The Psychological Status and the Perceived Social Support of Women Who Have Undergone Breast Surgery

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ABSTRACT

Objective: This study explores the psychological status and the perceived social support of women who have undergone breast surgery.

Method: The sample includes 100 women who have diagnosed with breast cancer, have surgically treated and having chemotherapy or radiation therapy. Measures used were Socio-Demographic Information Form which is prepared by the researchers, Brief Symptom Inventory and Multidimensional Scale of Perceived Social Support. Non-parametric tests Mann Whitney U and Kruskal Wallis were used for statistical analysis.

Findings: Sixty-three percent of the women stated that they haven't heard much information about breast cancer and three quarters did not perform breast self-examination regularly before being diagnosed. There were no significant differences between total mastectomy and breast conserving surgery in terms of psychological status and perceived social support. The side effects of chemotherapy and radiation therapy are found to be associated with the changes in psychological status and perceived social support. The women who psychologically affected from the surgery have experienced changes in their sexual life, changed their clothing styles and put silicone breast prosthesis into their bras to decrease the effects of surgery on their appearance.

Discussion and Conclusions: Breast surgery due to breast cancer and ongoing treatment process may cause psychological problems and increase social demands. In the sample of this study; psychological status and perceived social support were highly affected by breast surgery.

Keywords: breast cancer, breast surgery, psychological status, perceived social support

ÖZET

Meme Cerrahisi Geçirmiş Kadınların Ruhsal Durumları ve Algıladıkları Sosyal Destek Düzeyleri

Amaç: Bu çalışma meme cerrahisi geçirmiş kadınların ruhsal durumlarını ve algıladıkları sosyal destek düzeylerini incelemektedir.

Yöntem: Meme kanseri tanısı konarak cerrahi tedavi geçiren ve kemoterapi ve radyoterapi almakta olan 100 hasta araştırmanın örneklemini oluşturdu. Verilerin toplanmasında araştırmacılar tarafından hazırlanan Sosyo-Demografik Veri Formu, Kısa Semptom Envanteri ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği kullanıldı. Veriler, non-parametrik testler; Mann Whitney-U ve Kruskall Wallis ile değerlendirildi.

Bulgular: Kadınların %63'ü meme kanseri hakkında fazla bilgi sahibi olmadıklarını belirtirken dörtte üçü meme kanseri tanısı konmadan önce düzenli meme muayenesi yapmadığını ifade etti. Total mastektomi ile me-

me koruyucu cerrahi arasında ruhsal durum ve algılanan sosyal destek bakımından anlamlı bir fark bulunmadı. Kemoterapi ve radyoterapinin yan etkilerinin ruhsal durum ve algılanan sosyal destek ile ilişkili olduğu görüldü. Meme cerrahisinden ruhsal olarak etkilendiği belirlenen kadınların cinsel yaşamlarında değişiklikler yaşadığı, giyim tarzlarını değiştirdikleri ve cerrahi girişimin görünümleri üzerindeki etkisini azaltmak için silikon meme protezi kullandıkları saptandı.

Tartışma ve Sonuç: Meme kanseri sebebiyle geçirilen meme cerrahisi ve beraberinde yürütülen tedavi süreçleri psikolojik problemlere neden olabileceği gibi sosyal gereksinimleri de arttırmaktadır. Bu çalışma sonucunda; örneklemi oluşturan kadınlarda ruhsal durum ve algılanan sosyal desteğin belirgin oranda etkilendiği görüldü.

Anahtar Kelimeler: meme kanseri, meme cerrahisi, ruhsal durum, algılanan sosyal destek

INTRODUCTION

Diagnosis of breast cancer and its medical and surgical treatment can cause certain emotional reactions such as sadness, anger, guilt, fear or grief (Aapro and Cull 1999, Singh and Verma 2007). Furthermore, the women diagnosed with breast cancer face many stressors including stress of informing family and friends, social stigmatization, disfigurement, side effects of treatment, unmanageable pain, recurrence of the cancer, incurability, employment problems, dependency, and sense of helplessness (Singh and Verma 2007, Kornblith and Ligibel 2003). From diagnosis to treatment; all these emotional responses and needs affect psychological functioning substantially (Härtl et al. 2003).

Despite the cancerous cells exist in women's own body; it is not women's problem alone (Ben-Zur et al. 2001). Cancer also affects family members and furthermore family members' emotional reactions to cancer affect patient's adjustment to the illness (Singh and Verma 2007, Ben-Zur et al. 2001). Unfortunately, devastating effects of cancer on individuals and their loved ones can damage interpersonal relationships and social support correspondingly (Helgeson and Cohen 1996).

In addition to social demands of the women; the malignancy of the womanhood and sexuality symbol "breast" threat body image and sexual life seriously (Ang and Hkoo 1993). To decrease the negative effects of breast surgery on body image and sexuality; Breast Conserving Surgery (BCS) preferred instead of Modified Radical Mastectomy (MRM) (Engel et al. 2004). Moreover; the similar survival rates between BCS and MRM shows that BCS is a better option for early stage breast cancer (van Dongen et al. 2000, Kroman et al. 2004, Nold et al. 2000). BCS seems to be an acceptable surgical option in terms of body image, sexual life and survival; however the psychological effects of MRM and BCS have been compared in many studies and reported no significant differences associated with psychopathology (Steinberg et al. 1985, Rowlan et al. 2000, Noguchi et al. 1993, Fallowfield et al. 1990, Gumus et al. 2010, Wellisch et al. 1989).

Diagnosis and treatment of breast cancer may be perceived as a threat to body image, womanhood, sexuality and social life. To avoid these emotional threats lead to psychopathology, it is necessary to consider the individual's psychological status and social environment thoroughly. Thus, to assist the women in the psychosocial adjustment period to the illness; surgeons, medical oncologists, radiation oncologists, nurses, consultation liaison psychiatrists and, psychologists should collaborate from treatment to adjustment. Therefore, the purpose of this study was to explore the psychological status, perceived social support, sexual and social life changes experienced by women who have undergone breast surgery.

METHOD

Participants

Women diagnosed with breast cancer, which have surgically treated and having chemotherapy or radiation therapy were eligible for participation in the study. Exclusion criteria were: operations performed at least one month earlier, age <20 or >85 years, history of mental disorder before breast cancer diagnosis. A total of 106 women were eligible for participation. Verbal consent was obtained from participants and only the consenting patients filled the instruments. Six participants were dropped from the study because of missing data. The study completed with 100 participants.

Setting and Procedures

Patients were identified on the basis of appointments in the oncology polyclinic in an education and research hospital in Istanbul between April 7, 2008 and April 28, 2008. The participants were completed the measures while they were waiting for their appointment. Ethical approval was obtained from the Provincial Directorate of Health.

Data Collecting Instruments

The data of the study were collected by Socio-Demographic Information Form, Brief Symptom Inventory, and Multidimensional Scale of Perceived Social Support.

Socio-Demographic Information Form is prepared by the researchers in accordance with the literature and includes questions related to demographic characteristics, social life, health behaviors, and existence of risk factors of breast cancer, ongoing treatment and changes in social and sexual life after surgery.

Brief Symptom Inventory (BSI) is a 53-item self-report symptom inventory created by Derogatis, L. in 1992 designed to reflect the psychological symptom patterns of psychiatric and medical patients, and non-patient population. BSI was adapted to Turkish and analyzed for reliability and validity by Nesrin Hisli Sahin ve Aysegül Durak in 1993. Respondents rank each feeling item on a 5-point scale ranging from 0 (not at all) to 4 (extremely). The rankings give information related to the intensity of distress during the past seven days. The 53 items include nine symptom dimensions: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism; and three global indices of distress: Global Severity Index, Positive Symptom Total, and Positive Symptom Distress Index. The global indices give information related to level of symptomatology, intensity of symptoms, and number of reported symptoms, respectively (Savasir and Sahin 1997, Sahin et al. 2002).

Good internal consistency reliability has been reported for the nine dimensions, ranging from .71 on Psychoticism to .85 on Depression (Savasir and Sahin 1997). In this study, internal consistency reliability for the nine dimensions has been found .54 for Psychoticism to .83 on Depression.

Multidimensional Scale of Perceived Social Support (MSPSS) is a 12 item Likert-type scale which is developed by Zimet and colleagues in 1988. Respondents rank each item on a seven-point scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). MSPSS measures the perceived social support of patients and assesses perceptions of support adequacy from significant other, family and friends. High scores indicate better social support (Eker et al. 2000).

MSPSS was adapted to Turkish and analyzed for reliability and validity by Eker and Akar in 1995 and repeated in 2001. Zimet and colleagues was reported the internal consistency reliability .91 on significant other, .87 on family, .85 on friends, .88 on the total score of MSPSS (Eker et al. 2000). In this study; the internal consistency reliability was found .82 on significant other, .94 on family, .90 on friends and .89 on the total score of MSPSS.

Evaluation of the Data

The data were evaluated using the Statistical Package for Science (SPSS) 15.0 for Windows. Initially, the data were tested for homogeneity and normal distribution by Kolmogorov Smirnov and Oneway ANOVA and according to these results; non-parametric tests Mann Whitney U and Kruskal Wallis were used for statistical analysis.

FINDINGS

The women's age average was 50.32±10.55 (min:28, max:74). Sixty-three percent of the women reported that they haven't heard much information about breast cancer before being diagnosed with it. Seventy-five percent of the women did not perform breast self-examination regularly before being diagnosed.

Seventy-three percent of the women had Modified Radical Mastectomy and 27% had Breast Conserving Surgery. Seventy-seven percent of the women were having chemotherapy. The most common reported side effects due to chemotherapy were nausea (90%), alopecia (85.7%), fatigue (79.2%), and loss of appetite (61%). Sixty-four percent of the women were having radiation therapy and the most common reported side effects of radiation therapy were fatigue (17.2%) and nausea (12.5%).

Seventy-eight percent of the women reported changes in their clothing style after breast surgery. Fifty-two percent of the women tried to change their body appearance after surgery and 56.2% of them used sponge filled bras, 39.6% put silicone breast prosthesis into their bras and, 4.2% had reconstructive breast surgery.

Forty-five point nine percent of the married women reported that their husband became more concerned to her after surgery. Sixty-one point two percent of the women reported no changes in sexual life after surgery. From the women who had changes in their sexual life; 99.3% described this change as negative.

Results related to Psychological Status

As shown in Table 1; there was no significant difference between modified radical mastectomy and breast conserving surgery in terms of psychological status.

The women found to be affected psychologically by ongoing chemotherapy and radiation therapy. As

Table 1. Symptom Dimensions of BSI According to Surgery Type (N=100)

Symptom Dimensions of BSI	Surgery Type	n	Mean	Z	p
Somatization	MRM	73	49.53	- 0.552	0.581
	BCS	27	53.13		
Obsessive Compulsive	MRM	73	48.66	- 1.048	0.295
	BCS	27	55.48		
Interpersonal Sensitivity	MRM	73	51.30	- 0.459	0.647
	BCS	27	48.33		
Depression	MRM	73	49.33	- 0.667	0.505
	BCS	27	53.67		
Anxiety	MRM	73	51.04	- 0.308	0.758
	BCS	27	49.04		
Hostility	MRM	73	48.48	- 1.150	0.250
	BCS	27	55.96		
Phobic Anxiety	MRM	73	51.88	- 0.789	0.430
	BCS	27	46.78		
Paranoid Ideation	MRM	73	49.25	- 0.713	0.476
	BCS	27	53.89		
Psychoticism	MRM	73	50.35	- 0.086	0.931
	BCS	27	50.91		
Global Severity Index	MRM	73	49.55	- 0.540	0.589
	BCS	27	53.07		
Positive Symptom Distress Index	MRM	73	49.04	- 0.828	0.408
	BCS	27	54.44		
Positive Symptom Total	MRM	73	49.52	- 0.555	0.579
	BCS	27	53.15		

Z= Mann-Whitney U Test

presented in Table 2; the women who were having ongoing chemotherapy or radiation therapy have significantly higher scores in symptoms related to somatization and the women who were having ongoing radiation therapy also shows significantly higher obsessive compulsive symptoms. The women who reported loss of appetite due to chemotherapy have significantly higher scores in Obsessive Compulsive (p=0.018), Interpersonal Sensitivity (p=0.009), and Depression (p=0.029) dimensions of BSI. The women who reported nausea due to radiation therapy have significantly higher scores in Depression (p=0.002), Anxiety (p=0,011), Psychoticism (p=0,010) dimensions of BSI and also Global Severity Index (p=0.014), Positive Symptom Total (p=0.018) and, Positive Symptom Distress Index (p=0.014) scores were significantly higher in this group.

The women who reported changes in their clothing style after surgery have significantly higher scores in Paranoid Ideation (p=0.003), and also in Global

Table 2. Symptom Dimensions of BSI according to Ongoing Chemotherapy or Radiation

Symptom Dimensions of BSI	Ongoing Therapy	n	Mean	Z	p
Somatization	Ongoing Chemotherapy	77	54.77	- 2.701	0.007 *
	No Chemotherapy	23	36.20		
	Ongoing Radiation Therapy	63	55.41	- 2.264	0.024 *
	No Radiation Therapy	36	41.76		
Obsessive Compulsive	Ongoing Chemotherapy	77	53.49	- 1.895	0.058
	No Chemotherapy	23	40.48		
	Ongoing Radiation Therapy	64	55.01	- 2.079	0.038 *
	No Radiation Therapy	36	42.49		
Interpersonal Sensitivity	Ongoing Chemotherapy	77	50.53	- 0.017	0.987
	No Chemotherapy	23	50.41		
	Ongoing Radiation Therapy	64	49.86	- 0.297	0.766
	No Radiation Therapy	36	51.64		
Depression	Ongoing Chemotherapy	77	50.83	- 0.210	0.834
	No Chemotherapy	23	49.39		
	Ongoing Radiation Therapy	64	52.70	- 1.017	0.309
	No Radiation Therapy	36	46.58		
Anxiety	Ongoing Chemotherapy	77	51.61	- 0.703	0.482
	No Chemotherapy	23	46.78		
	Ongoing Radiation Therapy	64	52.14	- 0.757	0.449
	No Radiation Therapy	36	47.58		
Hostility	Ongoing Chemotherapy	77	52.50	- 1.267	0.205
	No Chemotherapy	23	43.80		
	Ongoing Radiation Therapy	64	53.14	- 1.219	0.223
	No Radiation Therapy	36	45.81		
Phobic Anxiety	Ongoing Chemotherapy	77	50.71	- 0.133	0.895
	No Chemotherapy	23	49.80		
	Ongoing Radiation Therapy	64	48.88	- 0.755	0.450
	No Radiation Therapy	36	53.39		
Paranoid Ideations	Ongoing Chemotherapy	77	52.14	- 1.036	0.300
	No Chemotherapy	23	45.02		
	Ongoing Radiation Therapy	64	49.95	- 0.252	0.801
	No Radiation Therapy	36	51.47		
Psychoticism	Ongoing Chemotherapy	77	50.50	0.000	1.000
	No Chemotherapy	23	50.50		
	Ongoing Radiation Therapy	64	49.84	- 0.304	0.761
	No Radiation Therapy	36	51.67		
Global Severity Index	Ongoing Chemotherapy	77	52.10	- 1.007	0.314
	No Chemotherapy	23	45.15		
	Ongoing Radiation Therapy	64	52.51	- 0.923	0.356
	No Radiation Therapy	36	46.93		
Positive Symptom Distress Index	Ongoing Chemotherapy	77	51.96	- 0.923	0.356
	No Chemotherapy	23	45.61		
	Ongoing Radiation Therapy	64	53.48	- 1.370	0.171
	No Radiation Therapy	36	45.21		
Positive Symptom Total	Ongoing Chemotherapy	77	52.08	- 0.999	0.318
	No Chemotherapy	23	45.20		
	Ongoing Radiation Therapy	64	52.52	- 0.930	0.352
	No Radiation Therapy	36	46.90		

Severity Index (p=0.048) and Positive Symptom Distress Index (p=0.047). In parallel with this finding; the women who put silicone breast prosthesis into their bras have significantly higher scores in Interpersonal Sensitivity (p=0.047), Depression (p=0.004), Anxiety (p=0.009), Hostility (p=0.002), Psychoticism (p=0.028) and, also in Global Severity Index (p=0.010) and Positive Symptom Distress Index (p=0.010).

The women who reported changes in their sexual life after surgery have significantly higher scores in Depression (p=0.017), Paranoid Ideation (p=0.005) and also in Positive Symptom Total (p=0.007). The women who described this sexual life change as negative have significantly higher scores in Somatization (p=0.049) and Anxiety (p=0.030).

Results related to Perceived Social Support

As shown in Table 3; there is no significant difference between modified radical mastectomy and breast conserving surgery in terms of perceived social support.

Perceived social support according to reported side effects of ongoing chemotherapy or radiation therapy is shown in Table 4. The women who have fatigue and loss of appetite while ongoing chemotherapy perceive more support from significant others. The women who reported loss of appetite due to chemotherapy also perceive significantly higher support from friends. Total score of MSPSS is also significantly higher in women who reported loss of appetite due to chemotherapy.

The women who reported nausea due to radiation therapy perceive significantly higher support from significant others and family. Furthermore, total perceived social support score is significantly higher in women who have nausea due to radiation therapy.

DISCUSSION

More than half of the sample stated that they haven't heard much information about breast cancer and did not perform breast self-examination (BSE) regularly before being diagnosed. In the study which was conducted in Nigeria (Balogun and Owoaje 2005) with 281 healthy women traders; 68.3% of the sample was not aware of BSE. In the study of Parsa and Kandiah (2005); two-thirds of the 261 healthy Iranian women said that they had never performed BSE and the most frequent reason was lack of knowledge with 48 percent. In the study which was carried out with 519 healthy women from two major universities in Jordan (Petro-Nustus and Mikhail 2002); having heard or read about breast tumors were found to be significant predictors of BSE practice. In the study of Altukan et al. (2008); it was reported that, from the 253 healthy Turkish women; 86.2% had never done BSE and 13.8% seldom practice BSE. Lack of knowledge about breast cancer and BSE seems to be a considerable reason in delaying of seeking medical opinion. Ozgun et al. (2009) investigated the reasons of delayed presentation in breast cancer and reported that; although 88.9% of their sample figured out the problem in their breast by themselves, only 35% of them sought for medical help within the first month.

Surgical treatment of breast cancer may lead distortions in body image, fear of losing womanhood, problems in finding the appropriate cloth and all the-

Table 3. Perceived Social Support according to Surgery Type (N=100)

Perceived Social Support from...	Surgery Type	n	Mean	Z	p
Significant Other	MRM	73	51.76		
				- 0.737	0.461
	BCS	27	47.09		
Family	MRM	73	50.52		
				- 0.012	0.990
	BCS	27	50.44		
Friends	MRM	73	50.25		
				- 0.141	0.888
	BCS	27	51.17		
Total Score	MRM	73	51.25		
				- 0.424	0.672
	BCS	27	48.48		

Z= Mann-Whitney U Test

Table 4. Perceived Social Support according to Side Effects of Ongoing Chemotherapy or Radiation Therapy (N=100)

Perceived Social Support From...		Reported Side Effects		n	Mean	Z	p
Significant Other	Ongoing Chemotherapy	Vomiting	Yes	47	38.61	- 0.199	0.842
			No	30	39.62		
		Fatigue	Yes	61	41.75	- 2.169	0.030 *
			No	16	28.53		
		Loss of Appetite	Yes	49	43.33	- 2.316	0.021 *
			No	28	31.43		
	Ongoing Radiation Therapy	Nausea	Yes	8	49.25	- 2.829	0.005 *
			No	56	30.11		
Family	Ongoing Chemotherapy	Vomiting	Yes	47	34.79	- 2.196	0.028 *
			No	30	45.60		
		Fatigue	Yes	61	39.34	- 0.273	0.785
			No	16	37.72		
		Loss of Appetite	Yes	49	40.14	- 0.630	0.529
			No	28	37.00		
	Ongoing Radiation Therapy	Nausea	Yes	8	50.50	- 3.073	0.002 *
			No	56	29.93		
Friends	Ongoing Chemotherapy	Vomiting	Yes	47	38.26	- 0.372	0.710
			No	30	40.17		
		Fatigue	Yes	61	40.22	- 0.951	0.342
			No	16	34.34		
		Loss of Appetite	Yes	49	44.51	- 2.907	0.004 **
			No	28	29.36		
	Ongoing Radiation Therapy	Nausea	Yes	8	41.19	- 1.432	0.152
			No	56	31.26		
		Vomiting	Yes	47	37.34	- 0.817	0.414
			No	30	41.60		
Total Score	Ongoing Chemotherapy	Fatigue	Yes	61	40.68	- 1.290	0.197
			No	16	32.59		
		Loss of Appetite	Yes	49	43.90	- 2.548	0.011 *
			No	28	30.43		
	Ongoing Radiation Therapy	Nausea	Yes	8	50.88	- 2.993	0.003 *
			No	56	29.88		

Z= Mann-Whitney U Test * p<0,05 ** p<0,01

se problems may continue their presences after many years (Akyolcu 2008). In this study; almost three-quarters of the sample reported changes in their clothing style after breast surgery and almost half of them tried to change their body appearance by mostly using silicone breast prosthesis and filling their bras with sponge. Leone (2007) defined body image as "a phenomenon all people experience each day they awaken". The women who undergone breast surgery may experience all these problems related to their negative body image each day they awaken as Leone emphasized. In the study of Engel et al. (2004); effects of surgery type on body image has been studied and body image scores were found significantly lower in mastectomy patients than the patients who had breast conserving surgery. Besides; in consistent with Leone's (2007) body image definition, Engel et al (2004) reported that body image scores did not improve over time. Figueiredo et al. (2004) surveyed with 563 women by telephone at 3, 12, and 24 months after breast surgery and reported that the women who had breast conserving surgery had better body image two years after surgery than women who had mastectomies. Also, women who preferred breast conservation but undergone modified radical mastectomy reported poorest body image. Härtl et al. (2003) found that; patients who had breast conservation reports a more favorable body image compared to the patients who treated with mastectomy. Manos et al. (2005) surveyed non-metastatic breast cancer patients and reported more positive body image in the patients who had breast conservation in comparison with the mastectomy group. In this context, it can be said that the surgery type is an important factor which should be considered in patients with breast cancer.

Negative effects of surgery type on body image; raise the question of its effect on psychological status. In this study; there is no significant difference between modified radical mastectomy and breast conserving surgery in terms of psychological status. The effects of surgery type on psychopathology in women with breast cancer have been studied in several studies. Fallowfield et al. (1990) reported no significant differences in the incidences of anxiety and depression between women who treated with mastectomy and those who had breast conserving surgery. Steinberg et al. (1985) reported that after 14 months of surgery there were no difference between surgical groups in terms of depression and anxiety. Gumus et al. (2010) investigated the psychological effect of the patients' choice on surgery type and reported no difference in anxiety scores between the mastectomy and breast conservation groups. Also; mastectomy patients were found to be prone to depression but the difference between surgery groups were not significant. The negative effects of mastectomy on body image and psychological adjustment increase the need for breast reconstruction. In the study of Wellisch et al. (1989) patients who had mastectomy without reconstruction reported significantly more anger than the patients who had mastectomy with reconstruction and patients who had breast conservation. Fallowfield (1993) and Noguchi et al. (1993) reported no difference in psychiatric morbidity between BCS and MRM treated women. Rowland et al. (2000) found no emotional and social differences in between these surgical groups.

In addition to surgery type; ongoing cancer treatment (chemotherapy and/or radiation therapy) and its side effects can also affect psychological adjustment. In this study; the women found to be affected psychologically by ongoing chemotherapy and radiation therapy. Thompson (2000) underlined that the patients undergoing chemotherapy could experience depression and anxiety more severe than the ones who receive radiation therapy and surgical treatment only. In the study of Schreier and Williams (2004) which was conducted with forty-eight breast cancer patients; trait anxiety levels of patients receiving chemotherapy were found significantly higher than the patients receiving radiation therapy. However, radiation therapy is also a strong risk factor for depression and anxiety in cancer patients. In addition; expectations of known side effects of chemotherapy and radiation therapy may increase anxiety. In the study of Andrykowski and Gregg (1992); in the sample which consists of 65 chemotherapy patients; state anxiety was found significantly related to the expectation of nausea.

Breast cancer and its medical and surgical treatment are associated with problems such as disturbance in body image, sexuality and sexual functioning (Compas and Luecken 2002). In this study; the women who reported changes in their clothing style after surgery were found psychologically affected and were having paranoid ideations significantly. In parallel with this finding; the women who put silicone breast prosthesis into their bras have significantly severe symptoms related to interpersonal sensitivity, depression, anxiety, hostility and psychoticism. Frierson et al. (2006) stated that body change stress in women with breast cancer may manifest with avoidance such as attempting to limit exposure of the body to self or others. Breast cancer is the leading cause of negatively affected sexual life among women. Commonly used treatment policies (e.g. chemotherapy, ra-

diation therapy and anti-hormone therapy) and their side effects such as fatigue, nausea, hair loss and reduced estrogen levels change the individuals' sexual life respectively (Wimberly et al. 2005). In this study; women who reported changes in sexual life after surgery reported significantly severe symptoms related to depression and paranoid ideation.

For the people diagnosed with cancer; social support is an important factor which may affect physiological and psychological well-being and when support is inadequate, it may diminish patient's ability to cope with the diagnosis and its treatment (Yoo et al. 2010, Molassiotis et al. 1997). In this study; there is no significant difference between modified radical mastectomy and breast conserving surgery in terms of perceived social support. This finding suggests that the loved-ones in the social environment may be focused on the diagnosis and its curability instead of the surgery type.

In this study; the women who have fatigue and loss of appetite while ongoing chemotherapy perceive more support from significant others. The women who reported loss of appetite due to chemotherapy also perceive significantly higher support from friends. Total score of MSPSS is also significantly higher in women who report loss of appetite due to chemotherapy. In the qualitative study of Mattioli et al. (2008) meaning of hope and social support has been asked to patients receiving chemotherapy and found that talking to others helps to cope and deal with the disease and the side effects of chemotherapy.

Limitations of the Study

The duration of data collection process was limited due to planning of this study as a master thesis and should be completed in a certain time. The study only covers one oncology unit of one hospital. Therefore, the results may not apply directly to all breast cancer patients.

CONCLUSIONS

Implications for Practice

More than half of the sample weren't aware of breast cancer and breast self-examination. In addition; as suggested by the literature findings, breast conserving surgery has positive outcomes in body image, sexual life and psychological well-being. However; the decision of breast conserving surgery is related to the tumor size. Therefore; the women should be educated about breast cancer, its risks and breast self-examination. On the long view; a more informed women population allows early diagnosis of breast cancer. With the increase of early diagnosed breast cancer patients; breast conserving surgery can be performed more frequently than mastectomy. In this way; negative results related to breast surgery can be diminished respectively.

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