RESEARCH ARTICLE

Social Support and Hopelessness in Patients with Breast Cancer

Gürsel Öztunç[1], Pınar Yeşil[1]*, Semra Paydaş[2], Semra Erdoğan[3]

Abstract

Background: Patients with breast cancer can experience a feeling of hopelessness very deeply in the adjustment process, and the social support provided during this period can be effective in increasing the level of hope. The present study aimed to identify breast cancer patients' social support and hopelessness level. Materials and Methods: The target population of this analytical study was all breast cancer patients (total of 85) who had treatment in the oncology department of a university hospital located in Adana/Turkey and who met the inclusion criteria. Data were collected through "Personal Information Form", "Beck Hopelessness Scale (BHS)" and "Multidimensional Scale of Perceived Social Support" (MSPSS). Analysis was performed using Shapiro Wilk, One Way ANOVA Welch, Student t-test, Mann Whitney U, and Kruskall Wallis tests. Homogeneity of variance was tested with the Levene, Bonferroni and Games Howell tests. Mean scores and standard deviation values are given as descriptive statistics. Results: Average age of the participants with breast cancer is 48.6±10.6. Of all the participants, 84.7% are married, 49.4% graduated from primary school, 81.2% are housewives, and 82.4% had children. The participants' multidimensional perceived social support total scores were found to be high (57.41±13.97) and hopelessness scale scores low (5.49±3.80). There was a reverse, linear relationship between hopelessness scale scores and social support total scores (r=-0.259, p=0.017). A statistically significant relationship was found between hopelessness scores and education level and having children, occupation, income status, and education level of spouses (p<0.05). Conclusions: The present study indicates that hopelessness of the patients with breast cancer decreased with the increase in their social support. Therefore, activating patient social support systems is of importance in increasing their level of hope.

Keywords: Hope - social support - breast cancer - Turkey

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Introduction

Breast cancer, one of the most important health problems of women in developed countries, accounts for almost 30% of all cancer types among women. As for Turkey, breast cancer has been the most common cancer type that affects women (Baider et al., 2003; Gümüş, 2006; Liao et al., 2007; Rızalar and Altay, 2010; Tümer and Baybek, 2010). Despite its high prevalence, breast cancer can be diagnosed and treated at early phases, which increases the ratio of surviving (Rızalar and Altay, 2010).

In addition to affecting tissues/organs, breast cancer has medical and psychosocial effects that have roles in the adjustment process. Women with breast cancer generally have such problems as probability of cancer spreading, uncertainty about future, anxiety, depression, anger, hopelessness, suffering, deterioration in body image, decreased self-respect, and fearing to lose feminine features. Therefore, patients need the emotional support to be provided by their own social support networks or professional health team both during and after the treatment process (Çam and Gümüş 2006; Gümüş, 2006, Liao et al., 2007; Güner, 2008; Arslan et al., 2009; Brothers and Andersen, 2009; Çam et al., 2009).

Hope is an important factor in increasing individuals' motivation. In the presence of a disease, it prevents the feeling of desperation and helplessness as well as helping patients to feel better and maintain the cancer treatment. A strong feeling of hopelessness is known to have the potential to cause new cancer to emerge and to die because of the illness (Öz, 2004; Kelleci, 2005; Fadıloğlı et al., 2006; Arslan et al., 2009). Hope, when used as a method of struggle, is helpful in decreasing the stress caused by cancer. As for hopelessness, it increases stress and negative expectations about future. Patients with breast cancer experience the feeling of hopelessness deeply in the adjustment process. Hopelessness is caused by perceiving cancer as a negative and deadly disease (Fadıloğlı et al., 2006).

Social support is an important source in decreasing the negative psychological reactions such as hopelessness and depression. With this effect, social support helps to

*[1]Cukurova University Adana Health Science School, Nursing Department, [2]Cukurova University Faculty of Medicine, Department of Oncology, Adana, [3]Mersin University Faculty of Medicine, Department of Biostatistics and Medical Informatics, Mersin, Turkey *For correspondence: pnar.yesil@gmail.com*

decrease the harmful effects of negative events in life on physical health and emotional well-being, and it serves as a buffer while coping with stress. The social support group is usually composed of family members, people around (relatives, friends), and health care team (doctors, nurses, social service experts, psychologists, etc.). Therefore, care for the patients diagnosed with breast cancer should include social support, which is a key factor in increasing hope (Gil and Gilbar, 2001; Koopman et al., 2001; Özyurt, 2007; Makabe and Nomizu 2007; Tuncay, 2010).

Nurses, with their significant roles in the health care team, have important roles in helping cancer patients in their adjustment process. This role in the treatment process can accelerate healing and contribute to morale and motivation of patients. Nurses have important responsibilities in evaluating hope levels of cancer patients as well as supporting them. It is because nurses are important part of the health care team that can provide professional help/support to patients who experience hopelessness and activate their social support system in coping with the feeling of hopelessness (Dean, 2002; Aslan et al., 2007). While providing care to patients who experience hopelessness, nurses should identify patients' features and personal characteristics and devise appropriate nursing interventions accordingly (Arslantaş et al., 2010). It is expected that those who benefit from social support systems have higher hope levels.

The purpose of this study is to identify social support and hopelessness level of patients with breast cancer.

Materials and Methods

The target population of this analytical study is all breast cancer patients who have treatment in the oncology department of a university hospital located in Adana/Turkey and who met the inclusion criteria. The participants were identified by reviewing the hospital records; it was found that there were 240 patients who were treated in the oncology department in one year. In line with this information, the purpose was to reach the 30% of this population. In this regard, the participants of the study are 85 patients who met the following inclusion criteria: 1) Being diagnosed with breast cancer at least three months ago. 2) Having received or currently receiving chemotherapy. 3) Being older than 18. 4) Cognitive competence in answering the questions. 5) Volunteering to participate in the study.

The data were collected through the 22-item Personal Information Form developed by the researchers with a view to identifying the socio-demographical features of the participants, Beck Hopelessness Scale (BHS) in identifying the hopelessness level, and "Multidimensional Scale of Perceived Social Support" (MSPSS) in identifying the perceived social support.

Personal Information Form: Personal Information form consists of 22 questions regarding the socio-demographical features, medical history, treatments received and operational interventions.

Beck Hopelessness Scale: Beck Hopelessness Scale (BHS) used in the study aims to identify the negative expectations, attitudes, or hopelessness level of individuals about future. The scale, which includes 20 items rated between 0 and 1, was developed by Beck et al. (1974) and adapted into Turkish by Durak (1994). Eleven items in "yes" option and 9 items in "no" option are graded as 1. This way, total scores range from 0-20. The scale has three sub-dimensions which are "feelings and expectations about future" (1st, 3rd, 7th, 11th, and 18th items), "loss of motivation" (2nd, 4th, 9th, 12th, 14th, 16th, 17th, and 20th items), and "hope" (5th, 6th, 8th, 10th, 13th, 15th, and 19th items). High scores indicate high hopelessness levels. The Multidimensional Scale of Perceived Social Support: The Multidimensional Scale of Perceived Social Support (MSPSS) was used with a view to identifying the participants' perceived social support elements. The MSPSS was developed by Zimmer et al. (1998) and its validity and reliability in Turkey was performed by Eker and Arkar (1995). The scale which evaluates the adequacy of social support received from three different sources in a subjective way consists of 12 items. The three groups each of which has four items about the source of social support are *family* (3rd, 4th, 8th, and 11th items), *friends* (6th, 7th, 9th, and 12th items) and *a special person* (1st, 2nd, 5th, and 10th items). Each item is rated on a 7 point scale. High scores indicate high social support.

Before the study was carried out, the necessary permissions were obtained from the Oncology Department and Ethical Committee of the hospital where the study was conducted. The forms were administered by the researcher through face to face interviews with a view to making the participants feel more comfortable, and the informed consents were obtained before administration.

Some information about the patients (e.g. receiving chemotherapy before or not, the number of cure) was examined from the patient files for confirmation. The administration of the scales used in the study took a total of 30 minutes: 5 minutes for the personal information form, 15 minutes for the Beck Hopelessness Scale, and approximately 10 minutes for the Multidimensional Scale of Perceived Social Support.

As to the analysis of the data, normality in the repeated measures was tested with Shapiro Wilk Test; and it was found that only the social support total score demonstrated normal distribution. The comparison of the socio-demographical features and Beck Hopelessness Scale and Multidimensional Scale of Perceived Social Support was performed using Student t test and Variance Analysis (One Way ANOVA) for those which demonstrated normal distribution and Mann Whitney U and Kruskall Wallis tests for those which did not demonstrate normal distribution. Homogeneity of the variances was tested with Levene Test. Paired comparisons were performed using Bonferroni when the homogeneity requirement was met and Games Howell test when it was not met. Mean scores and standard deviations are given as descriptive statistics. The relationship between the scale scores was tested using Spearman correlation co-efficient. Statistical significance was accepted as $p<0.05$. The data were analysed using SPSS 11.5 package program, making use of STATISTICA 6.0 demo.

Results

Average age of the participants was found 48.6±10.6. Of all the participants, 84.7% are married, 49.4% graduated from primary school, 81.2% are housewives, and 82.4% have children. In addition, 71.8% lived in the city centre and 94.1% lived with their families (Table 1). It was found that the participants' multidimensional scale of perceived social support total scores were high (57.41±13.97) and hopelessness scale scores were low (5.49±3.80).

An analysis of the sub-dimensions of the social support scale shows that mean scores and standard deviations of the scores are 23.56±3.68, 16.09±7.32, and 17.654±6.91 for *family, friends*, and *a special person* sub-dimensions respectively. The highest score belongs to the *family* sub-dimension. A comparison of the hopelessness and social support scores of the participants shows that there is a reverse, linear relationship between hopelessness and only *friends* sub-dimension of the social support scale (r=-0.291, p=0.007; r=-0.259, p=0.017 respectively) and total social support scores. In this regard, the participants' hopelessness level increased with the decrease in their social support *friends* sub-dimension and total social support scores. The internal comparison of social support scores indicates a parallel, linear relationship (Table2).

The participants' hopelessness and social support mean scores were evaluated according to their descriptive characteristics. It was found that those aged between 40 and 49 were more hopeful than the other age groups; those aged 60 and over were more hopeless and had lower social support scores when compared to other age groups. Married participants were found to be more hopeful than single participants, but the difference was not statistically significant (p>0.05). Besides, the participants who have children were found to be significantly happier than those who do not have children (p<0.05). However, no statistically significant difference was detected in terms of their social support scores (p>0.05).

No significant relationship was found between hopelessness and social support mean scores and place of living and family types (p>0.05). Those who lived alone were found to be more hopeless and have less social support than those who lived with their family or relatives; however, the difference was not statistically significant (p>0.05). Hopelessness mean scores of those who were illiterate were found to be higher than the scores of other education levels; illiterate participants were much more hopeless than those who graduated from secondary school or high school. The difference was found to be statistically significant (p<0.05).

An evaluation of the total social support and sub-dimension scores according to the education level of the participants indicate that there is a statistically significant difference between the education level and social support *friends* sub-dimension scores (p<0.05). Social support total scores of those who graduated from secondary school, high school, or university were found to be better than those who were illiterate or graduated from primary school. The difference was found to be statistically significant (p<0.05 for all p values) (Table 3).

No significant relationship was detected between the participants' occupation and hopelessness scale scores. Total social support scores and social support *friends* sub-dimension scores of those who work were found to be better than the scores of participants who do not work. The relationship was found to be statistically significant (p values 0.050 and 0.0003 respectively). The evaluation of soc[illegible]ppor[illegible]es a[illegible]ng to education level of spo[illegible]eve[illegible]hat [illegible]oci[illegible]port *friends*

Table 1. Socio-demographical Features of the Patients

Variables		N	%
Marital Status	Single	13	15.3
	Married	72	84.7
Having Children	Yes	70	82.4
	No	15	17.6
Place of Living	City	61	71.8
	Town-Village	24	28.2
Family Type	Large Family	39	45.9
	Nuclear Family	46	54.1
People they live with			
	Alone	2	2.4
	With Family	80	94.1
	With Relatives	3	3.5
Education Level	Illiterate	8	9.4
	Primary School	42	49.4
	Secondary School-High School	26	30.6
	Colleague or University	9	10.6
Job	Unemployed	78	91.8
	Working	7	8.2
Education Level of spouses			
	Illiterate	2	2.8
	Primary School	29	40.3
	Secondary School-High School	26	36.1
	Colleague or University	15	20.8
Occupation of spouses			
	Clerk	10	13.9
	Worker	12	16.7
	Independent Business	25	34.7
	Retired	25	34.7
Income Status	Income Lower than Expenses	80	94.1
	Income equal to or more than Expenses	5	5.9

Table 2. Frequency of the Mean Scores of Patients' Social Support and Hopelessness and the Relationship between the Scores

Variables	Beck Hopelessness Scale	The Multidimensional Scale of Perceived Social Support			
	Total BHS	Social Support			Total
		family	*friends*	*a special person*	MSPSS
Beck Hopelessness Scale					
r	-	-0.146	-0.291	-0.181	-0.259
p	-	0.182	**0.007**	0.097	**0.017**
Social Support *family*					
r	-	-	0.241	0.355	0.491
p	-	-	**0.026**	**0.001**	**<0.001**
Social Support *friends*					
r	-	-	-	0.434	0.815
p	-	-	-	**<0.001**	**<0.001**
Social Support *a special person*					
r	-	-	-	-	0.816
p	-	-	-	-	**<0.001**

Table 3. Frequency of the Mean Scores of Hopelessness and Social Support according to the Patients' Descriptive Characteristics

Variables		Beck Hopelessness Scale	The Multidimensional Scale of Perceived Social Support			
		Total BHS	Social Support			Total
			family	*friends*	*a special person*	MSPSS
Age	≤40 (n=17)	5.0 ± 3.8	23.4 ± 4.4	19.1 ± 7.9	18.4 ± 8.5	60.8 ± 18.1
	40-49 (n=32)	4.7 ± 3.0	23.8 ± 3.6	15.9 ± 7.4	17.0 ± 7.3	57.0 ± 14.3
	50-59 (n=21)	6.0 ± 3.8	24.1 ± 3.3	16.4 ± 5.3	17.7 ± 5.7	58.1 ± 10.2
	≥60 (n=15)	7.0 ± 5.0	22.5 ± 3.6	12.7 ± 8.1	17.5 ± 6.3	53.4 ± 12.8
	p	0.172	0.6	0.133	0.787	0.513
Marital Status	Single (n=13)	7.1 ± 4.4	23.8 ± 3.2	15.7 ± 9.5	17.8 ± 7.6	57.4 ± 16.6
	Married (n=72)	5.2 ± 3.6	23.5 ± 3.8	16.2 ± 6.9	17.5 ± 6.8	57.4 ± 13.6
	p	0.119	0.956	0.966	0.773	0.994
Having Children						
	Yes (n=70)	5.2 ± 3.8	23.6 ± 3.7	16.3 ± 7.3	17.7 ± 6.7	57.8 ± 13.8
	No (n=15)	7.1 ± 3.5	23.5 ± 3.7	15.1 ± 7.7	16.9 ± 8.2	55.5 ± 15.0
	p	**0.009**	0.893	0.567	0.79	0.569
Place of Living	City (n=61)	5.5 ± 4.2	23.6 ± 3.6	16.7 ± 7.1	17.8 ± 7.1	58.4 ± 14.4
	Town-Village (n=24)	5.4 ± 2.6	23.4 ± 4.0	14.7 ± 7.9	16.8 ±6.6	54.9 ± 12.8
	p	0.454	0.969	0.288	0.502	0.304
Family Type	Large family (n=39)	5.3 ± 3.2	23.9 ± 3.5	14.6 ± 7.0	17.4 ± 6.5	55.9 ± 12.0
	Nuclear family (n=46)	5.6 ± 4.3	23.3 ± 3.9	17.3 ± 7.4	17.7 ± 7.3	58.7 ± 15.5
	p	0.975	0.481	0.103	0.668	0.352
People they live with						
	Alone (n=2)	5.0 ± 2.8	22.0 ± 2.8	12.5 ± 12.0	17.5 ± 7.8	52.0 ± 22.6
	With Family (n=80)	5.5 ± 3.8	23.5 ± 3.7	16.3 ± 7.1	17.5 ± 6.9	57.5 ± 13.7
	With Relatives (n=3)	6.7 ± 5.0	25.3 ± 2.3	14.3 ± 12.3	20.0 ± 8.0	59.7 ± 21.1
	p	0.899	0.49	0.777	0.865	0.831
Education Level	Illiterate (n=8)	8.4 ± 3.1	23.3 ± 3.6	10.6 ± 6.1	18.8 ± 5.1	52.6 ± 10.3
	Primary School (n=42)	5.4 ± 3.6	23.7 ± 3.8	13.9 ± 6.9	15.8 ± 7.1	53.4 ± 12.8
	Secondary School-High School (n=26)	4.5 ± 2.5*	24.2 ± 2.9	19.6 ± 6.2*,†	19.3 ± 6.7	63.7 ± 14.4†
	Colleague or University (n=9)	6.3 ± 6.8	21.3 ± 4.9	21.2 ± 6.3*, †	19.6 ± 7.3	62.1 ± 14.7
	p	**0.036**	0.395	**<0.001**	0.141	**0.012**
Job	Not working (n=78)	5.5 ± 3.7	23.7 ± 3.5	15.4 ± 7.2	17.2 ± 7.0	56.5 ± 13.9
	Working (n=7)	5.4 ± 5.0	22.0 ± 5.7	23.9 ± 3.6	21.4 ± 4.6	67.3 ± 12.0
	p	0.657	0.508	**0.003**	0.147	**0.05**
Education Level of spouses						
	Illiterate (n=2)	6.0 ± 2.8	22.5 ± 2.1	18.0 ± 2.8	22.5 ± 2.1	63.0 ± 7.1
	Primary School Graduate (n=29)	6.4 ± 4.0	23.8 ± 3.4	12.9 ± 6.0	15.6 ± 6.6	53.0 ± 11.6
	Secondary school-High School (n=26)	4.0 ± 1.8	23.7 ± 4.3	17.7 ± 6.9	17.3 ± 7.3	58.7 ± 14.9
	Colleague or University (n=15)	4.7 ± 4.7	22.7 ± 4.2	19.5 ± 7.0†	20.8 ± 5.6	63.0 ± 13.7
	p	0.063	0.684	**0.016**	0.05	0.101
Income Status	Income Lower than Expenses (n=80)	5.4 ± 3.6	23.5 ± 3.7	15.7 ± 7.3	17.0 ± 6.8	56.4 ± 13.7
	Income equal to or more than Expenses (n=5)	7.0 ± 6.2	25.2 ± 2.9	22.4 ±4.3	25.6 ± 1.8	73.2 ± 7.7
	p	0.992	0.385	**0.039**	**0.002**	**0.008**

*Differences with the first category, †Differences with the second category

sub-dimension scores indicated statistically significant difference (p=0.016).

It was found that social support *friends* sub-dimension scores of those whose spouse graduated from a college or university were much higher when compared to the participants whose spouse graduated from primary school. However, education level of spouses indicated no significant difference in terms of the hopelessness scale scores. The analysis of the relationship between income status and hopelessness and social support mean scores shows that social support *friends* and social support *a special person* sub-dimensions and social support total scores indicate statistically significant differences (p values 0.039, 0.002 and 0.008 respectively). Total social support, social support *a special person* and *friends* sub-dimension scores of the group whose income is equal to or higher than their expenses were found to be higher than those whose income is lower than their expenses (Table 3).

The participants' clinical characteristics show that they were diagnosed with breast cancer less than a year ago (84.1%), and they started to receive their first chemotherapy treatment (45.9%). Of all the participants, 71.8% were still having chemotherapy treatment and 62.3% were having treatment in every three weeks. Besides, 15.3% had chemotherapy before and were currently receiving hormonotherapy. There is no statistically significant difference between the clinical

Table 4. Frequency of the Mean Scores of Hopelessness and Social Support according to Patients' Clinical Features

Variables	n (%)	Beck Hopelessness Scale	The Multidimensional Scale of Perceived Social Support			
		Total BHS	Social Support			Total MSPSS
			family	*friends*	*a special person*	
Duration of the Illness						
<1	29 (34.1)	4.4 ± 2.5	23.8 ± 3.3	17.5 ± 7.1	18.3 ± 7.2	60.0 ± 14.4
1-3 years	22 (25.9)	7.3 ± 5.2	23.1 ± 4.1	14.5 ± 6.8	16.5 ± 7.9	54.8 ± 14.5
3-4 years	15 (17.6)	4.1 ± 2.3	23.9 ± 4.4	16.5 ± 8.8	17.7 ± 7.0	57.5 ± 14.6
≤5 years	19 (22.4)	6.2 ± 3.7	23.2 ± 3.4	15.4 ± 7.2	17.5 ± 5.3	56.5 ± 12.4
p		0.054	0.847	0.473	0.81	0.608
The first time they received chemotherapy						
<1	39 (45.9)	5.0 ± 3.3	24.2 ± 3.1	17.5 ± 7.3	18.4 ± 7.3	60.6 ± 14.1
1-3 years	12 (14.1)	7.0 ± 5.8	22.1 ± 4.6	13.4 ± 3.8	14.6 ± 7.3	50.1 ± 11.9
3-4 years	18 (21.2)	4.5 ± 2.8	23.6 ± 4.1	16.4 ±9.0	17.7 ± 6.6	57.2 ± 14.6
≤5 years	16 (18.8)	6.6 ± 3.8	23.1 ± 3.7	14.4 ± 7.1	17.4 ± 5.8	55.3 ± 13.0
p		0.228	0.47	0.217	0.367	0.123
Receiving chemotherapy						
Currently Receiving	61 (71.8)	5.3 ± 3.4	24.1 ± 3.3	16.8 ± 7.1	18.0 ± 7.1	59.1 ± 13.4
Not Receiving	24 (28.2)	5.9 ± 4.8	22.2 ± 4.3	14.4 ± 7.7	16.5 ± 6.6	58.1 ± 14.7
p		0.953	0.07	0.145	0.24	0.073
Frequency of the Chemotherapy						
Once a week	13 (21.3)	6.1 ± 4.3	23.8 ± 3.5	15.8 ± 7.9	17.5 ± 6.9	57.8 ± 14.0
Once in every three weeks	38 (62.3)	5.3 ± 3.3	24.1 ± 3.4	17.0 ± 7.0	18.6 ± 6.8	59.9 ± 13.5
Once a month	5 (8.2)	4.0 ± 1.2	25.2 ± 2.8	18.0 ± 5.5	18.2 ± 8.8	61.4 ± 9.6
Once in every two weeks	5 (8.2)	4.8 ± 2.6	23.6 ± 3.0	16.0 ± 8.9	14.4 ± 8.8	54.0 ± 17.1
p		0.864	0.814	0.92	0.736	0.774
Receiving Hormones						
Yes	13 (15.3)	5.0 ± 3.8	23.2 ± 3.7	15.3 ± 8.2	17.5 ± 5.8	55.3 ± 13.0
No	72 (84.7)	5.6 ± 3.8	23.6 ± 3.7	16.2 ± 7.2	17.5 ± 7.1	57.8 ± 14.2
p		0.395	0.734	0.65	0.704	0.558

features and hopelessness and social support mean scores (Table 4).

Discussion

Hope is an important source for patients with breast cancer in helping them maintain the treatment and feel well. As to social support, it can be viewed as an important factor in coping with chronic, life-threatening illnesses like cancer which have negative effects on patients' general well-being (Kelleci, 2005; Yoo et al., 2010).

The present study has revealed that the participants' multidimensional perceived social support total scores are high and hopelessness scale scores are low. The highest score in the social support sub-dimensions belongs to *family* sub-dimension. These findings indicate that the participants are hopeful and have high social support. Similarly, in a study conducted with women with breast cancer recurrence, Ahuja (2007) found a reverse, linear relationship between social support received from the family and hopelessness.

In their study conducted with patients with breast cancer, Kim et al. (2010) identified a positive, linear relationship between social support and emotional well-being. In their study which involved adults with cancer, Pehliven et al. (2012) found a reverse, linear relationship between the support received from the family and hopelessness. It is reported that the difficulties experienced in the process may cause patients to become closer to some of their family members and drift apart from some other family members (Çam and Gümüş, 2006; Dedeli et al., 2008). The uncertainty and fear experienced in the process often cause an increase in the need for social support (Rustøen and Begnum, 2000; Landmark et al., 2002; Çam and Gümüş, 2006). It is reported that the social support provided by the family affects the adaptation process and longevity positively (Tan et al., 2005; Fadıloğlı et al., 2006; Yoo et al., 2010). Some studies indicate that patients and their relatives drift apart in the cancer process. However, because of the traditional family structure in Turkey, the participants of the present study were found to receive their social support mostly through their families. Thus, the participants seem to be hopeful due to the high social support they have.

The present study has found that the participants' hopelessness level decrease with the increase in their social support scores. In line with the findings of this study, Brothers et al. (2009) found a negative relationship between hopelessness and the scores obtained from social support sub-dimensions of friends and family. The related literature reports hopelessness as a negative factor that causes patients to perceive cancer as a negative and deadly disease. As to social support, it is an important source that has positive effects on increasing longevity and emotional well-being as well as decreasing hopelessness in lifelong diseases such as breast cancer (Fadıloğlı et al., 2006; Yoo et al., 2010).

No statistically significant difference was found between age of the participants and their hopelessness and social support scores. In line with the findings of the present study, Solak and Başer (2003) found no significant difference between age groups and hopelessness scores

of the patients with breast cancer. Another study with breast cancer patients conducted by Fadıloğlu et al. (2006) reports that those aged 40 and younger are more hopeful than the other age groups. In addition, the related literature indicates that women at advanced age fear to experience cancer recurrence and functional loss, but these fears are relatively less threatening for younger women. Therefore, it is reported that factors such as functional independence loss, deaths of peers, and illnesses with aging can cause decrease in social support (Ashing, 2005; Yoo et al., 2010).

Married participants were found to be happier than single participants; however, the difference was not statistically significant. Denewer et al. (2011), in their study conducted after mastectomy, and Fadıloğlu et al. (2006), in their study conducted with women having breast cancer, found no statistically significant difference between marital status and patients' hope levels. On the other hand, the related literature indicates that women with breast cancer receive the social support they need in coping with the emotional effects of the illness from their husbands, but single women have more difficulties in terms of receiving this kind of support. Some studies report that this situation might be resulted from the fact that single women do not share their worries and fears in the cancer process with their partners because of the probability that their partner rejects/refuses them (Hordern, 2000; Hoskins and Haber, 2000; Güner, 2008).

The present study has found that patients having children are significantly more hopeful than patients having no children. However, no significant difference was found in terms of the social support scores. Hope is emphasized as an important component that helps patients with cancer to feel better in the treatment process (Pehlivan et al., 2012). In their study conducted with women with breast cancer, Fadıloğlu et al. (2006) found that there was no statistically significant difference between hope level and having children, but patients having children approached negative events happening in their life more optimistically. Children in Turkish society are always regarded as support and guarantee of future for parents. Hence, participants having children could be considered to have lower future anxiety and higher hope levels.

Participants who live alone were found to be more hopeless and have less social support when compared to the participants who live with their family or relatives; however, the difference was not statistically significant. Rustoen and Wiklund (2000) found that hope scores of the patients who live alone are lower than the scores of those who lived with their family or together with someone. Although the present study has found no statistically significant relationship between the variables, the related literature emphasizes the fact that living alone makes coping behaviours more difficult in chronic and life-threatening diseases such as cancer. It is reported that patients who have social and emotional support usually adjust to the impairment of health and function loss more easily (Fadıloğlı et al., 2006).

It was found that illiterate breast cancer patients had higher hopelessness mean scores when compared to the patients having other education levels. An analysis of the total social support and sub-dimension scores of the participants according to their education level reveals that there is a statistically significant difference between education level and total scores and social support *friends* sub-dimension scores. Studies show that receiving education, by increasing social networks such as friendship or work friendship, affects social support positively (Drageset and Lindstrøm, 2005). Findings of the study conducted by Rustoen and Wiklund (2000) correspond to the findings of the present study in that they found cancer patients with low education level had higher hopelessness scores. The related literature indicates that educated patients took more responsibilities in being protected from illnesses and in improving their health; hence, decreased the feeling of hopelessness (Pehlivan et al., 2012).

No statistically significant difference was found between the participants' occupation and hopelessness scale scores. On the other hand, the participants who work had higher social support and social support *friends* sub-dimension scores; the relationship was found to be statistically significant. Studies show that women with breast cancer less frequently focus on their illness in their working environment, benefit from the directive effect of the working environment in terms of intellectual meaning, and get the social support they need through the social network in the working environment (friends and organizational connections) (Landmark et al., 2002). It is indicated that the social support provided to cancer patients by their friends yields positive improvements in the course of the disease by affecting patients' general well-being (Arora et al., 2007; Adler et al., 2008).

No statistically significant relationship was found between the participants' income status and their hopelessness scale scores. The evaluation of income and social support mean scores shows that those whose income is equal to or higher than their expenses had better total social support scores and *a special person* and *friends* sub-dimension scores than those whose income is lower than their expenses. The difference was found to be statistically significant. In their study conducted with patients who had gynaecological cancer, Dansuk et al. (2002) found that cancer patients having low socio-economical levels also had low social support scores. Findings of the present study also show that socio-economical level affects social support.

The present study has found no significant difference between diagnosis time and social support and hopelessness level. In line with the findings of this study, Fadıoğlu et al. (2006), in their study conducted with breast cancer patients, and Vellone et al. (2006) and Aslan et al. (2007), in their study conducted with cancer patients, found no significant relationship between hope and the duration of the illness. However, due to its long treatment process and considerable side effects, breast cancer is an illness which requires a lot of energy. Therefore, patients cannot perceive the improvements in the process as positive due to the nature and the chronicity of the illness, which may cause decrease in their hope (Gumus et al., 2011).

In conclusion, the present study has found that breast cancer patients' hopelessness level decrease with the increase in their social support. There is a statistically

significant relationship between the participants' hopelessness scores and education and having children status, and social support scores and education, occupation and income status.

In line with these findings, it is recommended that nurses should help patients to increase their hope- a crucial factor in coping with the illness- and to activate their social support systems, work cooperatively in a multidisciplinary team with a view to supporting patients psychologically and financially, and not ignore to evaluate hope levels of patients with low education and to focus on this group.

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