Original Article

Evaluation of Training Requirements in Patients Undergoing Breast Surgery

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Abstract

Background: The study is quite important in order to avoid complications which may develop in patients who underwent breast surgery due to the surgical operation. Informing healthcare personnel on this subject beginning from the school life period will ensure these methods to be used in a more active way. Detailed studies on this subject are needed to ensure that the methods in patient education can be used by healthcare personnel in a more active way.

Objective: This study was conducted to evaluate the educational needs in patients undergone breast surgery.

Methodology: The data of this descriptive study were collected from 67 patients who underwent breast surgery between June 15, 2018 and August 15, 2018 in two private hospitals on the European side. After obtaining institutional permission and ethics committee approval, data were collected using the "Patient Learning Needs Scale" and "Patient Information Form" prepared by the researcher and analyzed statistically.

Results: The mean age of the patients included in the study was 45.04±8.039, and 79.1% was married, 32.8% was college or university graduate, and 82.1% had a balanced income. It was found that 35.8% of the patients had a history of breast disease in their family, 97% had surgical treatment, and 98.5% had been informed before the surgery. It was observed that 82.1% of the patients considered the information given adequate. It was determined that patients were in need of learning more about medications and quality of life (4.76±0.430). No statistically significant relationship was found between the learning needs and the age, marital status, and educational status of the patients.

Conclusion: It may be suggested that the trainings for patients who undergone breast surgery should be planned in line with the needs.

Key Words: Patient, Patient Education, Breast, Breast Cancer, Breast Surgery.

Introduction

Cancer is a global health problem because it is one of the causes of death worldwide (Caman et. al, 2014). It ranks first as the cause of death according to the worldwide cancer statistics (Ferlay et. al., 2013). Multiple factors play role in the development of breast cancer. These factors including being female, older age, early age at first menstruation, late-onset menopause, family history, genetic susceptibility, giving birth over the age of 30 and late-onset breastfeeding are known to increase the risk of developing breast cancer and to promote the cancer development process (Akyolcu, 2011; Celer et al., 2018; Ozmen, 2014). The treatment methods of cancer include chemotherapy, radiotherapy and surgical treatment (Bebiş et al., 2014; Gulcivan, Topcu, 2017). Side effects such as fatigue, nausea-vomiting, weight loss, anemia, mucositis and hair loss are seen due to chemotherapy drugs. These side effects

significantly reduce the quality of life of the patient. However, the aim of treatment is to reduce the symptoms caused by treatment during the patient's fight against cancer and to improve his/her quality of life (Ozdelikara, Arslan, 2017).

Breast cancer can be diagnosed with simple screenings in a short time and its treatment can be started immediately. Thus, early diagnosis is of vital importance. For the purpose of prevention of breast cancer and early diagnosis, screening programs should be established, education activities should be promoted, risks and expectations should be identified (Aksoy et al., 2015).

One of the most important health care goals is to minimize the difficulties and problems experienced by the patients, to improve the individual's strategies to cope with life changes and to increase the individual's power. From the moment of diagnosis, all healthcare personnel members in the treatment team should plan and actively employ supportive approaches to identify and meet the patient's needs throughout the whole process, to improve the patient's compliance to treatment as well as to provide emotional support to the patient and his/her family.

Therefore, the healthcare personnel to provide training to patients should prepare an education process according to individual needs and by giving priority to the needs perceived by the patients. For this purpose, firstly, effort should be made to determine the needs of the patient. Education involves supporting someone else by assuring certain development and improvement in people's lives, thoughts, behaviors and attitudes in order to ensure them to gain knowledge and skills in a specific field in line with the predetermined needs and objectives. Patient education is a set of processes that involve informing the patient about the disease process and getting him/her adopted new behavior including the strategies to cope with the disease and maintaining this newly adopted behaviors, as determined in line with the patient needs (Smeltzer et al., 2010; Cin, 2009).

For the nursing profession, patient education which is an innate component of the profession is not a new concept. As it is known, Florence Nightingale Hospital provided patient education for the patients to regain their health and gain habits to protect them from diseases and to improve their quality of life (Bastable, 2014; Ozden, 2014). The concept of

patient education was practically included in the standards of nursing profession in the past and now has become the expected and fundamental role of the nurse as a healthcare professional. Thus, it is important that nurses have the necessary knowledge about patient education principles and develop themselves continuously. It is obvious that patient care will not be available and be interrupted in the absence of patient education (Bastable, 2014; Avşar, Kasıkcı, 2011).

Effects of Patient Education on Self Care: Self-care is defined as the whole of activities that individuals initiate and perform on their own behalf to maintain life, health, or well-being. Patients' ability of self-care should be improved to prevent and reduce hospitalization. This applies to patients with breast cancer as in those with other diseases. Thanks to effective self-care behaviors in the diagnosis and treatment of the disease, the quality of life is improved and deterioration of clinical course of the disease is reduced (Babacan, Ulupınar, 2008; Pender et al., 2014; Kaya, 2009).

Effect of Patient Education on Repetitive Hospitalization: The main purpose of hospitalization should be to avoid acute disorders, to eliminate complications, to stabilize the disease and to control and monitor the side effects of the administered treatments and thus to treat the disease itself. In order to reduce preventable hospitalization, the education for patient and his/her family should be effectively started once the patient is hospitalized, and the regimen that will allow the patient to live at home after discharge should be taught to the patient. It was showed that hospitalizations significantly decreased within 3 to 6 months after discharge and patients' living standards increased due to the comprehensive trainings and multidisciplinary approaches (Moser et al.,2011; Birol, 2013).

Since nurses are health team members who spend the longest time with patients, they should plan patient education by evaluating the patient and information needs during the period of care. Appropriate assessment tools to determine the information requirements should be used when providing education to the patient. However, it was found that nurses had lack of knowledge on the subjects as a result of these evaluations. This study was planned to evaluate education needs in the patients who underwent breast surgery and to

provide suggestions to improve the patient care and education.

Accordingly, the aim of this study was to evaluate the education needs in patients who underwent breast surgery. This study, which was carried out to determine patients' learning needs and variables affecting these needs, is of great importance in terms of monitoring individuals with breast cancer. It has also particular importance since it provides recommendations that will contribute to the improvement of care and patient education provided by healthcare personnel.

Scope

The study is quite important in order to avoid complications which may develop in patients who underwent breast surgery due to the surgical operation. Informing healthcare personnel on this subject beginning from the school life period will ensure these methods to be used in a more active way. Detailed studies on this subject are needed to ensure that the methods in patient education can be used by healthcare personnel in a more active way.

It is considered that the results of this study will raise awareness on the determination of education needs of patients who underwent breast surgery and make a significant contribution.

Study Questions

This study sought to answer the following questions;

1. What are the learning needs of patients who underwent breast surgery?

2. What are the personal characteristics that affect learning needs of patients who underwent breast surgery?

3. What are the disease characteristics that affect learning needs of patients who underwent breast surgery?

Material and Method

Aim of the Study

The study, a type of descriptive study, was conducted to evaluate education needs of the patients who underwent breast surgery in hospitals affiliated to a foundation university in Istanbul province.

Population and Sample of the Study: The study population was consisted of 67 patients who underwent breast surgery in two private hospitals on the European side of Istanbul between the dates of

15.06.2018 and 15.08.2018.A sample for the study was not chosen. The whole universe also constituted the sample. The sample of the study was consisted of 67 patients aged 18 years and older who underwent breast surgery in two private hospitals on the European side of Istanbul between the dates of 15.06.2018 and 15.08.2018 and agreed to participate in the study.

Ethical Aspect of the Study: Approval (29.05.2018/2018.05.04) was obtained from Istanbul Bilim University Institute of Health Sciences Ethics Committee before starting the study. Necessary written permissions were obtained from the administration of the two private hospitals on the European side of Istanbul where the study was conducted, and necessary permissions were taken to use the "Patient Learning Needs Scale" for the Evaluation of Education Needs of Patients Who Underwent Breast Surgery.

The patients who agreed to participate in the study were informed that the data obtained from them would be kept confidential and not shared with anyone, and their informed consents were obtained with the "Informed Voluntary Consent Form".

Data Collection Tools: Data were collected by the researcher by face-to-face interview method between the dates of 15.06.2018 and 15.08.2018. In the study, the education needs of the patients who underwent breast surgery were assessed using the "Patient Information Form" and the "Patient Learning Needs Scale" prepared based on the literature information as data collection tools (Catal, 2008). The Patient Information Form included 23 questions about personal and disease characteristics. The "Patient Learning Needs Scale" included 50 questions for information, attitude and behaviors of patients. Each item was evaluated based on a 1 to 5-point Likert-type scale format. The scores obtained from the scale varied between 50 and 250. The scale and sub-scale scores were divided by the total number of questions of the scale and all sub-scales and interpreted as follows; "1=not important", "2=slightly important", "3=moderately important", "4=very important", "5=extremely important" depending on their importance level ranging from 1 to 5. Each interview lasted approximately 15-20 minutes.

Data Analysis: The data obtained from the study were interpreted through statistical analysis. Descriptive statistics such as frequency, arithmetic mean, standard deviation and percentage were used

to analyze the data. t-test was used for two independent variables and Oneway ANOVA test was used for more than two independent variables in difference analyses, while Pearson's correlation test was used for correlation analyses.

Limitations of the Study: The study data were limited with the patients who underwent breast surgery in two private hospital on the European side of Istanbul. The results can be obtained in other hospitals in Istanbul province.

Results

It was determined that the average age of the participant patients was 45.04 ± 8.039 years, 79.1% of them were married, and according to their distribution by education status, 34.3% of them were primary school graduates, 32.8% of them were high-school or university graduate, 61.2% of them were employed and 17.9% of them were retired.

It was determined that 82.1% of them had income equal to expense and the mean number of their children was 1.85 ± 0.763. It was determined that 25.4% of them were smoker. Accordingly, it was determined that the duration of smoking of the smoker patients varied between 5 to 30 years, the mean duration of smoking was 20.22 ± 6.638 years and the number of cigarettes smoked per day was 12.64 ± 3.003 pieces. It was found that 20.9% of the patients were using alcohol and the mean frequency of alcohol use per month was 1.77 ± 05832 times.

It was found that the mean time from diagnosis was 12.91 ± 20.082 months, 98.5% of the patients underwent chemotherapy, 25.4% of them underwent radiotherapy, 40.3% of them received hormonal therapy and 97% of them underwent surgical treatment. When the distribution of the patients by breast surgery was examined, it was found that 43.3% of them underwent mass excision, 26.9% of them underwent lumpectomy, 19.4% of them underwent total mastectomy, 3% of them underwent left mastectomy, 3% of them underwent right mastectomy, 3% of them underwent nipple sparing mastectomy and 1.5% of them underwent surgery for back muscle tissue with tumor.

It was determined that 44.8% of the patients participating in the study had chronic or systemic disease other than breast cancer, 16.4% of them had diabetes, 17.9% of them had hypertension and 19.4% of them had thyroid disease. It was determined that almost all patients (98.5%) were

informed before the surgery. It was determined that all the patients were informed by physician, 86.6% of them by nurse and 64.2% of them by anesthesiologist. It was determined that health status identification varied from 1 to 8 within the last 3 months, and the mean value was 5.10 ± 1.458 (Table 1).

When the distribution of the scores given by the patients to the Patient Learning Needs Scale items was examined, it was found that the item with the lowest score was the item 33 "How should I care for my feet?" of the "Skin Care" sub-dimension (2.73 ± 1.067), and the items with the highest score were the item 8 "What should I do if a drug-related side effect develops?" of the "Drugs" sub-dimension and the item 21 "What should I do when symptoms of my diseases appears? of the "Quality of Life" sub-dimension   (4.76 ± 0.430) (Table 2).

The results of the Patient Learning Needs Scale item-total score correlation analysis and the Cronbach α value were given in Table 3. The analysis results showed that the scale item-total score correlations were 0.354-0.576 for the "Drugs" sub-dimension, 0.246-0.628 for the "Life Activities" sub-dimension, 0.159-0.676 for the "Society and Follow-up" sub-dimension, 0.212-0.597 for the "Feelings about the Situation" sub-dimension, 0.251-0.637 for the "Treatment and Complications" sub-dimension, 0.337-0.774 for the "Quality of Life" sub-dimension, 0.159-0.499 for the "Skin Care" sub-dimension. Accordingly, all items except the 7th, 33rd, and 41th items were found to be significantly correlated with the overall score of the scale ($p < 0.05$).

The scale's internal consistency coefficient Cronbach Alpha value was found to be 0.795 for the "Drugs" sub-dimension, 0.732 for the "Life Activities" sub-dimension, 0.399 for the "Society and Follow-up" sub-dimension, 0.633 for the "Feelings about the Situation" sub-dimension, 0.742 for the "Treatment and Complications" sub-dimension, 0.803 for the "Quality of Life" sub-dimension, 0.453 for the "Skin Care" sub-dimension and 0.933 for the whole scale (Table 3).

The relationship between the Patient Learning Needs Scale sub-dimension and the overall scale scores was evaluated by correlation analysis. According to the analysis results, the relationship between the "Drugs" sub-dimension and the "Society and Follow-up" and "Skin Care" sub-

dimension was found low-level, positive and statistically significant (respectively rs: 0.379 and rs: 0.436), the relationship between the "Life Activities", the "Treatment and Complications" and the "Quality of Life" sub-dimensions was found medium-level, positive and statistically significant (respectively rs: 0.568, rs: 0.677 and rs: 0.548), and the relationship between PLNS scores was found high-level, positive and statistically significant (rs: 0.716)   (*p*< .05). On the other hand, a statistically significant relationship between the "Drugs" sub-dimension and the "Feelings about the Situation" sub-dimension was not found.

The relationship between the "Life Activities" sub-dimension and the "Feelings about the Situation" sub-dimension was found low-level, positive and statistically significant (rs: 0.496), the relationship between the "Society and Follow-up", the "Quality of Life" and the "Skin Care" sub-dimensions was found medium-level, positive and statistically significant (respectively rs: 0.690, rs: 0.636 and rs: 0.552), and the relationship between the "Treatment and Complications" sub-dimension and the PLNS score was found high-level, positive and statistically significant (rs: 0.709 and rs: 0.859) (*p*< .05).

The relationship between the "Society and Follow-up" sub-dimension and the "Quality of Life" sub-dimension was found low-level, positive and statistically significant (rs: 0.496), the relationship between the "Feelings about the Situation", "Treatment and Complications" and the "Skin Care" sub-dimensions was found medium-level, positive and statistically significant (respectively rs: 0.576, rs: 0.517 and rs: 0.500), and the relationship between PLNS scores was found high-level, positive and statistically significant (rs: 0.730) (*p*< .05).

The relationship between the "Feelings about the Situation" sub-dimension and the "Skin Care" sub-dimension was found low-level, positive and statistically significant (rs: 0.380), and the relationship between the "Treatment and Complications", the "Quality of Life" sub-dimensions and the PLNS score was found medium-level, positive and statistically significant (rs: 0.521, rs: 0.624 and rs: 0.693) (*p*<.05).

The relationship between the "Treatment and Complications" sub-dimension and the "Skin Care" sub-dimension was found medium-level, positive and statistically significant (rs: 0.528), and the

relationship between the "Quality of Life" sub-dimension and the PLNS score was found high-level, positive and statistically significant (rs: 0.756 and rs: 0.871) (*p*<.05).

The relationship between the "Quality of Life" sub-dimension and the "Skin Care" sub-dimension was found low-level, positive and statistically significant (rs: 0.445), and the relationship between PLNS scores was found high-level, positive and statistically significant (rs: 0.831) (*p*< .05). When the relationship between the "Skin Care" sub-dimension and the PLNS score was examined, a medium-level, positive and statistically significant relationship was found (respectively rs: 0.661) (*p*< .05) (Table 4).

When the Patient Learning Needs Scale was compared according to the employment status of the patients, only the relationship between the "Skin Care" sub-dimension scores was found statistically significant (*p*< .05). The analysis results showed that the "Skin Care" sub-dimension scores of the employed patients (21.07 ± 2.078) were significantly higher than those of the retired and unemployed patients (respectively 19.83 ± 1.946 and 19.79 ± 2.259).

On the other hand, when the other sub-dimension scores and the PLNS total scores were compared according to the employment status of the patients, the difference between them was found not statistically significant (*p*> .05) (Table 5). When the Patient Learning Needs Scale was compared according to the income status of the patients, the relationship between the "Treatment and Complications" and "Skin Care" sub-dimensions scores was found statistically significant (*p*< .05).

The analysis results showed that the "Treatment and Complications" (41.75 ± 2.128 and 42.43 ± 2.637) and the "Skin Care" (20.89 ± 1.750 and 21.00 ± 1.528) sub-dimension scores of the patients with income equal to or higher than expense were significantly higher than those of the patients with income lower than expense (respectively 35.40 ± 6.229 and 16.60 ± 3.209) (*p*< .05) (Table 6).

When the Patient Learning Needs Scale was compared according to the patients' satisfaction with preoperative information, the difference between the "Life Activities" sub-dimension and the "PLNS Total" scores was found statistically significant (*p*< .05). The analysis results showed

that the "Life Activities" sub-dimension and the "PLNS Total" scores of the patients who satisfied with preoperative information (respectively 40.25 ± 3.116 and 223.45 ± 16.840) was statistically and

significantly higher than those of the patients who did not satisfy with preoperative information (respectively 36.75 ± 4.093 and 216.75 ± 12.843) (*p*< .05) (Table 7).

Table 1. Distribution of Patients According to their Socio-Demographic Characteristics (N=67)

Characteristic	Category	n	%
Age	*Mean*: 45.04 ± 8.039 (*range*: 26-62)		
Marital Status	Married	53	79.1
	Single	14	20.9
Educational Status	Literate	2	3.0
	Primary school	23	34.3
	High school	20	29.9
	College/university	22	32.8
Employment Status	Employed	41	61.2
	Retired	12	17.9
	Unemployed	14	20.9
Social security	SSI	50	74.6
	Private insurance	15	22.4
	Premium	2	3.0
Monthly Income Level	Income less than expense	5	7.5
	Income equal to expense	55	82.1
	Income higher than expense	7	10.4
Number of child	*Mean*: 1.85 ± 0.763 (*range*: 1-4)		
Smoking	Yes	17	25.4
	No	50	74.6
Duration of smoking (year)	*Mean*: 20.22 ± 6.638 (*range*: 5-30)		
Number of cigarette smoked per day (pcs)	*Mean*: 12.64 ± 3.003 (*range*: 10-18)		
Alcohol Use	Yes	14	20.9
	No	53	79.1
Frequency of Alcohol Use (per month)	*Mean*: 1.77 ± 0.832 (*range*: 1-4)		
Family History of	Yes	24	35.8

Breast Cancer	No	43	64.2
Type of Breast Cancer	Benign	12	17.9
	Malign	11	16.4
Age of Breast Disease Diagnosis	*Mean*: 44.02 ± 8.493 (*range*: 15-61)		
Time from diagnosis (month)	*Mean*: 12.91 ± 20.082 (*range*: 2-156)		

Table 1. Distribution of Patients According to Disease Characteristics (contd.)

Characteristic	Category	n	%
Treatment Applied After Diagnosis of Breast Disease	Chemotherapy	66	98.5
	Radiotherapy	17	25.4
	Hormonal therapy	27	40.3
	Surgical treatment	65	97.0
Date of Surgery (month ago)	*Mean*: 12.69 ± 19.716 (*range*: 1-156)		
Breast Surgery Operation	Mass excision	29	43.3
	Lumpectomy	18	26.9
	Mastectomy, total	13	19.4
	Mastectomy, left	2	3.0
	Mastectomy, right	2	3.0
	Nipple sparing mastectomy	2	3.0
	Back muscle tissue with tumor	1	1.5
Chronic/Systemic Disease Other Than Breast Disease	No	37	55.2
	Yes	30	44.8
Chronic/Systemic Disease	Anemia	1	1.5
	Asthma	5	7.5
	Diabetes	11	16.4
	Migraine	1	1.5
	Hypertension	12	17.9
	Thyroid	13	19.4
Caregivers	My family	67	100
Preoperative Information	Yes	66	98.5

Status	No	1	1.5
Person who Provided Preoperative Information	Physician	67	100
	Nurse	58	86.6
	Anesthesiologist	43	64.2
Satisfaction with Information	Yes	55	82.1
	No	12	17.9
Health Status within the last 3 Months	*Mean*: 5.10 ± 1.458 (*range*: 1-8)		

Table 2. Distribution of the Patients according to the Scores given by them to the Patient Learning Needs Scale items (N=67)

Items	$\overline{x}$	±SD
Drugs		
3. How do each of my drugs work?	4.63	0.546
8. What should I do if a drug-related side effect develops?	4.76	0.430
16. How long should I take each of my drugs?	4.67	0.613
18. How should I take each of my drugs (before or after meals etc.)?	4.57	0.633
37. Why should I take each of my drugs?	4.48	0.746
39. What are the possible side-effects of my drugs?	4.55	0.634
44. When should I take each of my drugs?	4.57	0.609
45. Where/how can I obtain my drugs?	4.60	0.629
Life Activities		
2. What should I do to maintain my energy/power?	4.46	0.502
5. What should I do if I have a trouble emptying my bowel?	4.37	0.714
14. When can I return to work/housework?	3.24	1.232
17. How long should I rest?	4.60	0.629
27. How should I prepare my meals (non-fat, unsalted etc.)?	4.58	0.581
28. What are the foods I should and should not eat?	4.60	0.629
29. What should I do if I don't get enough sleep?	4.46	0.636
30. Which activities should not I do (such as lifting weight)?	4.63	0.573
48. Which activities should I do?	4.69	0.499
Society and Follow-up		
6. What should I do in my home care?	4.58	0.555
9. Where can my family get help to cope with my disease?	4.60	0.524

22. Where can I apply when I have an urgent health problem at home?	4.70	0.551
31. How can I benefit from healthcare institutions in an emergency?	4.60	0.552
36. How can I communicate with social groups (such as patient associations)?	4.39	0.717
41. How will I go to home from clinic?	3.33	1.064
Feelings about the Situation		
7. How can I speak with my family and friends about my disease?	4.28	0.714
24. What are the cause(s) of my disease?	4.36	0.753
32. Who can I talk to about my feelings about life/death?	4.22	0.918
35. Where can I get help to cope with my feelings about my disease?	4.34	0.686
42. How can I define my feelings about my disease?	4.30	0.798
Treatment and Complications		
1. What are the problems that may occur at home and should I pay attention to?	4.33	0.860
4. How can I notice the problems that may occur at home?	4.58	0.555
10. What are the problems that may occur due to my disease?	4.72	0.486
19. Who will follow-up my treatment?	4.60	0.698
20. What are the possible side effects of my treatment?	4.75	0.472
23. Who should I call for help at home?	4.58	0.527
Treatment and Complications		
26. What should I do if I have a trouble urinating?	4.46	0.659
38. How should I prevent the problems that may develop due to my disease and treatment?	4.66	0.565
47. What are the purposes of my treatment?	4.67	0.504
Quality of Life		
11. How will this disease affect my future?	4.51	0.587
13. What are the symptoms of my disease?	4.43	0.891
15. How should I relieve my pain?	4.70	0.493
21. What should I do when symptoms of my diseases appears?	4.76	0.430
34. Which vitamins and supplementary foods should I take?	4.49	0.683
40. How can I cope with stress?	4.27	0.730
46. How can I keep away from stress?	4.51	0.704
50. How will this disease affect my life?	4.51	0.587
Skin Care		
12. When can I take bath or shower?	4.19	0.743
25. How should I care for the surgical wound?	4.66	0.664
33. How should I take proper care of my feet?	2.73	1.067

43. How should I prevent the formation of wound in my skin?	4.58	0.607
49. How should I prevent the formation of redness in my skin?	4.42	0.678

Table 3. The Results of the Patient Learning Needs Scale Item-Total Score Correlation Analysis and the Cronbach Alpha Value (N=67)

Items	Item-Total Score Correlation		Cronbach α
	r_s	p	
Drugs			.795
3. How do each of my drugs work?	0.576**	.000	
8. What should I do if a drug-related side effect develops?	0.354**	.000	
16. How long should I take each of my drugs?	0.354**	.003	
18. How should I take each of my drugs (before or after meals etc.)?	0.446**	.000	
37. Why should I take each of my drugs?	0.416**	.000	
39. What are the possible side-effects of my drugs?	0.468**	.000	
44. When should I take each of my drugs?	0.448**	.000	
45. Where/how can I obtain my drugs?	0.458**	.000	
Life Activities			.732
2. What should I do to maintain my energy/power?	0.547**	.000	
5. What should I do if I have a trouble emptying my bowel?	0.518**	.000	
14. When can I return to work/housework?	0.246*	.045	
17. How long should I rest?	0.442**	.000	
27. How should I prepare my meals (non-fat, unsalted etc.)?	0.607**	.000	
28. What are the foods I should and should not eat?	0.561**	.000	
29. What should I do if I don't get enough sleep?	0.460**	.000	
30. Which activities should not I do (such as lifting weight)?	0.532**	.000	
48. Which activities should I do?	0.628**	.000	
Society and Follow-up			.399
6. What should I do in my home care?	0.676**	.000	
9. Where can my family get help to cope with my disease?	0.407**	.000	
22. Where can I apply when I have an urgent health problem at home?	0.376**	.000	
31. How can I benefit from healthcare institutions in an emergency?	0.363**	.000	
36. How can I communicate with social groups (such as patient associations)?	0.457**	.000	
41. How will I go to home from clinic?	0,159	197.	

Feelings about the Situation			.633
7. How can I speak with my family and friends about my disease?	0,212	.085	
24. What are the cause(s) of my disease?	0.586**	.000	
32. Who can I talk to about my feelings about life/death?	0.378**	.000	
35. Where can I get help to cope with my feelings about my disease?	0.531**	.000	
42. How can I define my feelings about my disease?	0.597**	.000	
Treatment and Complications			.742
1. What are the problems that may occur at home and should I pay attention to?	0.595**	.000	
4. How can I notice the problems that may occur at home?	0.322**	.008	
10. What are the problems that may occur due to my disease?	0.545**	.000	
19. Who will follow-up my treatment?	0.313**	.010	
20. What are the possible side effects of my treatment?	0.322**	.008	
23. Who should I call for help at home?	0.251*	.041	
26. What should I do if I have a trouble urinating?	0.637**	.000	
38. How should I prevent the problems that may develop due to my disease and treatment?	0.445**	.000	
47. What are the purposes of my treatment?	0.556**	.000	
Quality of Life			.803
11. How will this disease affect my future?	0.498**	.000	
13. What are the symptoms of my disease?	0.471**	.000	
15. How should I relieve my pain?	0.337**	.005	
21. What should I do when symptoms of my diseases appears?	0.388**	.001	
34. Which vitamins and supplementary foods should I take?	0.492**	.000	
40. How can I cope with stress?	0.507**	.000	
46. How can I keep away from stress?	0.774**	.000	
50. How will this disease affect my life?	0.436**	.000	
Skin Care			.453
12. When can I take bath or shower?	0.460**	.000	
25. How should I care for the surgical wound?	0.499**	.000	
33. How should I take proper care of my feet?	0,159	.200	
43. How should I prevent the formation of wound in my skin?	0.423**	.000	
49. How should I prevent the formation of redness in my skin?	0.491**	.000	
Overall Cronbach α			**.933**

Table 4. Relationships between the Patient Learning Needs Scale Scores (N=67)

Items	F1. Drugs r_s	F2. Life Activities r_s	F3. Society and Follow-up r_s	F4. Feelings about the Situation r_s	F5. Treatment and Complications r_s	F6. Quality of Life r_s	F7. Skin Care r_s	Total Score r_s
F1. Drugs	1,000							
F2. Life Activities	0.568**	1,000						
F3. Society and Follow-up	0.379**	0.690**	1,000					
F4. Feelings about the Situation	0,209	0.496**	0.576**	1,000				
F5. Treatment and Complications	0.677**	0.709**	0.517**	0.521**	1,000			
F6. Quality of Life	0.548**	0.636**	0.496**	0.624**	0.756**	1,000		
F7. Skin Care	0.436**	0.552**	0.500**	0.380**	0.528**	0.445**	1,000	
PLNS Total Score	0.716**	0.859**	0.730**	0.693**	0.871**	0.831**	0.661**	1.000

r_s: Spearman's correlation coefficient

Table 5. Comparison of the Patient Learning Needs Scale Scores according to the Employment Status of the Patients (N=67)

	Employment Status	N	$\bar{x}$	±sd	X^2_{kw}	p
Drugs	Employed	41	37.37	2.605		
	Retired	12	36.25	3.137	1.407	.495
	Unemployed	14	35.71	4.250		
Life Activities	Employed	41	40.10	3.270		
	Retired	12	39.33	2.188	1.975	.372
	Unemployed	14	38.50	4.973		
Society and Follow-up	Employed	41	26.22	2.092		
	Retired	12	26.50	1.243	0.227	.893
	Unemployed	14	25.86	2.568		
Feelings about the	Employed	41	21.78	2.455	3.181	.204

Situation	Retired	12	20.42	2.429		
	Unemployed	14	21.64	2.499		
Treatment and Complications	Employed	41	41.98	2.403		
	Retired	12	41.08	1.929	4.121	.127
	Unemployed	14	39.71	4.874		
Quality of Life	Employed	41	36.54	2.794		
	Retired	12	36.33	2.807	1.003	.605
	Unemployed	14	35.00	5.054		
Skin Care	[a]Employed	41	21.07[(a.b)]	2.078		
	[b]Retired	12	19.83	1.946	7.691	**.021**
	[c]Unemployed	14	19.79	2.259		
PLNS Total Score	Employed	41	225.05	14.541		
	Retired	12	219.75	9.882	3.410	.182
	Unemployed	14	216.21	23.423		

X^2_{kw}: Kruskal-Wallis Test

Table 6. Comparison of the Patient Learning Needs Scale Scores according to the Income Status of the Patients (N=67)

	Income Status	**N**	$\overline{x}$	**±sd**	X^2_{kw}	**p**
Drugs	Income less than expense	5	31.40	5.550		
	Income equal to expense	55	37.20	2.468	5.559	.062
	Income higher than expense	7	37.71	2.430		
Life Activities	Income less than expense	5	35.40	5.273		
	Income equal to expense	55	39.91	3.357	4.118	.128
	Income higher than expense	7	40.43	1.397		
Society and Follow-up	Income less than expense	5	24.00	2.915		
	Income equal to expense	55	26.42	1.969	4.561	.102
	Income higher than expense	7	26.00	1.291		
Feelings about the Situation	Income less than expense	5	19.00	4.301		
	Income equal to expense	55	21.64	2.197	3.201	.202
	Income higher than expense	7	22.29	2.360		
Treatment and Complications	[a]Income less than expense	5	35.40	6.229		
	[b]Income equal to expense	55	41.75[(a)]	2.128	8.008	**.018**
	[c]Income higher than expense	7	42.43[(a)]	2.637		

Quality of Life	Income less than expense	5	29.8	7.085		
	Income equal to expense	55	36.65	2.398	5.117	.077
	Income higher than expense	7	37.00	2.000		
Skin Care	Income less than expense	5	16.60	3.209		
	Income equal to expense	55	20.89[(a)]	1.750	9.639	**.008**
	Income higher than expense	7	21.00[(a)]	1.528		
PLNS Total Score	Income less than expense	5	191.60	32.254		
	Income equal to expense	55	224.45	11,941	5.470	.065
	Income higher than expense	7	226.86	9,974		

X^2_{kw}: Kruskal-Wallis Test

**Table 7. Comparison of the Patient Learning Needs Scale Scores according to the Patients'
Satisfaction with Preoperative Information (N=67)**

	Satisfaction with Information	N	$\bar{x}$	±sd	Z_{mwu}	p
Drugs	Yes	55	37.07	3.161	-1.711	.087
	No	12	35.67	2.839		
Life Activities	Yes	55	40.25	3.116	-2.970	**.003**
	No	12	36.75	4.093		
Society and Follow-up	Yes	55	26.40	2.033	-1.854	.064
	No	12	25.25	2.006		
Feelings about the Situation	Yes	55	21.36	2.527	-0.950	.342
	No	12	22.17	2.209		
Treatment and Complications	Yes	55	41.53	3.293	-1.851	.064
	No	12	40.50	1.883		
Quality of Life	Yes	55	36.15	3.643	-0.750	.453
	No	12	36.33	1.875		
Skin Care	Yes	55	20.69	2.243	-1.388	.165
	No	12	20.08	1.676		
PLNS Total Score	Yes	55	223.45	16.840	-1.988	**.047**
	No	12	216.75	12.843		

Z_{mwu}: Mann-Whitney U Test

Discussion

The fact that the number of individual with a family member suffering from breast cancer has increased day-by-day is thought to be directly related to increased incidence of breast cancer (National Comprehensive Cancer Network, 2007). Psychological and social aspects of the concept of risk with epidemiologic (i.e. related with epidemic diseases) and medical aspects should not be disregarded. It is a well-known fact that individuals who experience cancer through their relatives experience cancer intensively together with them and feel the emotional impact of cancer to the same extent as them. Information needs studies, which were conducted to determine the priorities of cancer patients and to enable healthcare professionals to use time correctly, prevent patients from drowning in excessive information thus pushing them under more stress in this disease-related stressful period, and have also vital importance in order to enable a patient to reach accurate information when he/she needs. The results obtained from this descriptive study carried out to determine the education needs of the patients who underwent breast surgery with 67 adult patients were discussed below.

The average age of the patients participating in this study was found to be 45.04 ± 8.039 years. In the study carried out by Acikgoz et.al (2015), the average age of the patients was 35±8 years. When the distribution of the patients participating in the study by their education status was examined, it was determined that 34.3% of them were primary school graduate and 32.8% of them were high school or university graduate. In the study carried out by Gulcihan and Topcu (2017), 46% of the patients were primary school graduate. It was determined that 61.2% of the patients were employed, 17.9% of them were retired and 20.9% of them were unemployed. In the study carried out by Çakir et.al (2016), 70% of the patients were housewife.When the distribution of the patients by their monthly income was examined, it was found that 7.5% of them had income lower than expense, 82.1% of them had income equal to expense and 10.4% of them had income higher than expense. In the study on breast cancer patients which was carried out by Gulcihan and Topcu (2017), 49% of the patients had income equal to expense. It was determined that 25.4% of the patients participating in the study were

smoker. Accordingly, it was determined that the mean duration of smoking was 20.22 ± 6.638, and the number of cigarettes smoked per day was 12.64 ± 3.003 pieces. In the study carried out by Cakir et.al (2016), 77.6% of the patients were smoker.

It was found that 20.9% of the patients were using alcohol and their frequency of alcohol use per month was 1.77 ± 0,832 times. In the study carried out by Cakir et.al (2016), 97.9% of the patients were not using alcohol. It was determined that 35.8 of the patients participating in the study had a family history of breast cancer. Accordingly, when the breast cancer type was examined, it was determined that 17.9% of them had a family history of benign breast cancer and 16.4% of them had a family history of malign breast cancer. In the study carried out by Cakir et.al (2016), it was reported that 74.1% of the patients had no family history of breast cancer, 21% of them had a family history of malign breast cancer and 4.9% of them had a family history of benign breast cancer. The study results supported our study.

When the distribution of the patients by the treatment after being diagnosed with breast cancer, it was found that 98.5% of the patients underwent chemotherapy, 25.4% of them underwent radiotherapy, 40.3% of them received hormonal therapy and 97% of them underwent surgical treatment. In the study carried out by Cakir et.al (2016), 33.3% of the patients underwent surgical treatment. It was found that the patients participating in the study underwent surgery 12.69 ± 19,716 months ago in average. When the distribution of the patients by breast surgery was examined, it was found that 43.3% of them underwent mass excision, 26.9% of them underwent lumpectomy, 19.4% of them underwent total mastectomy, 3% of them underwent left mastectomy, 3% of them underwent right mastectomy, 3% of them underwent nipple sparing mastectomy and 1.5% of them underwent surgery for back muscle tissue with tumor.

It was determined that 44.8% of the patients participating in the study had a chronic or systemic disease other than breast cancer. Accordingly, 1.5% of the patients had anemia, 7.5% of them had asthma, 16.4% of them had diabetes, 1.5% of them migraine, 17.9% of them had hypertension and 19.4% of them had thyroid disease.   It was determined that almost all patients (98.5%) were

informed before the surgery. When the distribution of the patients participant in the study by the person who informed them before the surgery was examined, it was determined that all the patients were informed by physician, 86.6% of them by nurse and 64.2% of them by anesthesiologist. 82.1% of the patients were satisfied with the information. It was determined that health status identification varied from 1 to 8 within the last 3 months, and the mean value was 5.10 ± 1.458.

In this study, it varied between 0.39 and 0.80 according to the analysis results. The Croncbach alpha value for the total scale was 0.93 and sufficient. Catal and Dicle (2007) who carried out the Turkish validity and reliability study of the Patient Learning Needs Scale determined the scale's internal consistency as 0.95, and reported that the internal consistency was 0.74 for the "Drugs" sub-dimension, 0.82 for the "Life Activities" sub-dimension, 0.82 for the "Society and Follow-up" sub-dimension, 0.78 for the "Feelings about the Situation" sub-dimension, 0.83 for the "Treatment and Complications" sub-dimension, 0.85 for the "Quality of Life" sub-dimension, and 0.69 for the "Skin Care" sub-dimension. The validity levels were similar to the original study.

The Patients Learning Needs Scale, which is crucial for enabling patients to find the information they need and for determining the amount of information rather than the extent of information provided to patients, allows informing patients accurately and sufficiently. An individual can reach exact information on his/her disease only when he/she is informed by a physician or a nurse. When the distribution of the scores given by the patients to the Patient Learning Needs Scale items was examined, it was found that the perception of importance was high in the subjects that determine concern about emergencies in line with the following items; "What should I do if a drug-related side effect develops?", "What should I do when symptoms of my diseases appears?", "What are the possible side effects of my treatment?", "What are the problems that may occur due to the disease?", "How should I relieve my pain?", "Where can I apply when I have an urgent health problem at home?" . Other learning needs were found to include the following items; "Which activities should I do?, "What are the purposes of my treatment?", "How should I prevent the problems that may develop due to my disease and treatment?",

"How should I care for the surgical wound?", "'How do each of my drugs work", "Which activities should not I do (such as lifting weight)?", "How long should I take each of my drugs?", "How long should I rest?", "What are the foods I should and should not eat?", "Where can my family get help to cope with my disease?", "How can I benefit from healthcare institutions in an emergency?" and "Who will follow-up my treatment" . It is important to act in accordance with an individual-specific plan under the guidance of a nurse and physician responsible for education who can answer all the patient's questions on these issues.

One of the subjects evaluated in the study was the education needs of the patients according to their age groups. Although this evaluation showed that there was no statistically significant difference between the groups, the learning need declines with advancing age (p>0 .05). Generally speaking, this can be explained by the fact that learning becomes difficult and the desire for learning declines with advancing age. This may be also explained by the fact that younger individuals have less experience of the disease and are expected to have higher awareness. As stated as a result of Catal's study in 2008 and also Chesnick's study (1992), no statistically significant difference was found between the ages of patients who had undergone coronary artery bypass grafting and information needs during discharge period. It is crucial to evaluate the relationship between age group and information needs of patients within the frame of different studies. The sample chosen may have caused the insignificance of the differentiation.

When the Patient Learning Needs Scale was compared according to the marital status of the patients, no statistically significant difference was found (p> .05). When the Patient Learning Needs Scale was compared according to the educational status of the patients, no statistically significant difference was found (p> .05). Although an increase was observed in the total mean scores from the PLNS scale as education level increases in patients whose learning needs were examined with respect to educational status, it can be concluded that this increase was not statistically significant. To investigate and question the surgeries they had, and problems and complications accompanying these surgeries is the attitude generally expected from patients with high educational level. Accordingly,

the opinion that patients with high educational level will have high awareness level prevails. The studies conducted on discharge educational needs are in parallel with the aforementioned study. It is stated that patients with high educational level have more learning needs than patients with low educational level since they care their health more and are capable of reaching information about their diseases/health conditions. It can be said that the findings obtained were in support of the literature.

When evaluated in terms of employment status, the "Treatment and Complications" means and the "Skin Care" sub-dimension scores of the patients with income equal to or higher than expense were significantly higher than those of the patients with income lower than expense (p<.05). When evaluated in terms of employment status, the "Treatment and Complications" means and the "Skin Care" sub-dimension scores of the patients with income equal to or higher than expense were significantly higher than those of the patients with income lower than expense. In Carew's study (1999) on patients who had undergone cardiac catheterization, learning needs were also identified and it was stated as a result of the study that the learning needs increased as income level increased. However, Erdogan (2012) investigated the learning needs of patients who had undergone open heart surgery and concluded that the learning needs of patients with high income level and patients whose income and expense is in parallel were higher that than those of patients with low income level. Similarly, in a study conducted by Demirkıran in 2011, it was also stated that the learning needs of patients with high income level were higher. Given all these findings, it can be said that the increase in income level increases the idea that they have the right to get more information, and that income level and learning need may be inversely proportional with each other. The opinion that the different results obtained may be the result of the patient groups studied and the designs of the studies conducted.

When the Patient Learning Needs Scale was compared according to the smoking status of the patients, the difference was not found to be statistically significant (p> .05). It was found out that the age when patients were diagnosed with breast cancer did not cause any significant differentiation (p> .05). As a result of the study

conducted by Suhonen et al. in 2005 on the relationship between the information received from hospitals and the information provided to patient, it was determined that the information needs of younger patients were higher than other patients. As a result of the study conducted by Tan et al. in 2013, it was found out that the information needs of patients in 18-25 age group were higher. Yılmaz and Ozkan (2015) stated that the information needs of individuals above 50 years of age were higher than other individuals while Cetinkaya and Asiret determined that the information needs of individuals above 60 years of age were higher in a study they conducted in 2017. However, Demirkan and Uzun (2012), Erdogan (2012) and Tasdemir et al. (2010) suggest that there was no relationship between age and the total scores and sub-dimension scores obtained from the Patient Learning Needs Scale. No statistically significant similarity was found between age and the Patient Learning Needs Scale as a result of these studies. It can be said that conflicting results obtained from different studies for age concept is closely related with sample and disease characteristics of the relevant studies. To put it more explicitly, some patients need more information to protect their health due to some issues as a result of old age while young individuals may feel the information need more intensely due to their desire to be educated and informed on how their living conditions will be affected in post-operation period. The "Life Activities" sub-dimension and "PLNS Total" scores of patients who found pre-operation informing sufficient were higher than the patients who did not found them sufficient (p< .05). In the similar studies conducted on cancer in the literature, the subjects that patients needed to be informed about most were found to be the treatments to be applied on patients as well as other treatment options, whether the disease spread and the course of the disease, information on emergence of the disease, symptoms and complications, disease and supportive treatment, daily life activities and life standard (Beaver, Bogg, Luker, 2001; McCaughan, Prue, Parahoo, 2009; Suhonen et.al., 2005). Similarly, the results obtained from this study also showed that the subjects that patients struggling with cancer needed to be informed most were mainly treatment and complications. It is vital that cancer patients and their families are informed and supported. A professional discharge training is needed in order to

protect patients from possible side effects and to detect these side effects at an early stage and to sustain their care and treatment at home. Nurses can gain the knowledge and equipment enabling them to meet the needs of patients, to protect and improve their health through a pre-planned training according to the needs of patients (Yıldırım, Bayraktar, 2010; Catal, Dicle, 2008).

Conclusions and Suggestions: Patients need to be informed on subjects such as drug-related side effects, symptoms of the disease and actions to be taken, potential treatment-related side effects, potential disease-related issues, pain relief, where to apply in case an emergency health problem occur at home, treatment goals, potential issues due to disease and treatment, surgical wound care, activities permitted and the duration of rest. Accordingly, planning education considering the suitability of education methods to patient, providing educational booklets/brochures to patients and their families about the emergencies and complications that may occur after discharge, evaluating patient groups according to surgical interventions and developing similar studies with more comprehensive samples may be suggested.

Acknowledgements

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