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Learning Needs, Expectations and Views of General Surgery Patients

Genel Cerrahi Hastalarının Öğrenim Gereksinimleri, Beklenti ve Görüşleri

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ABSTRACT

***Objective**: This study was planned to determine the learning needs and expectations of general surgery patients and their views on the education provided.*
***Method**: 145 patients hospitalized in the general surgery clinic of a training and research hospital between December 2014-February 2015 constituted the population of this descriptive and cross-sectional study. The sample of the study consisted of 105 patients who met the inclusion criteria with a sampling error of 0.05.*
The "Personal Information Form" consisting of 12 questions and the "Patient Learning Needs Scale (PLNS)" were used as the data collection tools. Data analysis was performed in SPPS 20 (IBM Corp. Released 2011, Armonk, NY: IBM Corp.) statistical program with descriptive analysis, independent samples t-test, one-way analysis of variance and advanced analyses.
***Results**: In the study in which 52.4% of the participants were over the age of 50 and 55.2% of them were female, the majority indicated that the most effective education methods were verbal expression (51.4%) and practical expression (50.5%). It was determined that 60% and all of the participants wanted to be educated and informed before admission to the hospital and at discharge, respectively. According to the mean total PLNS score (208.39±12.50), it was determined that the learning needs of the patients were high. When the subscale scores of the scale were evaluated, it was determined that the patients had higher learning needs in the dimensions of "treatment and complications" (39.09±2.43), " activities of living" (36.01±3.91), " medications" (34.66±2.54), however, the dimension with the lowest learning needs was " feelings related to condition" (19.12±1.92).*
***Conclusion**: The results of the study indicated that surgical patients had high learning needs before discharge. Accurate diagnosis of patients' learning needs and expectations is important since it will increase the quality and effectiveness of discharge education.*

***Keywords:** Surgery, patient learning needs, nursing*

ÖZ

***Amaç**: Araştırma, genel cerrahi hastalarının öğrenim gereksinimlerini, beklentilerini ve verilen eğitime ilişkin görüşlerini belirlemek amacıyla planlandı.*
***Yöntem**: Tanımlayıcı ve kesitsel tipteki bu araştırmanın evrenini, Aralık 2014-Şubat 2015 tarihleri arasında bir eğitim ve araştırma hastanenin genel cerrahi kliniğinde yatan 145 hasta oluşturdu. Araştırmanın örneklemini ise, 0,05 örnekleme hatası ile araştırmaya dahil edilme kriterlerini karşılayan 105 hasta oluşturdu. Veri toplama aracı olarak 12 sorudan oluşan "Kişisel Bilgi Formu" ve "Hasta Öğrenim Gereksinimleri Ölçeği (HÖGÖ)" kullanıldı. Veri analizi, SPPS 20 (IBM Corp. Released 2011, Armonk, NY: IBM Corp.) istatistik programında, tanımlayıcı analizler, bağımsız gruplarda t testi, tek yönlü varyans analizi ve ileri analizler ile yapıldı.*
***Bulgular**: Katılımcıların %52.4'ünün 50 yaşın üzerinde ve %55.2'sinin kadın olduğu araştırmada, çoğunluk en etkili eğitim yönteminin sözlü anlatım (%51.4) ve uygulamalı anlatım (%50.5) olduğunu belirtti. Katılımcıların %60'ının hastaneye kabul öncesi, tamamının ise taburculukta eğitim almak ve bilgilendirilmek istedikleri belirlendi. HÖGÖ toplam puan ortalamasına göre (208.39±12.50) hastaların öğrenim gereksinimlerinin fazla olduğu saptandı. Ölçek alt boyut puanları değerlendirildiğinde, hastaların, "tedavi ve komplikasyonları" (39.09±2.43), "yaşam*

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aktiviteleri" (36.01±3.91), "ilaçlar" (34.66±2.54) boyutlarında öğrenim gereksinimlerinin daha fazla olduğu, öğrenim gereksinimlerinin en düşük olduğu boyutun "duruma ilişkin duygular" (19.12±1.92) olduğu saptandı.
***Sonuç**: Araştırma bulguları, cerrahi hastalarının taburculuk öncesi öğrenim gereksinimlerinin fazla olduğunu gösterdi. Hastaların öğrenim gereksinimlerinin ve beklentilerinin doğru tanılanması, taburculuk eğitiminin kalitesini ve etkinliğini artıracağından önemlidir.*

***Anahtar kelimeler:** Cerrahi, hasta öğrenim gereksinimleri, hemşirelik*

INTRODUCTION

Nowadays, due to the changing healthcare system, the length of hospital stay of the patients decreases and the self-care responsibilities of the patients and their families/caregivers increase [(1)], which requires the determination of the knowledge, attitudes and skills, that are of critical importance for the recovery of patients from the first day of hospitalization to discharge [(2)], the patient and his/her family/caregiver to receive the necessary education in a systematic, problem solving and quality/qualified manner [(1)]. Patient education as part of the educational role of the professional nurse plays a key role in improving the quality of care [(3,4)]. It is reported that nurses have significant roles in discharge, in which patient education is important [(2,5-7)]. Patient education at discharge is a multiple-stage process that includes adequate and comprehensive diagnosis of the existing and future needs of the patient, making appropriate decisions, and coordinating follow-up services [(2)]. It is emphasized in the studies that the recovery processes of patients provided with discharge education are reduced [(8)], repeated admissions to hospital/polyclinic and healthcare costs are reduced [(9,10)], their self-confidence and also self-care competencies increase [(11,12)].

Surgery is a branch of medicine in which some diseases and wounds are treated interventionally with cutting and piercing instruments. Surgical intervention may cause patients to have physical and psychological stress due to fear of the unknown [(13)]. Patient education has a significant role in the patient and his/her family/caregiver's adaptation to the new situation after surgical intervention, maintaining home care and treatment, prevention or early detection of possible complications, and the patient's ability to become self-sufficient in physical, psychological and social life as soon as possible [(14)]. To this end, it is important to determine the learning needs and priorities of surgical patients with appropriate measurement tools, and to evaluate their readiness to learn [(15-17)]. In this context, answers to the following questions were sought in this study, which was conducted to determine the learning needs and expectations of general surgery patients and their views on the education provided.

Research Questions:

1. What are the learning needs and expectations of general surgery patients?
2. What are the views of general surgery patients on the education provided?
3. What are the factors that affect the learning needs of general surgery patients?

METHOD

Type of the Study: The research is a cross-sectional, descriptive study.

Population and Sample of the Study: The study was conducted in a training and research hospital in Istanbul where general surgery patients from different regions of Turkey are admitted. 145 patients hospitalized in the general surgery clinic of this hospital between December 2014-February 2015 constituted the population of the study. The sample of the study consisted of 105 patients who met the inclusion criteria with a sampling error of 0.05.

The patients who;

- were at the age of 18 and older,
- could speak Turkish,
- had no psychiatric or physical problem that prevents communication
- were admitted to the institution on the first day,
- volunteered to participate in the study were included in the study.

Data Collection Tools: The data were collected using the "Personal Information Form", which was prepared by the researchers in accordance with the literature [(2,12,14)] and the "Patient Learning Needs Scale (PLNS)" [(18)].

Personal Information Form: The personal information form consisted of two parts. The first part included five questions aimed at determining

the descriptive characteristics of patients such as age, gender, marital status, educational status and profession. The second part included seven questions aimed at determining the patients "views on nurses' educational initiatives and their expectations for education and information.

The Patient Learning Needs Scale (PLNS): The Cronbach Alpha value of the scale, which was developed by Bubela et al. (1990) to determine the learning needs and priorities of surgical patients at discharge, was found to be 0.95 (Bubela et al. 1990). The scale was adapted to Turkish by Çatal and Dicle (2008) and its Cronbach Alpha value was calculated as 0.93 (Çatal and Dicle 2008). It is a 5-point Likert type scale (1= not important", "2= slightly important", "3= somewhat important", "4= very important", "5= extremely important") and consists of 50 items. The scale has seven sub-dimensions, including medications, activities of living, community and follow-up, feelings related to condition, treatment and complications, quality of life and skin care. The scale is evaluated over each sub-dimension and the total score of the scale. Medications are scored between "8-40", activities of living are scored between "9-45", community and follow-up are scored between "6-30", feelings related to condition are scored between "5-25", treatment and complications are scored between "9-45", quality of life is scored between "8-40", and skin care is scored between "5-25". The minimum and maximum scores to be obtained from the overall scale are "50" and "250", respectively. The fact that the mean total scale score approaches 250 indicates that the learning needs of the patients are high. High scores indicate the significance level (SL) of the learning need (Bubela et al. 1990; Çatal and Dicle 2008). The Cronbach Alpha value of the scale in this study was calculated as 0.90.

Data Collection: The data of the study were collected by researcher nurses between December 2014-February 2015. The patients were met on the first day of their admission to the general surgery clinic and their compliance with the research criteria was evaluated. The patients who met the research criteria were informed about the study and its aim, and the "informed consent form" was signed by those who agreed to participate in the study. First, the Personal Information Form was filled out by interviewing the patient, and the learning needs and expectations before and during admission to the hospital were determined. PLNS was applied to accurately determine the information needs and priorities of the patients, and the patients' views on the education provided by the nurses were evaluated. The application of the data form took an average of 20 minutes.

Evaluation of Data: Data analysis performed using the SPPS 20 (IBM Corp. Released 2011, Armonk, NY: IBM Corp.) statistical program. Number, percentage, mean, standard deviation, minimum and maximum values were given in descriptive statistics for categorical and continuous variables. "Shapiro-Wilks" test, skewness and kurtosis values were used to determine the suitability of the data to normal distribution. Parametric tests were used in the analysis of the data since all data were suitable for normal distribution. The homogeneity of the variances, which is one of the prerequisites of the parametric tests, was tested with Levene's test. Independent samples t-test, one-way analysis of variance (One-way ANOVA) and advanced analyzes (Tukey HSD test, Dunnett T3) were used for comparing the mean total scale score and the mean total subscale score according to independent variables. The significance level was considered as $p<0.05$.

Ethical Dimension of the Study: This study was conducted in accordance with the principles stated in the Declaration of Helsinki. Ethics Committee approval (02.04.2014/42), where the study was conducted, were obtained to conduct the study. Written permission was obtained from the authors via e-mail for the use of the scale. The patients who agreed to participate in the study were informed about the aim of the study and that participation in the study was based on voluntariness, and their written consent was obtained.

Limitations of the Study:
The fact that the data of the study were collected from a single center prevents the generalization of the results to all general surgery patients.

RESULTS

52.4% of the patients were over the age of 50, 55.2% of them were female, and the majority of them (78.1%) were married. 61.9% of them were primary school graduates and 41% of them were workers (Table 1).

Table 1. Characteristics of the Patients (n=105)

Features	n	%
Age (Years)		
≤ 50 years	50	47.6
≥ 51 years	55	52.4
Gender		
Female	58	55.2
Male	47	44.8
Marital status		
Married	82	78.1
Single	23	21.9
Education status		
Illiterate	18	17.1
Primary school graduate	65	61.9
High school and above*	22	21.0
Profession		
Housewife	43	41.0
Worker	43	41.0
Retired	19	18.0

** Undergraduate (n=4) ve graduate (n=1)*

While 60% of the patients indicated that they wanted to receive education before admission to the hospital, 37.1% and all of them indicated that they wanted to receive education during admission and at discharge, respectively. It was determined that the patients wanted to get information about the disease (98.1%), surgery (96.2%), necessary documents and items (92.4%), medications and treatment (91.4%) before admission to the hospital and about the hospital rules (96.2%), the things to do on the day of surgery (93.3%), the surgical team (92.4%) and the intensive care setting during admission to the hospital (Table 2). More than half of the patients indicated that the most effective education methods were verbal expression (51.4%) and practical expression (50.5%). While 68.6% of the patients stated that they found the education provided by nurses sufficient, 83.8% of them stated that they could easily ask questions to nurses and 62.9% of them found the answers given by nurses to their questions sufficient (Table 2).

The learning needs of the patients at discharge were evaluated by the PLNS (Table 3). According to the mean total scale score (208.39 points/250 points; SL= 4.1), it was determined that the learning needs of the patients were high. When the subscale scores

Table 2. Education Expectations and Opinions of Patients (n=105)

Features	n	%
When patients want to study *		
Before admission to the hospital	63	60.0
On admission to the hospital	39	37.1
On discharge	105	100.0
The subjects he wants to get information about before admission to the hospital*		
About the disease	103	98.1
About the surgery	101	96.2
About the necessary documents and items	97	92.4
About medicines and treatment	96	91.4
Matters he wants to get information about during admission to the hospital*		
Hospital rules	101	96.2
What to do on the day of surgery	98	93.3
Information about the surgery team	97	92.4
Information about the intensive care setting	96	91.4
The most effective training method for the patient *		
Verbal lecture	54	51.4
Narration by applying	53	50.5
Printed materials	8	7.6
Video demonstration	3	2.9
Training given by nurses according to patients		
Enough	72	68.6
Insufficient	33	31.4
Patients' ability to easily ask questions to nurses		
Yes	88	83.8
No	17	16.2
The patients' finding the answers of nurses sufficient		
Enough	66	62.9
Insufficient	39	37.1

** More than one answer was given.*

of the scale were evaluated, it was determined that the patients had higher learning needs in the dimensions of “medications” (SL=4.3) and “treatment and complications” (SL=4.3), however, they the dimension with the lowest learning needs was “emotions related to the situations” (SL=3.8) (Table 3).

Table 3. Patients' Mean PLNS total Score and Subscale Score

PLNS Sub Dimensions	Min.-Max.	$\bar{X}$ ± SD	Level of Importance *
Medications	29-40	34.66±2.54	4.3
Life Activities	27-44	36.01±3.91	4.0
Community and Monitoring	21-30	25.15±1.78	4.2
Emotions Related to the Situations	14-23	19.12±1.92	3.8
Treatment and Complications	34-45	39.09±2.43	4.3
Improving Quality of Life	27-39	33.26±2.17	4.2
Skin Care	17-25	21.10±1.72	4.2
TOTAL PLNS SCORE	181-244	208.39±12.50	4.2

*PLNS: The Patients Learning Needs Scale, * Out of 5 points*

Table 4. Patients' Most Important First Ten Learning Needs Regarding Discharge

Learning Needs	Min.-Max.	$\bar{X}$ ± SD
When can I take a shower or take a bath?	3-5	4.54±0.56
Where can I apply when I have an urgent health problem at home?	4-5	4.50±0.50
How should I care for the surgical wound?	4-5	4.48±0.50
How to manage the symptoms I have?	3-5	4.47±0.52
What the possible side effects of my teatments are?	3-5	4.46±0.52
Who to call for help?	4-5	4.46±0.50
How to get through the "red tape" in the health care system?	4-5	4.44±0.49
Where I can get my medication?	4-5	4.43±0.50
How to take each medication?	3-5	4.40±0.51
Who to see at follow-up?	3-5	4.40±0.51

It was determined that the most important learning needs of the patients at discharge were the answers to the questions of "When can I take a shower or take a bath? (4.54 points/5 points)", "Where can I apply when I have an urgent health problem at home? (4.50 points/5 points)" and "How should I care for the surgical wound? (4.48 points/5 points" (Table 4).

It was determined that gender, which is one of the descriptive characteristics of the patients, significantly affected the total PLNS score and the scores of other sub-dimensions except for the "treatment and complications" sub-dimension, and that the learning needs of women were significantly higher. It was found that the profession of the patients significantly affected the total PLNS score and all sub-dimension scores, and that the learning needs of housewives were significantly higher (Table 5).

DISCUSSION

Discharge education applied by considering the individual characteristics of the patients, and their values, needs, perceptions of the disease, diseases and hospital experiences, families and environments contributes to the shortening of the recovery period, reduction of treatment and care costs, increasing the quality of care, and reduction of complications. Therefore, while determining the learning needs of all hospitalized individuals, it should be taken into account that the information they need may differ from each other.

In this study which was conducted with 105 patients to determine the learning needs and expectations of general surgery patients and their views on the education provided, the descriptive characteristics of the participants (Table 1) are similar to the results of Çetinkaya and Aşiret [14].

Table 5. Comparison of the Patients' Introductory Characteristics and the Mean PLNS Total Scores and Sub-Dimensions

Features	n	PLNS and Sub Dimensions							
		Medications	Life Activities	Community and Monitoring	Emotions Related to the Situations	Treatment and Complications	Improving Quality of Life	Skin Care	Total
		$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD	$\bar{X}$ ± SD
Age (year)									
≤ 50 year	50	34.32±2.61	35.80±4.29	25.18±1.80	18.94±1.96	38.62±2.36	33.44±2.09	20.94±1.91	207.24±13.45
≥ 51 year	55	34.96±2.46	36.20±3.57	25.13±.78	19.29±1.87	39.51±2.44	33.09±2.25	21.25±1.53	209.44±11.59
t / p		-1.300 / 0.196	-0.522 / 0.603	0.151 / 0.880	-0.937 / 0.351	-1.892/ 0.061	0.822/ 0.413	-0.935/ 0.352	-20.892 / 0.371
Gender									
Female	58	35.16±2.32	38.50±2.44	25.55±1.74	19.81±1.71	39.79±2.28	34.10±1.77	21.69±1.45	214.60±9.86
Male	47	34.04±2.69	32.94±3.12	24.66±1.72	18.28±1.83	38.21±2.36	32.21±2.18	20.38±1.76	200.72±11.14
t / p		2.275 / **0.025**	3.657 / **<0.001**	2.625 / **0.010**	4.431 / **<0.001**	3.480 / 0.001	4.905 / **<0.001**	4.162 / **<0.001**	6.769 / **<0.001**
Marital status									
Married	82	35.54±2.63	35.94±3.69	25.09±1.86	19.07±1.95	39.07±2.43	33.22±2.10	21.16±1.70	208.09±212.40
Single	23	35.09±2.21	36.26±4.70	25.39±1.47	19.30±1.82	39.13±2.49	33.39±2.45	20.91±1.81	209.48±13.08
t / p		-0.917 / 0.361	-0.347 / 0.729	-0.727 / 0.469	-0.510 / 0.611	-0.099 / 0.921	-0.334 / 0.739	0.603 / 0.548	-0.471 / 0.639
Education status									
Illiterate	18	35.00±2.45	37.28±3.44	25.44±2.04	19.39±1.94	39.78±2.76	33.33±2.54	21.56±1.46	211.78±13.98
Primary school graduate	65	34.57±2.66	36.11±3.91	25.02±1.74	19.18±1.98	39.05±2.44	33.35±2.12	21.09±1.64	208.37±12.17
High school and above*	22	34.64±2.34	34.68±4.03	25.32±1.73	18.73±1.72	38.64±2.11	32.91±2.05	20.77±2.11	205.68±12.09
F / p		0.200/0.819	2.290/0.106	0.525/0.593	0.673/0.513	1.113/0.332	0.354/0.703	1.030/0.361	1.182/0.311
Meslek									
Emekli[a]	19	34.68±2.58	34.68±3.54	24.89±1.94	18.68±1.83	38.74±2.66	32.21±2.28	20.95±1.54	204.84±11.24
Ev hanımı[b]	43	35.49±2.27	38.49±2.32	25.91±1.74	20.00±1.75	40.07±2.18	34.14±1.90	21.88±1.58	215.98±10.07
İşçi[c]	43	33.81±2.56	34.12±4.04	24.51±1.47	18.44±1.80	38.26±2.27	32.84±2.09	20.40±1.64	202.37±11.39
F / p		5.030 / **0.008**	20.222/**<0.001**	7.735/**0.001**	8.902/**<0.001**	6.914/**0.002**	7.370/**0.001**	9.468/**<0.001**	18.191/**<0.001**
Fark		b>c	b>a,c	b>c	b>a,c	b>c	b>a,c	b>c	b>a,c

PLNS: The Patients Learning Needs Scale
t= t test in independent groups
F= One-way analysis of variance (One Way ANOVA)

The discharge process starts by recording the information about the patient during admission to the hospital and ends with the patient leaving the hospital after the treatment is completed [19]. Discharge education, which is an important part of the discharge process, should start with the admission of the individual to the hospital, and the patient's family/caregiver should be necessarily included in it [20]. In this study, while 60% of the patients indicated that they wanted to receive education before admission to the hospital, 37.1% and all of them indicated that they wanted to receive education during admission and at discharge, respectively (Table 2). In the study of Öztürk et al. [11], surgical patients and their relatives indicated that they wanted to receive education during their stay in the clinic and also when they needed. Dursun and Yılmaz [21] determined that the patients who were provided with education during admission to the hospital had higher learning needs compared to those who were provided with education before hospitalization. This result suggests that the education provided before hospitalization is further internalized by the patients and that their awareness increases. Şenyuva and Taşocak [1] indicated that the time of education should be determined by considering the patient's readiness to learn, the diagnosis of the patient, the goals, content, methods, tools and materials of the education, and the length of hospital stay of the patients. In the same study, it was also emphasized that there may be some difficulties in determining the appropriate time due to reasons such as "shortening the length of hospital stay of the patients" in patient education, and that the nurses should choose the time when the patient's attention is high/intense, and they should support the education with tools and materials (brochures, etc.).

The surgical intervention process consists of three stages, which are preoperative, intraoperative and postoperative. The education of the patient and his/her family is one of most important nursing activities in the preoperative period, that starts with the decision of surgical intervention [22]. The education provided during this period is very important in preparing the surgical patient for the surgical intervention physically and mentally. In the study, it was determined that the patients wanted to get information about the disease (98.1%), surgery (96.2%), necessary documents and items (92.4%), medications and treatment (91.4%) before admission to the hospital and about the hospital rules (96.2%), the things to do on the day of surgery (93.3%), the surgical team (92.4%) and the intensive care setting during admission to the hospital (Table 2). This result of the study suggests that information about the things to do on the day of surgery, the surgical team, and the operating room and intensive care setting is an effective factor for the emotional relaxation of the patient and the development of a sense of trust.

More than half of the patients indicated that the most effective education methods were verbal expression (51.4%) and practical expression (50.5%). While 68.6% of the patients stated that they found the education provided by nurses sufficient, 83.8% of them stated that they could easily ask questions to nurses and 62.9% of them found the answers given by nurses to their questions sufficient (Table 2). In the study of Öztürk et al. [11], 47% of surgical patients indicated that they found the education provided by nurses sufficient, and more than half of them stated that the education was in the form of short verbal information. Unlike this study, the reason why more patients (68.6%) found the education provided by nurses sufficient in the study may be the use of practical expression apart from verbal information in education. Furthermore, the fact that the majority of the patients stated that they could easily ask questions to the nurses may have positively affected their views on the adequacy of education by allowing them to ask questions they did not understand. Although verbal education is a method in which the nurse is active, its effectiveness should be increased with other techniques. The fact that the teaching methods and techniques used during the education appeal to as many senses as possible is known to increase the effectiveness of the education [24]. In the studies, it was indicated that effective verbal patient education, which was planned in line with the needs of the individual, improved the care abilities of patients after discharge and reduced morbidity and mortality rates [3,23]. Therefore, the learning styles, health literacy and cultures of the individuals should not be ignored in verbal education, and the effectiveness of the education provided should be evaluated and the education should be recorded [23].

In the study, according to the mean total score of the PLNS (208.39±12.50/250; SL= 4.1), it was determined that the learning needs of the patients were high. When the subscale scores of the scale were evaluated, it was determined that the patients had higher learning needs in the dimensions of "treatment and complications" (39.09±2.43; SL=4.3), "activities of living" (36.01±3.91; SL=4.0), and

"medications" (34.66±2.54; SL=4.3), however, they the dimension with the lowest learning needs was "emotions related to the situations" (19.12±1.92; SL=3.8) (Table 3). Similar to the studies conducted in Turkey [14,16,25-28] and abroad [29,30], in this study, it was determined that patients had higher total PLNS scores and higher learning needs before discharge in the sub-dimensions of treatment and complications, medications, and activities of living. Medication is an important part of post-discharge treatment. However, the drugs used may lead to unwanted side-effects as well as expected effects. The proper use of medications after discharge is important in terms of preventing the complications related to treatment and care, shortening the recovery period and increasing the quality of life. The fact that the patients will take the responsibility of the treatment planned to be continued after discharge is considered as the reason they want to increase their knowledge about the treatment and drugs. Furthermore, education on drugs provided within the scope of patient safety is very important for maintaining the practices related to treatment and care after discharge. It is very important for nurses to create an environment of trust so that patients can express their needs for "feelings related to condition". In this study, the fact that the patients were informed about the their diseases and the symptoms and causes, and the presence of social support systems where they can share their feelings may have led to low needs of the patients for "feelings related to condition".

It was determined that the most important learning needs of the patients at discharge were the answers to the questions of "When can I take a shower or take a bath? (4.54±0.56; SL=4.54)", "Where can I apply when I have an urgent health problem at home? (4.50±0.50; SL=4.544.50)" and "How should I care for the surgical wound? (4.48±0.50; SL=4.48)" (Table 4). The complications such as surgical site infection and wound dehiscence are among the potential complications after surgical intervention [31]. After the patients are discharged from the surgery clinic, they may usually have limitations in their activities of living at home due to incision wounds. Therefore, surgical patients may need more information about bathing and wound care compared to other patients.

It was determined that gender, which is one of the descriptive characteristics of the patients, significantly affected the total PLNS score and the scores of other sub-dimensions except for the "treatment and complications" sub-dimension, and that the learning needs of women were significantly higher. It was found that the profession of the patients significantly affected the total PLNS score and all sub-dimension scores, and that the learning needs of housewives were significantly higher (Table 5). Similarly, in the study of Tan et al. [2], Özel [32], Suhonen et al [33], the mean total PLNS scores of female patients and mean scores for all sub-dimensions were found to be significantly higher compared to male patients. In the study of Demirkıran and Uzun, it was determined that housewives' learning needs were significantly higher [34]. The current literature and the research finding draw attention to the fact that patients' professions may affect their learning needs, which is supported by the fact that the housewife patients within the scope of the study had significantly higher learning needs, especially about the "activities of living", which include housework.

CONCLUSION AND RECOMMENDATIONS

In the study in which that the majority of surgical patients found the education and responses given by the nurses sufficient, it was determined that they had higher learning needs before discharge. In the study in which that the majority of the patients stated that both verbal and practical education methods were effective, it was determined that female patients and housewives had higher learning needs. The results of the study draw attention to the importance of accurate diagnosis of the expectations and learning needs of surgical patients, and carrying out the education planned specifically to the needs of the patient with appropriate tools and methods at the proper time. In discharge education, understanding and supporting the role of nurses, and providing the necessary institutional support to increase the quality and efficiency of education is important since they will contribute to shortening the recovery process after discharge, reducing the cost of treatment and care, and increasing the quality of care and patient satisfaction.

Author contribution
Study conception and design: CS, YK, and SY; data collection: CS, YK, and SY; analysis and interpretation of results: CS, YK, and SY; draft manuscript preparation: CS, YK, and SY. All authors reviewed the results and approved the final version of the manuscript.

Ethical approval
The study was approved by the Gaziosmanpaşa Education and Research Hospital Clinical Research Ethics Committee (Protocol no. 42/02.04.2014).

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Conflict of interest
The authors declare that there is no conflict of interest.

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Araştırma fikri ve tasarımı: CS, YK ve SY; veri toplama: CS, YK ve SY; sonuçların analizi ve yorumlanması: CS, YK ve SY; araştırma metnini hazırlama: CS, YK ve SY. Tüm yazarlar araştırma sonuçlarını gözden geçirdi ve araştırmanın son halini onayladı.

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