ATATÜRK ÜNİVERSİTESİ YAYINLARI
ATATURK UNIVERSITY PUBLICATIONS

Research Article *Araştırma Makalesi* DOI: 10.17049/jnursology.1429749

Determination of Health Information-Seeking Behaviors of Surgical Patients via Internet/Social Media After Discharge

Cerrahi Hastalarının Taburcu Olduktan Sonra İnternet/ Sosyal Medya Yolu ile Sağlık Bilgisi Arama Davranışlarının Belirlenmesi

Pınar ONGUN[1]
Büşranur GÖNCEKLİ[2]

[1]Balıkesir University, Faculty of Health Sciences, Department of Nursing, Balıkesir, Türkiye
[2]Etlik City Hospital, Ankara, Türkiye

ABSTRACT

Objective: To determine the learning needs of surgical patients via the internet/social media after discharge.

Methods: This descriptive study's population comprised all patients discharged from the surgical clinics of a university hospital after surgery between 12 December 2021 and 04 April 2022. A total of 180 patients participated in the study. Data were collected using a form created by the researchers and the Patient Learning Needs Scale.

Results: The mean age of the patients who participated in the study was 52.48±16.78 years; 67.22% were female, and 50.55% were primary school graduates. It was determined that patients obtained most of their information from the YouTube application (39.34%), and after surgery, they used social media since it offered more accessible access to healthcare professionals. 42.22% of the patients answered "undecided" to the question "Are internet/social media applications a reliable source for obtaining information about surgery?" The participants' mean total score on the Patient Learning Needs Scale was 174.00±33.00, and the subscale with the highest importance level was considered skincare at 4.27 ±0.52.

Conclusion: Most discharged patients use the internet to seek information about their surgery. Their Patient Learning Needs Scale score was above average, and the highest subscale score was skincare. It is recommended that nurses working in surgical clinics consider the needs of patients when planning discharge education and provide them with reliable sources that can be accessed when needed.

Keywords: Discharge planning, learning needs, Internet, Surgery.

ÖZ

Amaç: Cerrahi hastalarının taburcu olduktan sonra internet/sosyal medya yolu ile öğrenme gereksinimlerinin belirlenmesi amaçlandı.

Yöntemler: Tanımlayıcı türde planlanan bu araştırmanın evrenini, 12 Aralık 2021 ve 04 Nisan 2022 tarihleri arasında bir Üniversitesi Hastanesinin cerrahi kliniklerinde ameliyat olup taburcu olan tüm hastalar oluşturdu. Toplamda 180 hasta örnekleme dahil edildi. Veri toplamada araştırmacılar tarafından literatür doğrultusunda geliştirilen Veri Toplama Formu ve Hasta Öğrenim Gereksinimleri Ölçeği kullanıldı.

Bulgular: Araştırmaya katılan hastaların yaş ortalamasının 52,48±16,78, %67,22'sinin kadın, %50,55'inin ilkokul mezunu olduğu belirlendi. Hastaların ameliyat öncesinde olacağı ameliyat ile ilgili en fazla YouTube (%39,34) uygulamasından bilgi edindikleri, ameliyat sonrası ise "sosyal medya aracılığıyla sağlık profesyonellerine ulaşmak daha kolay olduğu için" sosyal medyayı kullandıkları bulundu. Hastaların %42,22'si "internet/sosyal medya uygulamaları ameliyat ile ilgili bilgi edinmek için güvenilir kaynak mıdır?" sorusuna "kararsızım" cevabını verdi. Hasta öğrenme gereksinimi ölçeği sonuçlarına bakıldığında ölçek toplam puanı 174,00±33,00'dır ve en yüksek önemlilik düzeyi 4,27±0,52 ile cilt bakımı alt boyutudur.

Sonuç: Taburcu olan hastaların çoğunluğunun internetten bilgi arama davranışının olduğu, hasta öğrenme gereksinimleri ölçeği puanının ortalamanın üstünde ve en fazla puan alan alt boyutun cilt bakımı olduğu sonucuna ulaşıldı. Cerrahi kliniklerinde çalışan hemşirelerin taburculuk eğitimlerini planlarken hastaların ihtiyaçlarını göz önünde bulundurmaları ve onlara ihtiyaç duyulduğunda ulaşabilecekleri güvenilir kaynaklar sunmaları önerilmektedir.

Anahtar Kelimeler: Taburculuk planlaması, Öğrenme gereksinimi, İnternet, Cerrahi.

Geliş Tarihi/Received 01.02.2024
Revizyon Talebi/Revision Requested 26.05.2024
Son Revizyon/Last Revision 19.09.2024
Kabul Tarihi/Accepted 04.10.2024
Yayın Tarihi/Publication Date 05.12.2024

Sorumlu Yazar/Corresponding author: Pinar ONGUN
E-mail: pinar.ongun@yahoo.com

Cite this article: Ongun P. Göncekli B. Determination of health information-seeking behaviors of surgical patients via internet/social media after discharge. *J Nursology.* 2024;27(4):315-323. doi: 10.17049/jnursology.1429749

INTRODUCTION

The surgical process starts with the admission of the patients to the surgical clinic and continues until the end of their medical care. During the process, the patient is trained and prepared to take responsibility for individual care in the postoperative period. Discharge education in surgical patients should start from the preoperative period and continue until discharge from the hospital in a planned manner. The patient is informed and prepared to take responsibility for individual care in this process. Education to be provided for patients and their families before discharge should include wound care, nutrition, drugs to be used and their side effects, signs of infection, and hygiene.[1,2] In studies conducted with surgical patients, it has been recommended that these be done according to these needs.[3,4] High-quality discharge education prepares patients for home care and successful management of their recovery.[5]

With the increase in accelerated care protocols, patients' length of hospital stay has been shortened, and discharge education is now given in a shorter time[6], which leads patients to seek further information from different sources. Various educational resources are available for patients who have undergone surgery, but not all are reliable. The internet has become one of the most widely used sources to obtain information rapidly. Patients' failure to use reliable information sources can lead to medication errors, increased anxiety, incorrect treatment practices, and nutritional or lifestyle mistakes, which may adversely affect their recovery.[1] However, individuals can sometimes trust websites without considering the validity of the information published.[7]

In Turkey, the rate of households with internet access increased from 43% in 2011 to 94.1% in 2022.[8] Seeking health-related information ranks second among the internet use purposes of households.[9] In addition, the use of social media to obtain health information has rapidly increased in recent years.[10] In particular, a growing majority of patients with chronic conditions refer to social media and other online resources to acquire health-related information, connect with other people affected by similar conditions, and take on a more active role in their health-related decisions.[11] Also, in a study, Daraz et al.[12] stated that online health-related information may not be reliable.

In a previous study interviewing 1000 patients in the preoperative period, it was determined that 66% of these patients used the internet, and 56% stated that they used it to obtain the necessary information about health issues of interest.[14] In the literature, it is stated that patients widely use the Internet. During discharge training, information on where and how to access reliable information sources should be provided. It is essential for surgical nurses to be aware of this situation and to direct their patients to reliable information sources after discharge. While there is a limited number of studies in the literature investigating the post-discharge information resources of surgical patients[3,4,13], there have been no studies identified that explore learning needs via internet or social media. Therefore, in this study, we aimed to determine the post-discharge learning needs of surgical patients and their use of the internet/social media to meet these needs. This study makes an essential contribution to identifying the learning needs of surgical patients by examining their information-seeking behaviors via the internet and social media after discharge.

METHODS

Design

This descriptive study was conducted at a university hospital from December 2021 to April 2022 to assess post-surgical patients' internet and social media use for their learning needs.

Sample

The population of the study consisted of all patients that were discharged from the surgical clinics (general surgery, orthopedics, urology, ear, nose, throat and head and neck surgery, gynecology and obstetrics, plastic and reconstructive surgery, cardiovascular surgery) of the hospital after surgery. The study included volunteers who were 18 years of age or older, who were willing and eager to participate in the study, who did not have a condition that would affect decision-making (dementia, etc.), and who had undergone surgery with any surgical technique in the last 3 months. The sample consisted of 180 patients that met the inclusion criteria. In the power analysis, using an alpha margin of error of 5%, effect size of 0.2, and sample size of 180, the power was found to be 85%.

Data Collection and Instruments

Data were collected using a data collection form and the Patient Learning Needs Scale, for which necessary permission was obtained.[3,4,11,13,14]

Data Collection Form: The researchers created this form in light of the literature[3,4,11,13,14] and included 21 questions. Among the questions included in the data collection form are the age and gender of the patients, the type and time of the surgery they underwent, their status of receiving training and information from healthcare professionals in the pre-and postoperative period, which internet and

social media applications they prefer to obtain information about their surgery and why they prefer them, which topics they would like to be informed about, and their thoughts on the use of internet/social media applications for obtaining information for situations such as health/surgery.

Patient Learning Needs Scale (PLNS): This scale was first developed in 1990 by Bubela et al.[15] to determine the information needs of patients at discharge. The validity and reliability analyses of the Turkish version of the scale were undertaken by Çatal and Dicle[3] in 2008. The scale consists of 50 items and seven subscales. The total score varies between 50 and 250. As the total score obtained from the scale increases, the learning needs of individuals also increase. High scores indicate a higher importance of learning needs. The scores for the overall scale and its subscales are calculated by dividing the total score by the number of items in the scale. These results are then interpreted on a scale of 1 to 5, representing the following levels of importance: 1 - not necessary; 2 - slightly important; 3 - somewhat important; 4 - very important; 5 - extremely important. The Cronbach Alpha value of the scale was reported to be 0.93. The Cronbach alpha value for the current study was found to be 0.95.

The researcher visited the surgical unit outpatient clinics in the hospital and interviewed patients who met the inclusion criteria. More than one outpatient clinic was visited on the same day. Patient questionnaires were completed through one-on-one, face-to-face interviews lasting approximately 20 to 25 minutes. Data on the patient's post-discharge internet/social media use during surgery were collected using the Patient Learning Needs Scale.

Statistical Analysis

Statistical analysis was performed with SPSS 25.0 (SPSS for Windows, v. 25.0, Armonk, NY, 2017). Numeric data were reported as means with standard deviations, while categorical data were presented as frequencies and percentages. Descriptive statistics (mean, standard deviation, median, frequency, and rate) were used to evaluate the study data. Student's t-test was performed to assess two groups for normally distributed variables. The results were evaluated at the 95% confidence interval and *P*<.05 significance level.

Ethics Committee Approval

For this descriptive study, ethics committee approval was obtained from the Ethics Committee of Non-Interventional Research at Balıkesir University (Date: 23.11.2021, ID: 2021/34) and was conducted by the Declaration of Helsinki. Patients were informed that all information on the forms would be kept confidential and used solely for scientific purposes. Before data collection, the purpose and nature of the study were explained to the patients in detail, and verbal and written consent was obtained from the patients who volunteered.

RESULTS

The descriptive data of the patients: the mean age of the participants was 52.48±16.78 years, 67.22% were female, and 50.55% were primary school graduates (Table 1).

Table 1. Comparison of the total scores on Patient Learning Needs Scale according to patients demographic characteristics

Variables	n	%	Mean	SD	Test and *P*
Age			52.48	16.78	
Gender					
Female	121	67.22	176.13	34.38	t=0.572
Male	59	32.78	173.14	32.29	.577
Educational status					
Literacy	11	6.11	187.54	37.80	
Primary school	91	50.56	174.60	31.84	F=1.189
Middle school	13	7.23	184.30	21.69	.318
High school	48	26.66	168.27	33.41	
University	17	9.44	170.52	40.92	
Income status					
Income less than expenditure	24	13.33	168.37	33.28	F=0.527 .591
Income matches expenditure	80	44.45	176.20	32.19	
Income more than expenditure	76	42.22	173.75	33.77	
Surgical clinics					
Cardiac surgery	19	10.55	188.36	20.48	F=4.792
Urology	7	3.88	183.85	32.53	**<.001***
General Surgery	31	17.22	182.61	31.33	
Orthopedics	49	27.22	181.73	36.03	
Gynecology and Obstetrics	30	16.66	172.70	26.31	
Plastic and Reconstructive Surgery	10	5.55	154.70	41.53	
Neurosurgery	23	12.77	153.86	22.26	
Ear, nose, throat	9	5.00	142.44	34.27	
Time for surgery					F=2.585
0-14 days	109	60.56	33.23	3.18	.055
15-29 days	39	21.66	32.80	5.25	
30-59 days	13	7.22	24.26	6.73	
60-89 days	19	10.56	32.15	7.37	
Total	180	100			

*p<0.05, SD; Standart Deviation, t; T Test F;Analysis of variance

It was determined that 96.06% of the participants obtained information from healthcare professionals in the preoperative period and 99.44% in the postoperative period. Physicians provided information to the participants in both preoperative (83.74%) and postoperative (70.51%) periods. Of the participants, 42.22% were undecided

whether the internet/social media applications provided a reliable source to obtain information about surgery (Table 2). The participants obtained most information about surgery from the YouTube application (39.34%), and they used social media in the post-surgical period because it offered more accessible access to healthcare professionals. The participants reported that in the preoperative period, they sought information about what to expect in the postoperative period (e.g., fasting, nutrition, and hospital stay) (Table 2).

Table 2. Social Media/Internet Use of Patients

Surgical information	n	%
What subjects did you want to learn about before surgery?*		
What to expect after surgery (hospital environment. fasting period. etc.)	120	29.19
What to do after surgery	98	23.84
Possible postoperative complications	87	21.16
Preparation for surgery	42	10.21
Exercise	27	6.56
Nutrition	22	5.35
Other	15	3.64
What/who do you think is the most useful source of information in the postoperative period?*		
Physician	112	40.57
Each member of a multidisciplinary team (physician-nurse-physiotherapist-anesthetists-dietician)	83	30.07
Posts on social media accounts used by healthcare professionals	53	19.2
Nurse	17	6.15
Posts by social media users	9	3.26
Posts by closed groups on social media (Facebook. Instagram. etc.)	2	0.72
Do you think the internet/social media applications are reliable sources to obtain information about surgery?		
Yes	68	37.77
No	36	20
Undecided	76	42.22
Should internet/social media applications be used to obtain information on health/illness/surgery?		
Yes	134	74.44
No	46	25.55
Which social media platforms have you used to seek information about your surgery? *		
YouTube	**96**	**39.34**
Google	57	23.35
Instagram	40	16.39
Facebook	40	16.39
Other	11	4.49
Why do you prefer social media accounts to obtain postoperative information? *		
Because it is easier to access healthcare professionals on social media	105	48.83
To access surgical videos	31	17.22
Because I am reluctant to ask healthcare professionals questions	23	10.69
To obtain detailed information	14	7.78
To read the posts of individuals that have undergone surgery and interact with them	12	5.58
Because I trust the social media posts of individuals that have undergone surgery	12	5.58
Because I was not sufficiently informed by healthcare professionals before and after surgery	9	3.72
Other	9	3.72
If yes. why? *		
To contact individuals that have undergone the same surgery	11	27.5
To learn about the experiences of individuals that have undergone the same surgery	6	15
To obtain information about the postoperative period	5	12.5
To receive psychosocial support from other people in groups	5	12.5
To do preliminary research for surgery	4	10
To choose a physician/hospital	2	5
To decide whether to have surgery	2	5
To obtain information about the preoperative period	2	5
Other	3	7.5

*Participants were allowed to choose more than one option.

When the results of the Patient Learning Needs Scale were examined, it was determined that the total scale score was 174±33, which was above the average (Table 3). Among all the subscales, the highest level of importance was observed in skin care (4.27) and the lowest level of significance in feelings related to the condition (2.58). Table 3 presents the importance levels of all the subscales.

Table 3. Total and Subscale Scores in the Patient Learning Needs Scale

Scale and Subscales	Number of items	Scale score range	Patient score	Importance level
Skin Care	5	5-25	21.37 ± 2.61	4.27
Activities of Living	9	9-45	35.33 ± 6.34	3.97
Enhancing Quality of Life	8	8-40	29.35 ± 7.01	3.67
Treatment and Complications	9	9-45	32.85 ± 5.99	3.45
Medications	8	8-40	26.70 ± 7.56	3.34
Community and Follow-up	6	6-30	15.57 ± 5.20	2.59
Feelings Related to Condition	5	5-25	12.91 ± 5.97	2.58
Total	**50**	**50-250**	**174.00 ± 33.00**	**3.48**

The top 4 learning needs that were most important by patients: "What should I do to maintain my stamina (4.91)", "How to manage my pain? (4.89)" and "How to recognize a complication? (4.83)" (Table 4).

Table 4. Ten Learning Needs Identifying to Be Most Important for Patients

	Importance	
Learning needs	**Importance level**	**Standard deviation**
What should I do to maintain my stamina?	4.91	.362
How to manage my pain?	4.89	.388
How to recognize a complication?	4.83	.434
What services does home health care provide?	4.81	.596
How to care of cut/incision?	4.76	.620
When can I take a shower or bath?	4.72	.749
How to prevent my skin from getting red?	4.72	.717
How to prevent my skin from getting sore?	4.69	.813
How much rest I should be getting?	4.69	.711
What physical exercise I cannot do such as lifting?	4.59	1.002

No statistically significant difference was found in the total score on the Patient Learning Needs Scale and the subscale scores according to the gender and educational status of the patients (*P*>.05) (Table 1). There was no statistically significant difference in scores based on whether participants considered the internet or social media reliable sources for information about surgery (*P*>.05) (Table 5).

Table 5. Comparison of the Total Scores on Patient Learning Needs Scale According to Social Media/Internet Use of Patients

Variables	n	Mean	SD	Test	*P*
Do you think the internet/social media applications are reliable sources for obtaining information about surgery?				F=1.096	.337
Yes	68	172.95	31.90		
No	36	181.30	36.82		
Undecided	76	171.76	31.84		
Should internet/social media applications be used to obtain health/illness/surgery information?				t=-1.605	.113
Yes	134	171.75	32.23		
No	46	181.02	34.30		
Total	180				

DISCUSSION

Insufficient discharge education leads patients to seek further health information. They may use unreliable sources on the internet or the past experiences of others to obtain information about patients' care.[12] In the current study, we investigated the patients' post-discharge learning needs and their use of the internet/social media to meet them.

The mean age of the individuals participating in the study was 52.48±16.78; more than half of them were female and graduated from primary school, and no significant difference was found between the mean PNLS scores. Among the surgical clinics, it was determined that the patient group with the highest PNLS score was cardiac surgery, and the patient group with the lowest score was ear, nose, and throat. There was a significant difference between the groups (Table 1). In the Soyer et al.[13] study, the mean age of the patients was 46.8 ± 13.0, and 57% were female, while high school graduates were in the majority in terms of education. In another study, it was found that the mean age of the patients was 58.45 ± 10.07, most were male and primary school graduates.[23] When the scale scores were analyzed, the groups had no significant difference.[23]

A considerable percentage of patients included in this study stated that they used YouTube to obtain information about their surgery, and the majority preferred the internet/social media because it offered more accessible access to healthcare professionals. Almost half of the patients considered the internet/social media as a reliable source that could be used to seek health-related information. 40% of the patients stated that the doctor was the most helpful source of information in the postoperative period, and 30% said that it was each of the multidisciplinary team members (Table 2). In a study conducted in Turkey to investigate the general internet use of patients, it was determined that health information obtained from the internet strengthened decision-making processes.[9] In another study, it was reported that 40.9% of participants 'sometimes' used the internet to research health-related issues.[16] Eler Çelik et al.[14] interviewed 1000 patients in the preoperative period to determine their internet use. The authors found that 55.9% of the patients sought information about their disease on the Internet before surgery, and 43.7% considered the Internet helpful in accessing health-related information.[12] Patients' behavior in seeking health-related information from unreliable sources can be reduced by providing adequate education planned according to their learning needs during the surgical process. This education should also include information on reliable sources of information to which patients can refer.

In this study, we determined that the post-discharge learning needs of the patients were above the average. When studies conducted in the country were examined, the learning needs scores of patients admitted to general surgery clinics, undergoing open heart surgery, undergoing surgery, and being admitted to internal medicine and surgery clinics were also found to be above the average.[13,17,18] Similar results were reported in studies conducted with patients hospitalized or discharged from surgical clinics in other countries.[19–21] These findings reveal a consistent trend worldwide that points to the importance of meeting patient education and information needs in the post-discharge period.

When the Patient Learning Needs Scale subscales were ordered according to their scores, it was determined that the skin care subscale received the highest score (Table 3). A previous study on the learning need perceptions of patients undergoing primary coronary intervention, and the nurses who provided care for them found that the patients had the most learning needs related to skin care.[19] In contrast, in another study examining the learning needs of internal and surgical patients, the skin care subscale was reported to have the lowest level of importance.[22] These contrasting findings suggest that learning needs may vary significantly depending on the type of surgery and patient population, highlighting the necessity for tailored educational interventions.

In studies in the literature, the highest scores mainly were obtained from the subscales of treatment and complications[13,21,23,24] and medications[13,22]. In the current study, data were collected during the follow-up visit of the patients after discharge, while in most previous studies, data collection was undertaken before patients were discharged.[13,17,19,25] Patients' needs may differ during their hospital stay and after discharge, explaining the differences in study findings. These observations underscore the importance of assessing learning needs at multiple time points to understand and fully address the evolving educational requirements of patients.

In a study by Mosleh et al.[19], patients' perceived learning needs and the nurses' perception of the learning needs of their patients were investigated. In both groups, the skin care subscale had the highest score. However, the subscales with the second and third highest scores differed between the patients and nurses. In that study, it was determined that there were differences in the

perceptions of patients and nurses concerning patient needs.[19] This again shows that nurses should be aware of the importance of the needs of patients.

In this study, the lowest level of importance of the subscale was determined to be feelings related to the condition (Table 3). Consistently, in another study examining the post-discharge learning needs of patients who had undergone open heart surgery, the feelings related to the condition subscale were reported to have the lowest score.[23] Similarly, different studies reported that this subscale had the lowest score.[11,19,21,23,26] In a study evaluating patients who had undergone thoracic surgery, the two minor subscales were determined to be feelings related to the condition (3.80) and community and follow-up (3.81).[24] In the current study, feelings related to the condition (2.58) and society and follow-up (2.59) were the two subscales with the lowest levels of importance. The results of this study agree with the literature. These consistent findings indicate that patients may prioritize emotional and social aspects less, suggesting current patient education approaches that may need to be addressed.

The most crucial learning need of the patients included in this study was "What should I do to maintain my stamina?" with an importance level of 4.91. This was followed by "How to manage my pain?" (4.89) and "How to recognize a complication?" (4.83) (Tablo 4). In the literature, the most critical learning needs concern when to shower or bath[19] or what to do when the symptoms of the disease appear.[11] The results of our study indicate the need to focus more on issues that will be tackled and paid attention to at home when planning discharge education to be provided by nurses.

In the study, the higher post-discharge information needs of patients who thought that the internet or social media were not reliable sources of information and that these platforms should not be used for obtaining information about health and surgery indicate that these individuals need to access accurate and reliable information, especially about the surgical process, and that they feel this need more (Table 5). However, the fact that there was no statistically significant difference between the groups reveals that information is an essential need for all patients in general and may be at similar levels regardless of internet use preference.

Limitations

The study's limitations include not assessing patients' internet and social media behaviors, technology access, and digital literacy levels. It was conducted in a single center and included patients from various surgical clinics.

This study investigated surgical patients' internet/social media use to meet their post-discharge learning needs. According to the research results, the patients had more learning needs after discharge, the most learning needs in skin care, and the least in feelings related to the condition. They also mostly considered that the internet and social media could be used to obtain health-related information.

It is recommended that nurses working in surgical clinics consider the needs of patients when planning discharge education and provide them with reliable sources that can be accessed when needed. To enhance the effectiveness of patient education, nurses should first assess and identify the specific learning needs of each surgical patient. This can be achieved through individualized assessments and validated tools to gauge patients' knowledge gaps and concerns. Based on these assessments, nurses should develop a tailored education plan that addresses the identified needs, ensuring that critical areas such as wound care, medication management, potential complications, and lifestyle modifications are thoroughly covered. Additionally, providing patients with easy-to-understand, evidence-based educational materials and directing them to trustworthy online resources can help reinforce the information provided during discharge education. Continuous follow-up and support, including scheduled check-ins and access to a dedicated helpline or online platform for questions, can ensure that patients feel supported and informed throughout their recovery. Due to the reduced hospital stay of surgical patients, discharge education should be planned and undertaken in the shortest time possible, and nurses should aim to provide comprehensive discharge information.

Etik Komite Onayı: Etik kurul onayı Balıkesir Üniversitesi Sağlık Bilimleri Girişimsel Olmayan Araştırmalar Etik kurulundan (Tarih: 23.11.2021, Sayı: 2021/34) alınmıştır.
Hasta Onamı: Gönüllü olan hastalardan sözlü ve yazılı onam alındı.
Hakem Değerlendirmesi: Dış bağımsız.
Yazar Katkıları: Fikir- PO, BG; Tasarım- PO, BG; Denetleme- PO, BG; Kaynaklar- PO, BG; Veri Toplanması ve/veya İşlemesi PO, BG; Analiz ve/ veya Yorum- PO, BG; Literatür Taraması- PO, BG; Yazıyı Yazan- PO, BG; Eleştirel İnceleme- PO, BG
Çıkar Çatışması: Yazarlar, çıkar çatışması olmadığını beyan etmiştir.
Finansal Destek: Yazarlar, bu çalışma için finansal destek almadığını beyan etmiştir.

Ethics Committee Approval: Ethics committee approval was obtained from Balıkesir University Health Sciences Non-Interventional Research Ethics Committee (Date: 23.11.2021, Number: 2021/34)
Informed Consent: Verbal and written consent was obtained from the patients who volunteered.
Peer-review: Externally peer-reviewed.
Author Contributions: Concept - PO, BG; Design- PO, BG;

Supervision- PO, BG; Resources- PO, BG; Data Collection and/or Processing- PO, BG; Analysis and/or Interpretation- PO, BG; Literature Search- PO, BG; Writing Manuscript- PO, BG; Critical Review- PO, BG

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

1. Akyolcu N. Postoperative Nursing Care. In: Aksoy G, Kanan N, Akyolcu N, ed. *Surgical Nursing* I. 2nd Edition. Istanbul: Nobel Medical Bookstores; 2017:335-365.
2. Fındık ÜY. The Surgical Process: Postoperative Care and Prevention of Complications. In: Aslan Eti F, ed. *Surgical Care.* 1st Edition. Ankara: Akademisyen Bookstore; 2016:425-453.
3. Çatal E, Dicle A. A Validity and Reliability Study of The Patient Learning Needs Scale in Türkiye. *DEUHEFED.* 2008;1(1):19-32. https://acikerisim.deu.edu.tr/xmlui/bitstream/handle/20.500.12397/13969/19-32.pdf?sequence=1&isAllowed=y
4. Güçlü A, Kurşun Ş. Learning Needs at Discharge of Patients Hospitalized in the General Surgery Clinic. *Journal of Anatolia Nursing and Health Sciences*. 2017;20(2):107-113. https://dergipark.org.tr/tr/download/article-file/348661
5. Weiss ME, Piacentine LB, Lokken L, et al. Perceived readiness for hospital discharge in adult medical-surgical patients. *Clin Nurse Spec*. 2007;21(1):31-42. https://doi.org/10.1097/00002800-200701000-00008
6. Ljungqvist O, Young-Fadok T, Demartines N. The History of Enhanced Recovery after Surgery and the ERAS Society. *J Laparoendosc Adv Surg Tech A.* 2017;27(9):860-862. https://doi.org/10.1089/lap.2017.0350
7. Goldstein N, Hadidi N. Impact of bariatric pre-operative education on patient knowledge and satisfaction with overall hospital experience. *Bariat Nurs Surg Pat.* 2010;5(2):137-144. https://doi.org/10.1089/bar.2010.992
8. Turkish Statistical Institute. Household Information Technology (IT) Usage Survey. Accessed December 24, 2022. https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2024-53492
9. Çetin İ, Özhanlı Y, Üniversitesi İ, Nightingale F. The characteristics of internet usage of surgical patients accessing health information. *KOU Sag Bil Derg*. 2018:44-49. https://doi.org/10.30934/kusbed.409937
10. Rammohan R, Dhanabalsamy, Nisha Cheeyandira, Abhiman Menzo Emanuele Lo Szomstein, Samuel Rosenthal R. Impact of Social Media on Bariatric surgery. *Surg Obes Relat Dis.* 2016;12(7):129-130. https://doi.org/10.1016/j.soard.2016.08.237
11. George DR, S RL, Kraschnewski JL. Dangers and opportunities for social media in medicine. *Clin Obstet Gynecol*. 2013;56(3):1-10. https://doi.org/10.1097/GRF.0b013e318297dc38
12. Daraz L, Morrow AS, Ponce OJ, et al. Can Patients Trust Online Health Information? A Meta-narrative Systematic Review Addressing the Quality of Health Information on the Internet. *J Gen Intern Med*. 2019;34(9):1884-1891. https://doi.org/10.1007/s11606-019-05109-0
13. Soyer Ö, Candan Y, Yavuz M. Determination of Patient Learning Needs of Surgical Patients. *DEUHEFED.* 2018;11(3):200-208. https://dergipark.org.tr/tr/download/article-file/752762
14. Eler Çevik B, Yüce Y, Erkal KH. Preoperative Evaluation of Internet Usage Characteristics of Patients in an Anesthesiology Clinic: A Survey of 1000 Patients. *South Clin Istanb Eurasia*. 2018;28(4):266-271. https://doi.org/10.14744/scie.2018.13007
15. Bubela N, Galloway S, McCay E, et al. The Patient Learning Needs Scale: reliability and validity. *J Adv Nurs.* 1990;15(1081-1087). https://doi.org/10.1111/j.1365-2648.1990.tb01711.x
16. Hassankhani H, Haririan H, Jafari A, Porter JE, O'Brien F, Feizollahzadeh H. Learning Needs of Iranian Patients with Coronary Heart Disease: A Cross-sectional, Comparative Study. *Clin Nurs Res*. 2021;30(2):193-199. https://doi.org/10.1177/1054773819898808
17. Zülfikar H. The internet usage behaviour and access patterns of the patients to the health information on the internet. *Florence Nightingale J Nurs*. 2014;22(1):46. https://dergipark.org.tr/tr/pub/fnjn/issue/30811/333287
18. Özyurt T, Aydemir Y, Aydın A, et al. Health information seeking behaviour from internet and television and related factors. *Sakarya Tıp Dergisi*. 2020;10(1):1-10. https://dergipark.org.tr/tr/download/article-file/1174981
19. Mosleh SM, Eshah NF, Almalik MMA. Perceived learning needs according to patients who have undergone major coronary interventions and their nurses. *J Clin Nurs*. 2017;26(3-4):418-426. https://doi.org/10.1111/jocn.13417
20. Eshah NF. Jordanian acute coronary syndrome patients' learning needs: Implications for cardiac rehabilitation and secondary prevention programs. *Nurs Health Sci*. 2011;13(3):238-245. https://doi.org/10.1111/j.1442-2018.2011.00608.x
21. Kurt G, Loerzel VW, Hines RB, et al. Learning Needs of Women Who Undergo Robotic Versus Open Gynecologic Surgery. *J Obstet Gynecol Neonatal Nurs.* 2018;47(4):490-497. https://doi.org/10.1016/j.jogn.2018.04.133
22. Çetinkaya F, Aşiret GD. Identification of learning needs of patients in medical and surgical units. *DEUHEFED.* 2017;10(2):93-99. https://dergipark.org.tr/tr/download/article-file/752970
23. Gökçen M. Determination of information needs of patients with open heart operation and anxiety levels after discharge. PhD Thesis. Hasan Kalyoncu University; 2018.
24. Guven B, Ibrahimoglu O, Elbuken B. Learning Needs of Patients and Their Caregivers After Ambulatory Surgery. *J Perianesth Nurs.* 2020;35(3):283-287. https://doi.org/10.1016/j.jopan.2019.10.012
25. Savcı C, Karaaslan Y, Yüksel S. Learning Needs, Expectations and Views of General Surgery Patients. *JAREN.* 2021;7(2):76-85. https://doi.org/10.55646/jaren.2021.71602

26. Üstündağ H, Gül A, Özkaya B. The Determination of Patient Learning Needs After Day Surgery: A Cross-. *J Perianesth Nurs.* 2023;38(2):258-263. https://doi.org/10.1016/j.jopan.2022.06.002