

Determination of Surgical Fear Levels of Patients Undergoing Day Surgery: Cross Sectional and Descriptive Study

Günübirlik Cerrahi Geçirecek Hastaların Cerrahi Korku Düzeylerinin Belirlenmesi: Kesitsel ve Tanımlayıcı Çalışma

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ABSTRACT Objective: The aim of the study is to determine the level of fear of surgery in day surgery patients. **Material and Methods:** The research is cross-sectional descriptive. In the day surgery unit; a total of 162 patients who underwent surgery in the interventional branches of general surgery, orthopedics, plastic surgery, urology and mammography were included. In data collection; "patient identification characteristics form" and "Surgical Fear Scale" prepared by the researchers were used. The data were analyzed in SPSS 24.0 program using number, percentage, mean, standard deviation, median, t-test, Mann-Whitney U, one way analysis of variance and Kruskal-Wallis (KW) statistics. **Results:** The level of fear of surgery in patients who will undergo day surgery (25.26±18.16) was found to be low. Women versus men (t=3.79, p<0.001); It was determined that the patients who will undergo mammographic interventional procedures, those who have plastic surgery and urology surgery (KW=6.86, p<0.001) and those who have general anesthesia have a statistically higher mean score for fear of surgery than those who have local anesthesia (KW=5.47, p<0.05). **Conclusion:** Surgical fear levels were low in day surgery patients. Gender, anesthesia type and type of surgery affected surgical fear level.

ÖZET Amaç: Bu çalışmanın amacı, günübirlik cerrahi hastalarında ameliyat korku düzeylerini belirlemektir. **Gereç ve Yöntemler:** Araştırma kesitsel tanımlayıcı tiptedir. Günübirlik cerrahi ünitesinde; genel cerrahi, ortopedi, plastik cerrahi, üroloji ve mamografik girişimsel alanında ameliyat olan toplam 162 hasta araştırmaya dâhil edildi. Veri toplama; araştırmacılar tarafından literatür gözden geçirilerek hazırlanan "hasta tanımlayıcı özellikler formu" ve "Cerrahi Korku Ölçeği" kullanıldı. Veriler SPSS 24.0 programında sayı, yüzde, ortalama, standart sapma, medyan, t-testi, Mann-Whitney U, tek yönlü varyans analizi ve Kruskal-Wallis (KW) istatistikleri kullanılarak analiz edildi. **Bulgular:** Günübirlik cerrahi geçirecek hastaların, cerrahi korku düzeylerinin (25,26±18,16) düşük olduğu belirlendi. Kadın hastaların erkek hastalara göre (t=3,79, p<0,001); mamografik girişimsel işlem yapılacak olan hastaların, plastik cerrahi ve üroloji ameliyatı yapılan hastalara göre (KW=6,86, p<0,001) ve genel anestezi uygulanan hastaların lokal anestezi uygulanan hastalara göre (KW=5,47, p<0,05) puan ortalamasının istatistiksel olarak cerrahi korku düzeyi puan ortalamasının daha yüksek olduğu belirlendi. **Sonuç:** Günübirlik cerrahi geçirecek hastaların, cerrahi korku düzeylerinin düşük olduğu belirlenmiştir. Cinsiyet, anestezi tipi ve ameliyat türü hastaların cerrahi korku düzeyini etkilemektedir.

Keywords: Day surgery; fear; nursing care

Anahtar Kelimeler: Günübirlik cerrahi; korku; hemşirelik bakımı

Day surgery is a surgical procedure in which most of the patients who are found suitable as a result of preoperative medical evaluations are operated and discharged on the same day. In an ambulatory surgery unit, patients usually discharged within 1-6 hours, however, longer stays may be required in case more surgical procedures needed.^{1,2}

Nowadays, day surgery preferred because of its advantages such as high patient satisfaction, shorter hospital stay, early mobilization, less hospital-acquired infection and venous thromboembolism, low mortality and morbidity rates, and faster return to daily life.²⁻⁴ Nunes et al. found that day surgery patients experienced less complications than hospital-

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ized patients and in day surgery patients the rate of re-admission to the hospital after surgery was found to be lower. Developments in the field of surgery and anesthesia in the world have positively affected day surgery.³ With recent developments, day treatment can be applied to a wide range of patient groups.⁵

In addition, the literature reported that patients experience various emotions such as fear, anxiety, and nervousness before the planned surgery.⁶ In the study of Karadağ Arlı, preoperative surgical fear was frequently encountered in patients awaiting surgery and it was found that 41% of preoperative surgical patients felt fear and 31% felt nervousness.⁶ These negative emotions experienced by the patients before surgery also affect postoperative recovery period negatively.

Nurses provide the completion of the physiological and psychological preparations and education of patients who undergone day surgery in pre-operative stage. During the preoperative stage, patients' diagnostic test results and their eligibility for the day surgery are evaluated. The patient's vital signs are collected, and his/her weight is recorded. Relevant specialists are consulted for the treatment of conditions that may prevent day surgeries such as hypertension and anemia. Patients are informed verbally or in writing by nurses about the practices they will do on the day of surgery and the points they should pay attention to. Depending on the policy of the institution, patients can be called via phone to make the necessary reminders before surgery and after discharge. In literature, day surgery and nursing care studies mostly focused on patient education.^{7,8}

Nurses working in day surgical units have important roles in informing the patient and their family about post-operative care and home care of the patient, as well as identifying the needs of day surgery units, developing solutions for them and collaborating within the team. In addition to the needs of the patient, the training content should include surgery-specific care, restraint and activities, post-operative position, post-discharge complications at home (pain, bleeding, insomnia, etc.), and treatment and care. Caregiver of the patients especially at home,

should be involved in the training. This person must also be physically and mentally competent. Since the nurse-patient relationship is limited, the nurse should determine the training requirements and provide training for caregivers starting from the patient's admission to the day surgical unit. It is thought that the education given to patients reduces surgical fear and anxiety and increases patient satisfaction.^{2,7}

In the process of day surgery, the nurse-patient relationship is limited. As a result, it may be more difficult to reduce the feelings such as fear, anxiety, and pre-operative experiences of the patients. Therefore, the patient and patient's family needed to be supported as the preoperative preparation time of the patients in the day surgery units is short. For this purpose, it is important to eliminate common fears experienced by patients regarding the surgery and improve pre-operative nursing care. Patients should be allowed to express their fears, deficiencies in information should be addressed and nursing care should be planned considering all these.⁹

Considering the day surgery and nursing care studies, more emphasis is placed on patient education.^{7,8} However, no descriptive study was found regarding the fear levels of patients from surgery. In this study, it was aimed to determine the level of fear of surgery in day surgery patients. It is thought that in day surgery determining preoperative fear levels will contribute to the planning of nursing interventions to reduce fear and anxiety, thus reducing the negative effects of surgical stress on the body, accelerating wound healing and decreasing surgical complications.

RESEARCH QUESTIONS

In day surgery;

1. What are the fear levels of day surgery patients?
2. What is the level of fear of surgery according to sociodemographic characteristics in day surgery patients?
3. What is the level of fear of surgery according to clinical characteristics in day surgery patients?

MATERIAL AND METHODS

STUDY DESIGN

In this study design was a cross sectional and descriptive.

SAMPLE

The population of study consisted of the 162 patients who admitted to day surgery unit in İzmir, Türkiye between March and August 2019. Of the patients, 53.1% underwent plastic surgery, 20.4% interventional mammography, 13.6% urology, 8.6% general surgery and 4.3% orthopedics.

Patients who do not have speech and hearing problems, who can speak and understand Turkish, those who are over the age of 18, those who do not have psychiatric problems and who do not use antipsychotic, antidepressant and anxiolytic drugs and scheduled for general surgery, plastic surgery, mammographic intervention, neurosurgery, ear nose throat and day surgery patients in the fields of urology were included.

DATA COLLECTION TOOLS

First of all, the patients were informed about the study. Written and verbal consent was then obtained. Data were collected on the day of surgery by face-to-face interview method. It took approximately 10-15 minutes for patients to complete the patient information form and the surgical fear questionnaire (SFQ).

PATIENT INFORMATION FORM

In this form, which was prepared by the researchers by reviewing the literature, the findings affecting the fear levels of patients in day surgery were revealed. The form consists of 11 questions about socio-demographic (age, education level, gender, marital status, social security) and surgical characteristics [American Society of Anesthesiologists (ASA) score, chronic diseases, previous surgery history, type of anesthesia, type of surgery].

SFQ

Theunissen et al., developed SFQ to state the fear level elective surgery patients. The questionnaire was likert type and consisted of eight items. The questionnaire is scored among 0 and 10 points. None

points means I am not afraid at all and 10 points means I am very afraid. In scale; there are 2 sub-dimensions in the scale, with items 1 to 4 identifying fear of the short-term results of the surgery, and items 5 to 8 being fear of the long-term results of the surgery. The total score of the 4 items that make up the 2 sub-dimensions of the scale gives the subscale scores, and the total score of all the items gives the total score of the scale. The total score of the entire questionnaire is a minimum of 0 and a maximum of 80. The total score of each of the sub-scales is minimum 0 and maximum 40. High scores from the scale indicate a high level of fear.¹⁰

Bağdigen and Karaman Özlü performed the Turkish validity and reliability of the scale. In their survey, the total Cronbach alpha was calculated as 0.93. Cronbach's alpha values for each item ranged from 0.71 to 0.82. Cronbach's alpha for sub-dimensions was found to be 0.90 and 0.96.¹¹

STATISTICAL ANALYSIS

Analysis of the data was performed in IBM SPSS Statistics Standard Concurrent User V 24 (IBM Corp., Armonk, New York, USA). Frequency, percentage, arithmetic mean, standard deviation and median were used in the analysis of the data of patient descriptive characteristics. Two-option questions; between gender, marital status, social security, chronic disease and surgery history and Surgical Fear Scale total score average; the difference between the 2 means was examined using the significance test (t test) of the 2 differences in the questions with normal distribution, and the Mann-Whitney U test in the questions that did not show normal distribution. Multiple choice questions; the relationship between education level, type of surgery, type of anesthesia and ASA score and the mean total score of the Surgical Fear Scale was evaluated using the one-way analysis of variance test in those with normal distribution, and the Kruskal-Wallis (KW) test in those with no normal distribution. The relation among the age of the patients participating in the study and the mean total score of the Surgical Fear Scale was analyzed using Pearson correlation analysis, as it showed normal distribution. Statistical significance of the tests was reported at $p < 0.05$.

ETHICAL CONSIDERATIONS

Non-Interventional Clinical Researches Ethics Committee of Dokuz Eylül University was approved the study (date: February 13, 2019, no: 2019/03-42). In addition, Theunissen et al. and Bağdigen and Karaman Özlü confirmed the use of SFQ by e-mail. Before any data were collected, patients were knowing concerning the study.^{10,11} Patients' written permission was obtained. The principles of the Declaration of Helsinki were complied with at every stage of the study.

RESULTS

As a result of statistical analyzes, 54.3% of the patients were female, 69.8% were married, 42.6% graduated from university or higher, and there were no illiterate patients; 96.3% of the patients had social security. The patients average age were found to be 48.36 ± 16 . The most common day surgical operations are anal fistula repair, wrist reduction, nevus excision, cystoscopy, and breast mass excision. Of the day surgery patients, 53.1% were plastic surgery patients, 35.2% were applied local anesthesia, 64.8% had an ASA 2 score, 59.9% did not have a chronic disease and 78.4% had a history of surgery (Table 1).

The total scores the patients gave to the SFQ was determined as 25.26 ± 18.16 , the lowest total score was 0, the highest total score was 76. When the mean scores given by the patients to the questions of the Surgical Fear Scale were examined; it has been observed that patients fear the short-term results of the surgery most about pain, and the long-term results of the surgery are most afraid of the long recovery period (Table 2).

When the characteristics of the patients and the mean scores of surgical fear were compared; observed that the mean scores of surgical fear level of the patients were different from each other according to gender. The mean score of the surgical fear level of women were significantly higher than that of men ($t=3.79$, $p<0.001$).

Statistically significant difference was found between the mean scores (KW=6.86, $p<0.001$) when the mean scores of the patients were compared with

TABLE 1: Socio-demographic and surgical characteristics (n=162).

Characteristics	n	%	
Gender			
Female	88	54.3	
Male	74	45.7	
Marital status			
Single	49	30.2	
Married	113	69.8	
Type of surgery			
General surgery	14	8.6	
Orthopedics	7	4.3	
Plastic surgery	86	53.1	
Urology	22	13.6	
Mammographic interventional	33	20.4	
Anesthesia type			
General anesthesia	14	8.6	
Regional anesthesia	15	9.3	
Local anesthesia	57	35.2	
Deep sedation	41	25.3	
The ASA score			
ASA 1	51	31.5	
ASA 2	105	64.8	
ASA 3	6	3.7	
Chronic illness			
Yes	65	40.1	
No	97	59.9	
Surgery history			
Yes	127	78.4	
No	35	21.6	
	Minimum-maximum	̄X	SD
Age	18-85	48.36	16.81

ASA: American Society of Anesthesiologists; SD: Standard deviation.

TABLE 2: Score distribution of the items of surgical fear questionnaire (n=162).

Items of surgical fear questionnaire	̄X±SD	Median
1) I am afraid of the operation.	2.96±2.83	2.00
2) I am afraid of the anaesthesia.	2.65±2.59	2.00
3) I am afraid of the pain after the operation.	3.62±2.88	3.00
4) I am afraid of the unpleasant side effects (like nausea) after the operation.	2.99±2.73	2.00
5) I am afraid my health will deteriorate because of the operation.	3.24±3.12	2.00
6) I am afraid the operation will fail.	3.02±3.09	2.00
7) I am afraid that I won't recover completely from the operation.	3.09±3.15	2.00
8) I am afraid of the long duration of the rehabilitation after the operation.	3.62±3.13	3.00

SD: Standard deviation.

TABLE 3: Comparison of surgical features and surgical fear questionnaire average scores (n=162).

Characteristics	n	$\bar{X}\pm SD$	Test value	p value
Type of surgery				
General surgery	14	3.49±2.07	KW=6.86	0.00
Orthopedics	7	3.17±2.16		
Plastic surgery	86	2.60±2.01		
Urology	22	2.46±1.61		
Mammographic interventional	33	4.67±2.59		
Anesthesia type				
General anesthesia	49	4.16±2.40	KW=5.47	0.001
Regional anesthesia	15	2.85±2.28		
Local anesthesia	57	2.51±2.13		
Deep sedation	41	2.92±2.25		
The ASA score				
ASA 1	51	3.02±2.32	KW=0.85	0.65
ASA 2	105	3.16±2.22		
ASA 3	6	3.89±2.59		
Chronic illness				
Yes	65	3.43±2.34	T=1.32	0.27
No	97	2.95±2.19		
Surgery history				
Yes	127	3.20±2.30	T=0.59	0.31
No	35	2.95±2.08		

SD: Standard deviation; KW: Kruskal-Wallis analysis; ASA: American society of anesthesiologists; T: Independent groups t-test; p<0.05.

the type of surgery performed and the surgical fear level (Table 3). The mean score level of the surgical fear level was higher in patients who underwent mammographic interventional procedures compared to patients who underwent plastic surgery and urology surgery. There is a statistically significant difference between the anesthesia type applied to the patients and the surgical fear level mean score (KW=5.47, p<0.05). The average score of the surgical fear level was higher in the patients who underwent general anesthesia compared to the patients who underwent local anesthesia. There was no statistically difference between the patients' ASA score, chronic disease and surgical history and surgical fear level mean score (p>0.05).

The patients average age were found to be 48.36±16. It was found that there was no statistical relationship in the correlation analysis between the average of the surgical fear level score and the age of the patients who had day surgery (p=0.74, r=0.02) (Table 4).

TABLE 4: The relationship between age and Surgical Fear Scale mean score (n=162).

Surgical Fear Scale mean score		
Age	r	0.026
	p value	0.741

r: Pearson correlation analysis, p<0.05

DISCUSSION

There is no specific age range in day surgery. When studies in this area are also examined, it is seen that there is no certain age range in patient selection. Day surgery can be applied to a wide variety of patient groups and to many patients of different ages.^{2,10}

In this study, 54.3% of the patients were women. In Özşaker et al., the rate of men is 54.4%.¹² In Bereket's study, the rate of females is 53.6% The ratio of women to men of this study is similar to the results of previous research.¹³

Of patients participating in the study, 69.8% of the patients were married. In a study conducted by Çelebi and Kanan's on the information needs of patients who were operated on at the outpatient clinic while they were discharged, 65.9% of the patients were married.¹⁴ In Özşaker et al., 75.4% of the patients were married.¹² Although this study seems similar to the literature, it is thought that the average age of patients who undergo day surgery is adult individuals over the age of 40 also affects the marital status and therefore most of the patients who will undergo day surgery are married.

Local anesthesia was applied to 35.2% of the patients, deep sedation to 25.3%, regional anesthesia to 9.3% and general anesthesia to 8.6% of the patients included in the study. In this study, it was observed that the patients who underwent general anesthesia had a statistically higher mean score for fear of surgery than those who received local anesthesia ($KW=5.47$, $p<0.05$). Feelings of not being able to wake up, fear of death and loss of control are more common in patients who are administered general anesthesia. For this reason, it can be said that it is an expected result that the average score of the level of fear of surgery is higher in patients undergoing general anesthesia.^{3,6} When previous studies in the literature were examined, the impact of the type of anesthesia given to patients on their fear levels was not examined in studies on patients who underwent day surgery.^{3,6,15} According to the Turkish Anesthesiology and Reanimation Society 2022 Daily Anesthesia Guideline, it has been stated that the type of anesthesia given to patients who will undergo day surgery varies according to the age, desire, medical characteristics and type of surgery.¹⁶ Different types of anesthesia were used in patients undergoing day surgery.

When the ASA scores were examined, it was seen that the patients had ASA 1, ASA 2 and ASA 3 scores. When other studies in the literature were examined, the ASA scores of the patients were not evaluated in studies conducted on outpatients.^{13,14} While patients with ASA scores of 1 and 2 were considered suitable for day surgery in the past, it is stated in the recent literature that patients with ASA scores of 3 and 4 can also be treated as outpatients.^{8,16} This study

was similar to the literature and that patients with ASA 3 score could undergo surgery on an ambulatory basis.

Considering the chronic disease history of the patient who underwent day surgery, 40.1% of the patients had chronic disease. Chronic diseases were identified as hypertension, diabetes, and hypothyroidism in this study. In the literature, the cause of the disease or being under control is stated in the patient selection criteria in day surgery.^{9,16}

The mean surgical fear score of 162 patients participating in the study who underwent day surgery was found to be 25.26 ± 18.16 . Considering that the lowest average score that can be obtained from the SFQ is zero and the highest average score is 80, the surgical fear level of the patients who have undergone day surgery determined as low. The Turkish validity and reliability study of the scale, conducted by Bağdigen and Karaman Özlü with patients hospitalized in surgical clinics and awaiting elective surgery, found that the mean score of the SFQ was 37.55 ± 21.11 and the patients experienced moderate surgical fear.¹¹ Şahin Altun et al., in their study on the effect of surgical fear level on sleep quality of patients, the mean SFQ score of 146 patients hospitalized in surgical clinics and awaiting elective surgery was determined as 42.57 ± 25.40 , and this result showed that patients felt moderate fear.¹⁷ Day surgery patients feel less fear than patients hospitalized in surgical clinics and awaiting elective surgery. Patients preferred day surgery because of the advantages such as returning home after surgery on the same day, low rate of postponing or canceling their operations, returning to daily life activities in a short time, low complication rate and comfortable for the patient.^{1,2,18} These positive aspects of day surgery reduce the surgical fear level of the patients.

When the mean scores given by the patients to the questions of the SFQ were examined; the patients were most afraid of pain and longer healing process. Although pain is an experience that varies from person to person, it was reported that 77.3% of the patients who underwent surgery experienced pain. Many things such as the previous painful experiences of patients, age, gender, culture of the patient, the

meaning and importance of the condition that creates the pain for the patient can affect the pain level of the patients. Therefore, before surgery patients think that “I will be in pain”.¹⁸ This study is compatible with the literature that the patients fear the pain the most as the short-term results of the surgery. Surgical incision affects patients return to daily life activities and their recovery time after surgery.^{2,9} Therefore, this study is compatible with the literature that the patients feared the long-term results of the surgery, the long recovery period. Especially women and some patients who have undergone mammographic interventional procedures when the results of the biopsy are announced later, and the possibility of diagnosed with cancer increases the patients’ fear of postoperative pain and long recovery time.

STUDY LIMITATIONS

This study had three limitations. First, there were no day-to-day surgical procedures in the neurosurgery field at the time of the study. Second, the sample size of otolaryngological surgery patients was small (most patients operated on in the otolaryngology clinic were younger than 18 years of age and therefore did not meet the inclusion criteria). Third, since the effects of different surgical procedures and anesthesia types on fear may be different, the inclusion of all areas in the study can be considered as a limitation.

CONCLUSION

In this study, it was determined that the level of fear of surgery was low in patients who underwent day surgery, but female gender and general anesthesia

type of anesthesia affected the level of fear of surgery negatively. Therefore, although the level of surgical fear is not high in day surgical procedures, considering the factors affecting it, it is thought that nursing interventions will be useful in reducing the negative effects of surgical stress on the body, accelerating wound healing and reducing surgical complications.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Sevgi Çolak, Fatma Vural; **Design:** Sevgi Çolak, Fatma Vural; **Control/Supervision:** Fatma Vural; **Data Collection and/or Processing:** Sevgi Çolak; **Analysis and/or Interpretation:** Sevgi Çolak; **Literature Review:** Sevgi Çolak, Fatma Vural; **Writing the Article:** Sevgi Çolak, Fatma Vural; **Critical Review:** Sevgi Çolak, Fatma Vural; **References and Findings:** Sevgi Çolak; **Materials:** Sevgi Çolak.

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