

Determination of Preoperative Anxiety Levels and Affecting Factors in Patients Undergoing Elective Surgery: A Descriptive and Cross-Sectional Study

Elektif Cerrahi Geçirecek Hastalarda Ameliyat Öncesi Anksiyete Düzeyinin ve Etkileyen Faktörlerin Belirlenmesi: Tanımlayıcı ve Kesitsel Bir Araştırma

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ABSTRACT Objective: This study was conducted to determine the preoperative anxiety level and the affecting factors in patients undergoing elective surgery. **Material and Methods:** The research is a descriptive cross-sectional study. The study was conducted with 320 patients who met the sampling criteria and agreed to participate in the research, and who were hospitalized in the general surgery clinic of a tertiary hospital in Türkiye. In the data collection, "questionnaire form" and the "Surgical Anxiety Questionnaire" were used. Descriptive statistics, independent samples t-test for two independent groups, and F-test (analysis of variance) for more than two groups were used in data analysis. **Results:** In this study, it was determined that 69.4% of the surgical patients experienced anxiety and 38.2% had high anxiety levels. The Surgical Anxiety Questionnaire total score was found to be higher in patients aged 65 and over, in females, with low educational level, non-working individuals, low income level, in major surgery, under general anesthesia, those with a history of previous surgery, those experiencing fear related to surgery, those diagnosed with cancer, and those who lacked knowledge about surgery and anesthesia, and the difference was found to be statistically significant ($p<0.05$). **Conclusion:** As a result of this study, it was determined that the majority of preoperative surgical patients experience anxiety. Therefore, it is recommended that all preoperative patients be routinely screened with a reliable anxiety scale before surgery, and nurses should plan individualized interventions to reduce anxiety.

ÖZET Amaç: Bu araştırma elektif cerrahi geçirecek hastalarda ameliyat öncesi anksiyete düzeyinin ve etkileyen faktörlerin belirlenmesi amacıyla yapıldı. **Gereç ve Yöntemler:** Araştırma tanımlayıcı tipte kesitsel bir araştırmadır. Araştırma, Türkiye'de üçüncü basamak bir hastanenin genel cerrahi kliniğinde yatan, örnekleme alınma kriterlerine uyan ve araştırmaya katılmayı kabul eden 320 hasta ile tamamlandı. Verilerin toplanmasında "anket formu" ve "Cerrahi Anksiyete Ölçeği" kullanıldı. Verilerin analizinde tanımlayıcı istatistikler, iki bağımsız grup için bağımsız örneklem t-testi ve ikiden fazla grup için F-testi (varyans analizi) kullanıldı. **Bulgular:** Bu çalışmada, cerrahi hastalarının %69,4'ünün anksiyete yaşadığı ve %38,2'sinin anksiyete düzeylerinin yüksek olduğu belirlendi. Hastaların Cerrahi Anksiyete Ölçeği toplam puan ortalamasının 65 yaş ve üzerinde, kadınlarda, düşük eğitim düzeyinde, çalışmayanlarda, düşük gelir düzeyinde, majör cerrahide, genel anesteziye, geçirilmiş ameliyat öyküsü olanlarda, ameliyata ilişkin korku yaşayanlarda, kanser tanısı olanlarda, ameliyat ve anestezi hakkında bilgisi olmayanlarda yüksek olduğu ve farkın anlamlı olduğu bulundu ($p<0,05$). **Sonuç:** Bu çalışma sonucunda, ameliyat öncesi cerrahi hastalarının çoğunluğunun anksiyete yaşadığı belirlendi. Bu nedenle ameliyat öncesi tüm hastaların ameliyattan önce rutin olarak güvenilir bir anksiyete ölçeği ile taranması ve hemşirelerin anksiyeteyi azaltacak bireye özgü girişimler planlaması önerilmektedir.

Keywords: Anxiety; preoperative period; surgery; nursing

Anahtar Kelimeler: Anksiyete; ameliyat öncesi dönem; cerrahi; hemşirelik

Today, technological developments in surgery, new diagnostic methods, successful interventions, advances in patient care, the rise in the socio-cultural

level of the society, and increasing epidemics in recent years have increased the number of surgical interventions.¹ Surgery causes anxiety in indi-

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viduals as it is a traumatic treatment method that causes major life changes and is associated with bleeding, pain, or sometimes death.² Anxiety, which is a challenging concept in the preoperative care of patients, is defined as an unpleasant disturbing experience that causes tension, fear, restlessness, and high autonomic activity.³ Anxiety causes an abnormal hemodynamic effect as a result of sympathetic, parasympathetic, and endocrine system stimulation.⁴ Studies have reported that high pre-operative anxiety can lead to increased blood pressure, heart rate, increased blood glucose level, and bleeding.⁵⁻⁷ In addition, it has been reported that anxiety is associated with increased postoperative nausea, vomiting, and pain, delayed recovery, prolonged hospital stay, increased postoperative complications, and increased morbidity and mortality rates.⁸⁻¹⁰ In one study, it was stated that patients with high levels of anxiety needed higher doses of anesthetic induction agents.¹¹

It has been reported in the literature that globally, between 48% and 61% of surgical patients experience a high level of anxiety.^{8,12} Previously published evidence has suggested that high preoperative anxiety levels may be attributed to certain factors such as age, knowledge about anesthesia and surgery, educational level, gender, income status, type of surgery and anesthesia, previous surgical experience, and fear of surgery.^{8,12-16} Due to anxiety being a prevalent issue among surgical patients and its negative consequences on the patients, identifying the levels of anxiety and the influencing factors during the preoperative period will aid in planning nursing care aimed at reducing anxiety. The Surgical Anxiety Questionnaire (SAQ) used in this study is a new tool designed to measure anxiety specific to patients undergoing surgery. In this context, the aim of the study is to determine the preoperative anxiety level and the affecting factors in patients undergoing elective surgery using the SAQ.

RESEARCH QUESTIONS

What is the preoperative anxiety level in patients undergoing elective surgery?

What are the factors affecting preoperative anxiety in patients undergoing elective surgery?

MATERIAL AND METHODS

RESEARCH DESIGN AND SAMPLING

The research is a descriptive cross-sectional study. The research population consisted of patients hospitalized in the general surgery service of a tertiary hospital between February 10, 2023 and June 10, 2023. Power analysis was performed using G* Power (version 3.1.9.2., University of Kiel, Germany) to determine whether the number of samples would be sufficient to detect significant differences.¹⁷ The effect size in this study, as assessed using Cohen's criteria, was considered to be medium.¹⁸ For the sample size, the sample size needed was approximately $n=250$ at the $\alpha=0.05$ level and the effect value was determined for a statistical power of 0.95.¹⁷ The inclusion criteria for the sample were individuals aged 18 and above, who had undergone elective surgery, did not have a diagnosed neuropsychiatric disorder as determined by a physician, had no history of psychiatric medication use, had no visual or hearing impairments, were literate, and agreed to participate in the study. Exclusion criteria were having undergone emergency surgery, and being in the post-operative period.

DATA COLLECTION AND TOOLS

The study invited 330 patients who the inclusion criteria were invited to the study. Ten patients who did not agree to participate in the study were excluded from the study, and the study was completed with 320 patients. At the first interview with patients, an oral description of the study was provided and written consent was obtained. Then, on the first day before surgery, a questionnaire and anxiety scale were administered to the patients. Data were collected by the researchers in approximately 15-20 minutes by face-to-face interview method using a questionnaire form, and SAQ.

Questionnaire Form

The form consists of 13 questions that include age, gender, marital, educational, working, and income status of the individual, previous surgery, knowledge about the surgical and anesthesia procedures, surgery type, type of anesthesia, the state of fear associated

with surgery.^{4,8} We classified anesthesia types as local and general. Types of anesthesia (regional and local) other than general anesthesia were classified as local anesthesia.

SAQ

The SAQ, developed by Burton et al., 2019 to evaluate the preoperative anxiety levels of patients, consists of a total of 17 items and 4 subdimensions.¹⁹ Turkish, the validity and reliability studies were performed by Topçu et al., 2023.²⁰ The scale's subdimensions are concerned about health (6 items: Q7, Q9, Q10, Q11, Q12, Q13), concern about recovery (4 items: Q14, Q15, Q16, Q17), concern about surgical procedure (4 items: Q1, Q2, Q4, Q8) and concern about invasive procedures (3 items: Q3, Q5, Q6). The scale items are scored as "0=I am not anxious at all," "1=I am anxious a little," "2=I am partially anxious," "3=I am anxious a lot," and "4=I am extremely anxious," and high scores indicate high levels of anxiety. A minimum of 0 and a maximum of 68 points can be obtained from the scale. There is no cut-off point for the scale, and as the total score increases, it is interpreted as an increase in anxiety. The total Cronbach's alpha values of the scales were determined to be 0.917 and 0.890.^{19,20} In this study, Cronbach's alpha value of 0.92 was calculated.

STATISTICAL ANALYSIS

Analyses were performed using SPSS 23.00 software (IBM SPSS Statistics Standard Concurrent User ver. 23). Descriptive statistical analyses (mean, standard deviation, frequency, and percentage) were used to evaluate the data. The normality of the data was evaluated with the Kolmogorov-Smirnov test, and the values of skewness and kurtosis were checked. The skewness and kurtosis values, ranging between -2 and +2, led to the assumption that the variables exhibited a normal distribution.²¹ Because the data met the parametric conditions, they were analyzed with the independent sample t-test for two independent groups and the F-test (analysis of variance) for more than two groups. $p < 0.05$ was considered statistically significant.

ETHICS COMMITTEE APPROVAL

Necessary permissions were obtained from the hospital where the study was conducted and the Sivas

Cumhuriyet University Non-Invasive Clinical Research Ethics Committee (date: December 14, 2022; decision no: 2022-12/36). Throughout the study, the principles of the Declaration of Helsinki were applied and informed consent was obtained from the participants.

RESULTS

In Table 1, it is seen that the mean age of the patients was 58.27 ± 16.78 , 54.4% were male, 79.7% were married, 55.3% were primary/secondary school graduates, 80.7% were unemployed, 83.8% had income equal to their expenses. It was found that 55.3% of the patients were informed about the surgical procedure, 60.6% were informed about anesthesia, 80.62% received general anesthesia, 21.1% had planned cholecystectomy and pineal sinus surgery, 75.9% had undergone surgery before, and 75.3% of them had fear of surgery. It was determined that there was a significant difference between the SAQ total score average and age, gender, education level, employment, income status, type of anesthesia, previous surgery history, fear of surgery, type of surgery, knowledge about surgery and anesthesia ($p < 0.05$). A significant difference was found between the four sub-dimensions of the SAQ total and educational status, size of the operation, type of operation, and fear of the operation ($p < 0.05$).

In Table 2, it is seen that the mean SAQ total score was 41.56 ± 12.26 . It also shows that 69.4% of patients experienced anxiety according to SAQ and 25% of the patients experienced some anxiety, 5.9% partial anxiety, 31.3% a lot, and 7.2% had severe anxiety.

DISCUSSION

The findings of this study show that 69.4% of surgical patients experience anxiety and 38.2% of them have high anxiety levels. In a meta-analysis study, it was reported that the preoperative anxiety prevalence of surgical patients was 48%.¹² In a study conducted by Shewangzaw Engda et al., the prevalence of anxiety was found to be 53.6% and Woldegerima et al. reported it as 59.6%.^{13,22} The current study and literature show that preoperative anxiety remains a seri-

TABLE 1: Comparison of demographic data of patients with Surgical Anxiety Questionnaire total score average (n=320).

Characteristics	Mean age (years/ $\bar{X}\pm\text{SD}$)	n	%	Health $\bar{X}\pm\text{SD}$	Recovery $\bar{X}\pm\text{SD}$	Surgical Procedure $\bar{X}\pm\text{SD}$	Invasive Procedures $\bar{X}\pm\text{SD}$	SAQ $\bar{X}\pm\text{SD}$
Age range (year)	58.27 \pm 16.78							
	18-64	220	68.7	13.40 \pm 4.94	5.90 \pm 3.31	10.74 \pm 3.80	6.02 \pm 2.50	40.10 \pm 11.20
	65 and over	100	31.3	15.82 \pm 4.76	8.19 \pm 3.12	10.18 \pm 3.30	7.51 \pm 2.84	42.47 \pm 11.14
t/p				0.358/0.02*	5.213/0.03*	0.684/0.495	6.06/0.04*	7.89/0.035*
Gender	Female	146	45.6	15.75 \pm 4.46	8.14 \pm 3.16	11.82 \pm 3.34	6.86 \pm 2.65	41.42 \pm 11.02
	Male	174	54.4	15.09 \pm 4.64	8.03 \pm 3.39	9.38 \pm 3.87	6.38 \pm 2.68	37.68 \pm 11.80
t/p				1.085/0.28	0.259/0.79	8.906/0.036*	1.324/0.187	8.00/0.047*
Marital status	Married	255	79.7	14.76 \pm 4.32	8.51 \pm 3.33	10.58 \pm 3.65	6.68 \pm 2.61	42.48 \pm 10.60
	Single	65	20.3	14.83 \pm 5.24	8.37 \pm 3.07	9.15 \pm 3.24	6.76 \pm 2.40	41.98 \pm 11.70
t/p				1.427/0.32	1.217/0.42	1.316/0.24	0.180/0.85	1.130/2.6
Educational status	Literate	56	17.5	16.02 \pm 4.50	8.57 \pm 3.25	11.89 \pm 2.78	7.40 \pm 2.82	43.66 \pm 10.84
	Primary/secondary school	177	55.3	14.65 \pm 4.82	6.76 \pm 2.81	9.39 \pm 3.68	6.20 \pm 2.26	40.60 \pm 11.32
	High school	58	18.1	11.80 \pm 4.09	5.50 \pm 1.55	7.75 \pm 4.75	5.70 \pm 2.85	35.45 \pm 9.75
	University	29	9.1	10.39 \pm 4.65	5.08 \pm 3.30	7.58 \pm 3.62	5.60 \pm 2.67	33.06 \pm 11.62
F/p				5.35/0.001**	5.48/0.001**	3.68/0.013*	2.39/0.04*	5.4/0.001**
Working status	Yes	62	19.3	15.57 \pm 4.51	8.61 \pm 3.20	10.37 \pm 3.63	6.81 \pm 2.67	41.47 \pm 11.17
	No	258	80.7	13.88 \pm 4.53	7.47 \pm 3.63	9.39 \pm 3.65	5.41 \pm 2.52	37.30 \pm 11.14
t/p				4.43/0.02*	0.70/0.486	1.30/0.196	6.46/0.02*	7.24/0.03*
Income status	Less	45	14.0	16.65 \pm 5.25	9.29 \pm 3.67	11.00 \pm 4.06	6.61 \pm 2.37	43.58 \pm 12.74
	Equals	268	83.8	14.45 \pm 4.21	7.94 \pm 3.20	10.52 \pm 3.56	6.59 \pm 2.70	40.60 \pm 11.01
	More	7	2.2	12.40 \pm 1.51	6.00 \pm 1.87	10.20 \pm 4.38	6.80 \pm 3.83	35.40 \pm 11.51
F/p				1.68/0.032*	5.34/0.037*	0.25/0.776	0.02/0.986	7.74/0.045*
Type of anesthesia	General	258	80.62	15.38 \pm 3.51	10.81 \pm 3.34	11.83 \pm 2.12	7.25 \pm 2.05	45.88 \pm 7.88
	Local	62	19.38	15.36 \pm 4.62	7.82 \pm 3.21	9.51 \pm 3.69	6.65 \pm 2.70	40.35 \pm 11.37
t/p				0.43/0.670	6.02/0.012*	1.99/0.046*	1.09/0.292	4.64/0.03*
Previous surgery	Yes	243	75.9	13.55 \pm 4.29	8.03 \pm 3.23	10.54 \pm 3.69	6.14 \pm 2.69	38.69 \pm 10.75
	No	77	24.0	16.98 \pm 4.50	8.24 \pm 3.45	10.70 \pm 3.48	6.75 \pm 2.55	41.21 \pm 11.35
t/p				6.57/0.01*	0.38/0.701	0.288/0.774	1.489/0.140	8.563/0.03*
Fear of individuals about surgery	Yes	241	75.3	13.56 \pm 4.34	8.94 \pm 2.55	11.78 \pm 3.16	7.43 \pm 2.05	43.92 \pm 10.06
	No	79	24.7	15.62 \pm 5.09	5.05 \pm 3.37	6.82 \pm 2.83	4.31 \pm 2.46	30.72 \pm 8.63
t/p				3.57/0.001**	5.98/0.001**	10.51/0.001**	7.82/0.001**	9.43/0.001**

TABLE 1: Comparison of demographic data of patients with Surgical Anxiety Questionnaire total score average (n=320) (continued).

Characteristics	n	%	Health		Recovery		Surgical Procedure		Invasive Procedures		SAQ	
			X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	
Type of surgery												
Cholecystectomy	67	21.1	14.87±3.93	7.59±3.10	9.08±3.22	6.69±2.60	38.55±10.11					
Thyroidectomy	59	18.4	16.65±4.38	8.92±2.94	11.85±2.45	5.88±1.91	43.20±8.40					
Pilonidal sinus	67	21.1	15.92±4.19	8.27±2.97	10.68±3.20	7.32±2.67	41.56±9.67					
Breast mass/cancer	9	2.7	22.16±2.04	9.37±1.21	16.33±1.21	10.01±2.00	46.67±12.35					
Anal fissure	22	6.7	12.93±4.65	5.62±1.84	8.46±3.60	5.46±3.18	32.47±11.35					
Gastric cancer	23	7.2	17.12±4.60	10.62±3.99	12.50±2.87	8.37±1.99	48.64±11.45					
Lipoma	17	5.4	14.52±3.60	9.33±2.80	12.50±2.74	6.50±2.46	42.84±8.36					
Hernia repair	39	12.1	12.42±3.53	5.45±2.51	8.40±4.63	5.18±2.48	31.44±10.51					
Rectal cancer	17	5.4	19.18±5.44	8.93±4.29	11.91±3.11	6.66±3.17	57.85±5.15					
F/p			6.52/0.001**	6.18/0.000**	8.19/0.000**	6.75/0.000**	9.007/0.001**					
Information about the surgical procedure												
Yes	177	55.3	14.69±5.13	8.03±3.45	9.96±3.99	6.12±2.62	38.93±12.13					
No	143	44.7	15.47±4.02	8.18±3.17	11.13±3.29	7.01±2.92	42.02±10.24					
t/p			1.28/0.201	0.34/0.728	6.442/0.015*	6.599/0.010*	7.020/0.04*					
Information about the anesthesia												
Yes	194	60.6	15.42±4.10	8.06±3.36	9.69±3.68	6.29±2.54	39.47±12.32					
No	126	39.4	15.61±5.09	8.11±3.25	11.22±3.73	6.97±2.86	43.55±10.56					
t/p			0.61/0.544	0.11/0.918	8.29/0.02*	7.87/0.04*	8.025/0.04*					

SD: Standard deviation; SAQ: Surgical Anxiety Questionnaire. * p<.05, ** p<.001

ous problem in surgical patients. These findings reveal the importance of health-care professionals in planning care for anxiety prevention and management.

In the current study, it was determined that the mean SAQ total, health, recovery, and invasive procedure anxiety sub-dimension scores of patients aged 65 and over were higher than those aged 18-64. It can be interpreted that the fact that older individuals experience more anxiety stems from the thought of not being able to wake up from the surgery, not being able to recover from the surgery, and not being able to fulfill the relevant care. In one study, it was stated that elderly patients had higher anxiety, while in other studies younger patients were reported to have higher levels of anxiety.^{8,14,23} In another study, it was reported that individuals between the ages of 20-46 have higher anxiety than those who are older.²⁴ The literature and the results of the current study have demonstrated inconsistent findings regarding the relationship between age and anxiety. This inconsistency may be attributed to differences in study methodology, inclusion of different age groups, variations in cultural characteristics, and examination of diverse patient populations.

In this study, it was determined that the SAQ total and surgical procedure anxiety sub-dimension mean scores of the females were higher than males and the difference was significant. This finding supports the literature.^{15,22,23,25,26} The difference may be due to the fact that women express their feelings more easily or the thought that women cannot fulfill their roles in daily life due to surgery.

In this study, it was observed that the anxiety level of the patients decreased as the education level increased. Similar results were found in another study.⁸ It can

TABLE 2: Surgical Anxiety Questionnaire and its sub-dimensions total score averages.

Scale		X±SD	Minimum	Maximum
SAQ total score mean		41.56±12.26	20	68
	Concern about health	15.29±4.56	6	24
	Concern about recovery	8.18±3.28	4	16
	Concern about surgical procedure	11.38±3.64	4	16
	Concern about invasive procedures	6.50±2.67	3	12
		n	%	
SAQ	I am not anxious at all	98	30.6	
	I am anxious a little	80	25.0	
	I am partially anxious	19	5.9	
	I am a lot anxious	100	31.3	
	I am extremely anxious	23	7.2	

SD: Standard deviation; SAQ: Surgical Anxiety Questionnaire.

be thought that the decrease in the level of anxiety with the increase in education level is due to the fact that patients have easier access to information about surgery and anesthesia.

In the current study, it was determined that the SAQ total, health, and invasive procedure anxiety sub-dimension scores of the working patients were higher and the difference was significant compared to the non-working patients. In addition, it was found that as the income level decreased, the SAQ total, health, and recovery anxiety sub-dimension mean scores increased and the difference was significant. In the study conducted by Woldegerima et al., it was reported that low income level is one of the factors affecting anxiety.¹³ It can be said that the high anxiety of unemployed and low-income patients stems from the thought that the surgery will delay their return to work and thus more financial problems will be experienced.

In this study, it was determined that the anxiety level of patients who received general anesthesia was higher in the SAQ total, surgical procedure, and recovery sub-dimension compared to local anesthesia, and the difference was significant. Similarly, in a study, it was reported that the anxiety of patients who received general anesthesia was higher than that of local anesthesia.¹⁵ It can be said that this finding is related to patients' inability to wake up from general anesthesia and loss of control over their bodies.

In our study, it was determined that the anxiety level of patients with a history of previous surgery was lower than those who did not have SAQ total and health concern sub-dimension, and the difference was significant. Similar to the findings of this study, it has been reported in studies that patients with a previous history of surgery have lower levels of anesthesia-related anxiety than those without.^{16,26} It can be said that the history of previous surgery reduces anxiety by reducing the uncertainty about surgery and anesthesia.

In the current study, it was determined that there was a significant difference in all SAQ total and sub-dimensions of the patients according to the type of surgery. It was also found that anxiety scores were higher in rectum, breast, and stomach cancers compared to other diagnoses, respectively. Cancer history and cancer surgery were also reported to be associated with higher preoperative anxiety in one study.²⁶ This finding can be interpreted as the fact that cancer surgery and the post-surgical process are more complicated, cancer is associated with death, and the recovery period and hospitalization period are longer.

In this study, it was found that the SAQ total, health, recovery, surgical procedure, and invasive procedure anxiety sub-dimension mean scores of patients who experienced fear of surgery were higher than those who did not, and the difference was significant. In a meta-analysis study, it was reported that complications, death, medical error, waking up in the

middle of the operation, and fear of pain increased the anxiety level of the patients in the postoperative period.¹² Similarly, in another study, it was reported that patients' fear of death, surgical complications, and postoperative pain were significantly associated with preoperative anxiety.²² It was concluded that the patients experienced fear for various reasons in the postoperative period and this fear caused an increase in anxiety.

In our study, it was found that patients with knowledge about surgery and anesthesia had lower SAQ total, surgical procedure, and invasive procedure anxiety sub-dimension score averages compared to those who did not, and the difference was significant. Similarly, it has been reported that patients who have knowledge about the surgical procedure and anesthesia have lower anxiety scores.^{8,23} These results can be interpreted as the fact that the anxiety of patients who have knowledge about surgery and anesthesia is low, the knowledge contributes to the reduction of uncertainty in patients and prevents patients from experiencing anxiety related to uncertainty.

LIMITATIONS

Among the limitations of this study are its single-center design and the exclusion of emergency surgical patients. Therefore, the study results may not be generalized to preoperative patients overall, and consequently, may not accurately reflect the frequency of surgical anxiety.

CONCLUSION

In conclusion, 69.4% of surgical patients experienced anxiety and 38.2% of them have high anxiety levels.

It was determined that postoperative anxiety was associated with age, gender, marital status, education level, employment and income status, size of surgery, type of anesthesia, previous surgery history, fear of surgery, type of surgery, and getting information about surgery and anesthesia. In addition, this study also revealed the importance of a good psychological evaluation and preoperative preparation. All patients, particularly at-risk groups, should be routinely screened with a reliable anxiety scale prior to surgery. Diagnosing anxiety in the pre-operative preparation process and making the necessary interventions should be included in health policies as a necessity. There is a need for studies in which surgical anxiety is determined individually and appropriate interventions are planned, evaluating the effectiveness of this in the level of preoperative anxiety and the postoperative recovery process. National and global interventions targeting these components can help prevent and potentially reverse surgical anxiety from causing adverse health outcomes.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

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

All authors contributed equally while this study preparing.

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