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RETURNING TO NORMAL AFTER EARTHQUAKE: ANXIETY LEVELS OF SURGICAL PATIENTS

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ÖZET

Purpose: This study aimed to examine the anxiety and factors affecting the anxiety of surgical patients who continue to live under psychological pressure due to the effects of major earthquakes and recurrent aftershocks.

Material and Methods: The population of this descriptive and cross-sectional study consisted of patients admitted to the surgical clinics of a university hospital between April and June 2023. The sample of the study consisted of 120 patients who agreed to participate in the study. Research data were collected using the “Personal Information Form” and the “Surgical Anxiety Scale for Adult Patients”. In the analysis of the data, besides descriptive statistics, the Independent Samples t-test and the One-way ANOVA test were used for independent groups.

Results: The mean age of the patients participating in the study was 50.9 ± 14.48 years, and 68.3% of them were male. The mean score of the patients on the Surgical Anxiety Scale was determined as 22.24 ± 10.74 . In addition, it was determined that the surgical anxiety experienced by the patients was related to marital status, having children, ASA score, education, delay in the planned surgery date due to the earthquake, and damage to the home/workplace in the earthquake.

Conclusion: It was determined that the patients who were planned for surgery experienced a moderate level of anxiety. Additionally, it appears that patients' surgical anxiety levels are affected by some variables after the earthquake.

Keywords: Surgical patient, Earthquake, Nursing, Anxiety.

DEPREM SONRASI NORMALE DÖNÜŞ: CERRAHİ HASTALARININ KAYGI DÜZEYLERİ

ABSTRACT

Amaç: Bu çalışmanın amacı ağır stres verici büyük depremlerin ve tekrarlayan artçı şokların etkisi ile psikolojik baskı altında yaşamına devam eden ve cerrahi geçirecek hastaların kaygısını ve bunu etkileyen faktörlerin incelenmesi ile ilişkin görüşleri belirlemektir.

Gereç ve Yöntemler: Tanımlayıcı ve kesitsel türde olan bu araştırmanın evrenini, Nisan-Haziran 2023 tarihleri arasında bir üniversite hastanesinin cerrahi kliniklerine yatışı yapılan hastalar oluşturmuştur. Araştırmanın örneklemini ise araştırmaya katılmayı kabul eden 120 hasta oluşturmuştur. Araştırma verileri “Kişisel Bilgi Formu” ve “Yetişkin Hastalar için Cerrahi Kaygı Ölçeği” kullanılarak toplanmıştır. Verilerin analizinde tanımlayıcı istatistiklerin yanı sıra, bağımsız gruplarda t testi, Varyans analizi testi kullanılmıştır.

Bulgular: Çalışmaya katılan hastaların yaş ortalamasının 50.9 ± 14.48 , %68.3'unun erkek olduğu saptanmıştır. Hastaların Cerrahi Kaygı Ölçeği toplam puan ortalaması 22.24 ± 10.74 olarak belirlenmiştir. Ayrıca hastaların yaşadıkları cerrahi kaygının medeni durum, çocuk sahibi olma, ASA skoru, eğitim, depremden dolayı planlanan ameliyat tarihinde gecikme ve depremden ev/işyerinin hasar alması ile ilişkili olduğu saptanmıştır.

Sonuç: Cerrahi planlanan hastaların orta düzeye yakın kaygı yaşadıkları belirlenmiştir. Ayrıca hastaların cerrahi kaygı düzeylerinin deprem sonrası değişkenlerden etkilendiği görülmektedir.

Anahtar Kelimeler: Cerrahi hastası, Deprem, Hemşirelik, Kaygı.

1. INTRODUCTION

The unprecedented earthquake of extraordinary magnitude that struck Turkey in the last century deeply affected 11 provinces, with the epicenter being Kahramanmaraş, on February 6, 2023. Those living in these provinces were exposed to a series of devastating earthquakes that could endanger their lives [1]. Earthquakes are natural disasters that cannot be prevented; some damages are inevitable [2]. But with this disastrous earthquake; It is predicted that the incidence of mental health illnesses such as depression, anxiety, post-traumatic stress disorder, sleep disorder, and substance abuse will increase in a way that will adversely affect humanity in the long run. The effects that occurred after the disaster of the century can be seen directly or indirectly [3]. In order to avoid possible effects, it is very important that nurses who are health professionals who spend longer time with patients starting from the pre-operative period and can evaluate patients in more detail, closely monitor patients, and provide care according to their needs [4,5].

Throughout daily life, every person experiences anxiety which is a universal emotion from time to time [6,7]. However, after major disasters such as earthquakes, it is not clear how the person will live at the moment and in the future; anxiety, which can be defined as the state of worry and uneasiness about a subjective situation that is not likely to occur, is increasing [8]. Mental reactions such as fear, anxiety, and hopelessness may improve in patients when surgical intervention is required. It has been reported that 60-80% of patients undergoing surgery experience preoperative anxiety [9]. Surgical procedures can increase anxiety in patients as they directly affect human life due to their nature. Anxiety before surgery can develop as a result of many factors [10]. It is thought that criteria such as age, gender, past health experiences, and type of surgery are factors affecting the level of surgical anxiety. In addition, there is a close relationship between the size of the surgical procedure that the patients will undergo, their positive or negative experiences in the past, and their anxiety levels before surgery. As the size of the invasive intervention related to the surgery increases, the anxiety seen in the individuals increases in parallel with the perioperative period. Postponing the surgical operation, the uncertainty of the operation day, and fear of death are among the important reasons that will increase the anxiety level of the patient [11,12]. While postponing the surgical procedure even under normal conditions causes anxiety, it is predicted that this earthquake process, which is defined as the disaster of the century, will increase anxiety even more. Determining the anxiety state of the patients and making appropriate nursing interventions are of great importance in terms of providing quality care in health. In this study, it was aimed to inspect the anxiety of surgical patients who continue their lives under psychological pressure due to the effects of severe stressful earthquakes and recurrent aftershocks and the factors affecting anxiety.

2. MATERIALS AND METHODS

2.1 Type of Research

This research was conducted descriptively and cross-sectionally to determine pre-surgical anxiety levels in patients undergoing surgery at a university hospital.

2.2. Place and Time of Research

The research was conducted between April and June 2023 in a university hospital centered in Kahramanmaraş, which was damaged and evacuated after the earthquake and continues to operate on a smaller campus.

2.3. Population, Sampling, and Sampling Method

The population of the study comprised of patients over the age of 18, who were literate, who could speak Turkish, who had no communication barriers, and who approved to contribute to the study, who were hospitalized in the surgical clinics (general surgery, ear-nose-throat, orthopaedics, urology, plastic surgery clinics) of the hospital. The sample number of the study was calculated using the G*Power 3.1.9.7 program. In the calculation, sample calculation was made for the independent-sample t-test. In the calculation, the number of samples was calculated as 102 for a one-way test with an effect size of 0.50 ($d = 0.50$), 5% margin of error ($\alpha = 0.05$), and 80% power ($1-\beta = 0.80$). Considering the possibility of data loss, the number of samples for each group was increased by 10%, and 113 participants were planned to be included in the sample. The study was completed with 120 patients who experienced the earthquake and were planned to undergo surgery. In the power analysis conducted with the collected data, with an effect size of 0.8 and an error of 0.05, the power of the study was found to be 99%.

2.4. Data Collection Tools

Research data were collected using the “Personal Information Form”, “Opinions Survey on Earthquakes” and “Surgical Anxiety Questionnaire for Adult Patients (SAQ)”.

Personal Information Form: There are questions about sociodemographics (age, gender, education level, active employment status, marital status, number of children, etc.) and surgery (ASA score, postponement of surgery, etc.).

Opinions Survey on Earthquakes: It is in line with the literature on earthquakes (more detailed information) provided by researchers. Whether they have experienced an earthquake before, whether they have lost property in an earthquake, their feelings about the earthquake, etc. It consists of questions containing information [13-15].

Surgical Anxiety Questionnaire (SAQ) for Adult Patients: The scale was advanced by Burton et al. (2019). Developed by the sub-dimensions of the scale are health concerns (items 7, 9, 10, 11, 12, and 13), concerns about the recovery period (items 14, 15, 16, and 17), concerns about the surgical procedure (items 1, 2, 4, and 8) and concerns about invasive procedures (items 3, 5 and 6). The scale items are scored as 0 = “I am not at all worried”, 1 = “I worry a little”, 2 = “I am somewhat worried”, 3 = “I am very worried” and 4 = “I am extremely worried”. Accordingly, patients are asked to choose the option that best describes how much anxiety they feel about each item. There is no opposite item in the scale. Total and sub-dimension total scores are calculated by adding the items they contain. The lowest score that can be obtained from the scale is 0 and the highest score is 68. The scale has no cut-off point. Scale and sub-dimension scores; divided by the number of questions on the total scale and all sub-dimensions, according to the level of anxiety between 0 and 4, it is interpreted as “0=Not at all, 1=A little, 2=Moderately, 3=A lot, 4=Extreme”. Higher scores indicate that patients have a high level of anxiety. The Cronbach's alpha value of the original scale was found to be 0.91 [16]. The Turkish validity and reliability study was led by Topçu et al. (2023). The Cronbach's alpha coefficient in the Turkish version of the scale was 0.890 [17]. In the study, the Cronbach's alpha value was 0.849.

2.5. Data Collecting

Patients who were hospitalized in the surgery clinic and planned for surgery, who met the sampling criteria and agreed to participate in the study, were met on the morning of the surgery and were informed about the purpose of the study. Afterward, verbal and written consents were gained from the patients, and a personal information form and SAQ. Patients completed the questionnaires in an average of 10-15 minutes. The patients were then thanked for participating in the study.

2.6. Ethical Considerations

In order to carry out the research; Ethics committee approval (Decision no: 132/42 07/04/2023) from the ethics committee of a university, necessary institutional permissions from the hospital where the research was carried out, and also the scale usage permission was obtained from the author who conducted the Turkish validity-reliability study of the scale via e-mail. The patients included in the study were informed about the study, the purpose of the study was explained, and their consent to participate in the study was obtained. The research was conducted in accordance with the Declaration of Helsinki.

2.7. Statistical analysis

SPSS 22 (Statistical Package of Social Science) package program was used in the statistical analysis. In the evaluation of the data, besides descriptive statistics, the Independent Samples t-test and one-way ANOVA test were used for independent groups.

3. RESULTS

The study found that the average age of the participating patients was 50.9 ± 14.48 , 68.3% were male, 56.7% had completed primary education, 82.5% were married, 84.2% had children, and 47.5% were classified as ASA 1 (Table 1).

Table 1. Descriptive characteristics of the patients

	$\bar{X} \pm S.S.$	Min-Max	
Age	50.9 ± 14.48	18-80	
	N	%	SAQ Total $\bar{X} \pm SD$
Gender			
Female	38	31.7	23.95 ± 11.48
Male	82	68.3	21.45 ± 10.35
<i>Test</i>			$t=-1.186$ $p=0.238$
Education level			
Primary Education	68	56.7	24.19 ± 11.38
High School	30	25.0	21.53 ± 10.41
University	22	18.3	17.18 ± 7.14
			F=3.795 $p=0.025$
Marital status			
Married	99	82.5	23.24 ± 10.84
Single	21	17.5	17.52 ± 9.06
<i>Test</i>			$t=-2.253$ $p=0.026$
Child			
Yes	101	84.2	23.25 ± 10.52
No	19	15.8	16.89 ± 10.65
<i>Test</i>			$t=-2.412$ $p=0.017$
ASA Score			
ASA 1	57	47.5	18.30 ± 7.79
ASA 2	63	52.5	25.81 ± 11.81
<i>Test</i>			$t=-4.148$ $p=0.000$

*n: number, %: percent, X: mean, SD: Standard deviation, Min: Minimum value, Max: Maximum value, t: T-test on the independent group.

Marital status, having children, and ASA score were found to be associated with SAQ ($p < 0.05$). It was concluded that there was a significant difference between the surgical anxiety total score

averages of the patients according to the education level ($F=3.795$, $p=0.025$). As a result of pairwise comparisons with Bonferroni correction made to find out which group the significant difference originated from; It was determined that there was a significant difference between the patients who graduated from higher education and those who graduated from primary education ($p=0.03$) (Table 1).

Table 2. Earthquake-related characteristics of the patients.

	n	%	SAQ Total $\bar{X} \pm SD$
Did you experience a delay in your surgery date due to the earthquake?			
	89	74.2	25.09 ± 10.29
Yes	31	25.8	14.06 ± 7.33
No			$t=5.49$
Test			$p=0.000$
Was your home/workplace damaged in the earthquake?			
No	62	51.7	18.16 ± 6.79
Yes	58	48.3	26.06 ± 12.30
Test			$t=4.39$
			$p=0.000$

*n: number, %: percent, X: mean, SD: Standard deviation, Min: Minimum value, Max: Maximum value, t: T-test on independent groups

The study found that 74.2% of the participating patients experienced a delay in their surgery date due to an earthquake, and the total SAQ score was 25.09 ± 10.29 . It was also concluded that 51.7% of the participating patients' homes and workplaces were undamaged, while 48.3% had homes and workplaces that were damaged, with a total SAQ score of 26.06 ± 12.30 (Table 2).

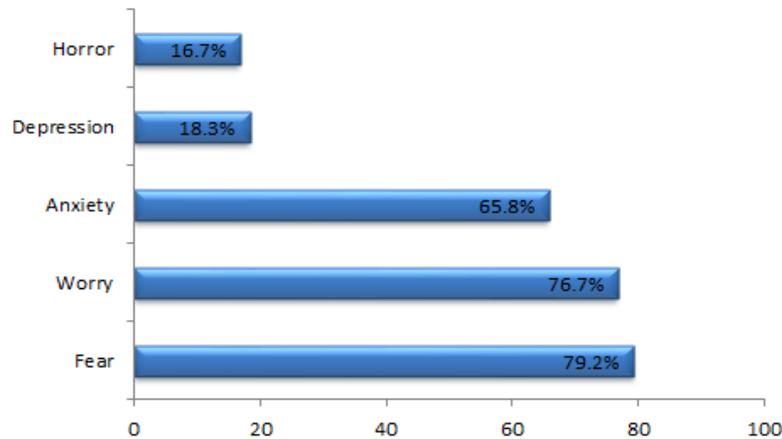


Figure 1. Emotions caused by the thought of the earthquake (n=120)

The distribution of answers given by the patients participating in the study to the question “What emotion does thinking about an earthquake cause?” are given in Figure 1. 79.2% of the patients stated that they felt fear, 76.7% worry, 65.8% anxiety, 18.3% depression, and 16.7% horror (Figure 1).

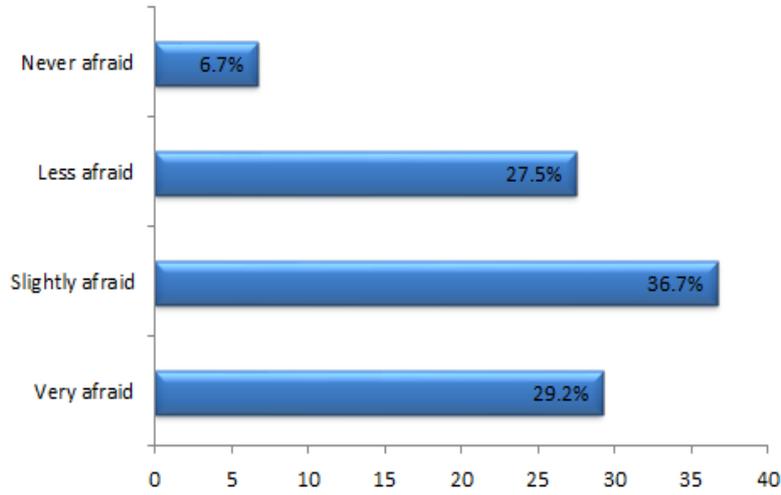


Figure 2. Patients' earthquake fear levels (n=120)

The distribution of answers given by the patients who participated in the study to the question of how much it scares you to think of an earthquake is given in Figure 2. 36.7% of the patients stated that they were slightly afraid, 29.2% were very afraid, 27.5% were less afraid, and 6.7% were never afraid (Figure 2).

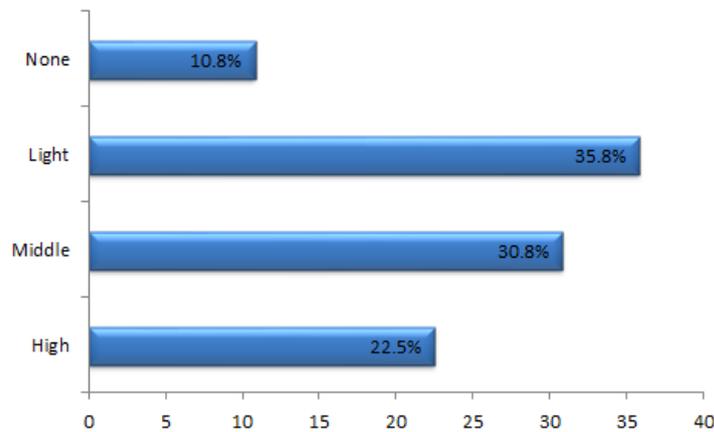


Figure 3. A level of anxiety about the imminent earthquake (n=120)

The distribution of answers given by the patients participating in the study to the question of what level of concern they have about the upcoming earthquake is given in Figure 3. 35.8% of the patients stated that they felt mild fear (Figure 3).

Table 3. SAQ sub-dimension and total score averages of the patients

	X ± SD	Taken from Scale Min-Max	Available from Scale Min-Max
SAQ_1	10.41 ± 4.78	1-20	0-24
SAQ_2	4.13 ± 3.32	0-13	0-16
SAQ_3	5.49 ± 3.18	0-12	0-16
SAQ_4	2.20 ± 2.31	0-8	0-12
SAQ_Total_Points	22.24 ± 10.74	3-48	0-68

* X: mean, SD: Standard deviation, Min: Min value, Max: Maximum value

*SAQ: Surgical Anxiety scale, SAQ_1: Concern about health, SAQ_2: Concern about recovery, SAQ_3: Concern about surgical procedure, SAQ_4: Concern about invasive procedures

The mean score of the patients participating in the study from the SAQ-S sub-dimension is 10.41 ± 4.78 , the mean score from the SAQ-I sub-dimension is 4.13 ± 3.32 , and the mean score from the SAQ-P sub-dimension is 5.49 ± 3.18 , SAQ-I sub-dimension mean score was 2.20 ± 2.31 and SAQ total score average was 22.24 ± 10.74 (Table 3).

4. DISCUSSION

Although surgery is a treatment method, it affects the patient physiologically and psychologically in many ways and causes anxiety. It is known that surgical anxiety experienced in the preoperative period affects the requirement for anaesthesia and analgesic drugs, the healing status in the postoperative period, the immune system, wound healing time, pain management in the postoperative period, and the duration of hospital stay [18]. Experiencing the earthquake process has also emerged as a reason that may cause anxiety in patients who will undergo surgery. In the study conducted to determine the surgical anxiety of patients who continue to live with the effects of aftershocks and the fact that earthquakes are unpreventable and unpredictable, it was determined that the patients experienced near-medium level anxiety.

In the literature, preoperative anxiety is related to age, gender, marital status, education level, fear of postponing the surgery, type of surgery, fear of anesthesia, fear of surgery, fear of waking up in the middle of surgery, fear of financial loss, fear of postoperative pain, fear of death and fears of unknown origin. are indicated [19,20]. The addition of the fear of an earthquake to these fears increases the anxiety level in patients.

In the study of Gök and Kabu (2020) on the examination of surgical anxiety, the level of surgical anxiety was found to be higher in female than in men [12]. In our study, it was determined that although female got higher scores than men, the difference between them was not statistically significant. In the study of Fındık and Yıldızeli Topçu (2012), it was found that the surgical anxiety score was lower in married people [21]. Contrary to this situation, in the study of King et al. (2017), it was concluded that the surgical anxiety levels of the participants living with a partner were higher [22]. In our study, it was concluded that the patients who were married and had children had higher anxiety levels. It can be thought that patients generally feel more burden on themselves due to their sense of responsibility towards their families, and this situation increases anxiety.

In the study conducted by Elmastaş and Kuyumcu (2022), no statistically significant relationship was found between ASA scores and preoperative anxiety [23]. In the study, when the surgical anxiety scores of the patients were examined, it was determined that the patients with ASA 2 had a significantly higher score than the patients with ASA 1, which was significantly related to the ASA score. This shows that anxiety increases in parallel with the increase in risk factors.

In the study conducted by Yılmaz et al., (2012) as education level increases, anxiety level increases [24]. In the study of Balkaya et al., (2021) it was determined that education level had no effect on surgical anxiety [11]. In another study, it was observed that the level of surgical anxiety decreased by improving the decision-making skills of the patients with the increase in the level of education [25]. As a result of the study, it was determined that the level of education of the patients increased and the level of surgical anxiety decreased. In this respect, the effects of the education level of the patients on surgical anxiety vary in the literature, which suggests that individual differences are effective.

In our study, it was determined that 74.2% of the patients experienced a delay in the date of surgery due to the earthquake, and the total SAQ score of these patients was 25.09 ± 10.29 . In the study of Karahan et al. (2020), comparing the anxiety of patients whose surgery was postponed and not postponed, they found that the mean anxiety state score of the patient group whose surgery was postponed was higher than the patients whose surgery was not postponed [26]. This situation was similar in this study, and it can be thought that the postponement of the surgery has an increasing effect on surgical anxiety.

It is observed that daily routine habits and expectations about life change more with the increase in the level of damage from the earthquake [27]. It was determined that 48.3% of the patients who participated in the study had damage to their homes and workplaces, and the SAQ total score of these patients was 26.06 ± 12.30 , and the anxiety of the patients was higher compared to the damage to their homes and workplaces.

Fear, which is an instinctive reaction, enables people to be alert and attentive to threats in order to survive physically and socially distressing processes. It is known that the fear reaction is the first reaction in people exposed to dangerous situations [28]. The results of the study were found to be parallel with the literature, and 79.2% of the patients participating in the study had fear, 76.7% worry, 65.8% anxiety, 18.3% depression, and 16.7% horror. In a similar study, when the results of the emotional, cognitive, and behavioral reactions of the police participating in the study were examined; as emotional reaction expressions, 79% of the participants stated that they were always worried, 72.2% were constantly on the alert, 61.1% felt excessive fear and 57.6% experienced anxiety [27].

Assessment of preoperative anxiety among surgical patients is not routinely performed as a part of surgical preparation. However, evidence suggests that preoperative anxiety contributes to a large impact on perioperative adverse outcomes, including increased induction agents, and hemodynamic instability [28,29]. It is very important to detect it in the early stage.

5. LIMITATIONS OF THE RESEARCH

The results obtained from the study are limited only to patients who agreed to participate in the study and met the inclusion criteria between April and June 2023 at a university hospital where the study was implemented. Therefore, the research results can only be generalized to patients with the characteristics of this sample group. In addition, another limitation is not being able to reach all patients because some of them are admitted to emergency surgical cases.

6. CONCLUSION AND RECOMMENDATIONS

As a result, according to the current findings, surgical anxiety arising from the surgical process may vary depending on many factors. On the other hand, surgical anxiety should be made manageable with appropriate nursing interventions. It is very important to ensure patient management by aiming to ensure rapid recovery in the surgical process. Moreover, in this context, it is recommended that nurses working in surgical clinics routinely evaluate anxiety that may affect postoperative recovery in the preoperative period and plan personalized care. It is recommended to develop practices to reduce the factors affecting the anxiety level of patients due to the surgical process.

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