

The Effect of Waiting Periods in Premedication Room on the Anxiety Levels of Patients Who Will Undergo Elective Surgery

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ABSTRACT:

The effect of waiting periods in premedication room on the anxiety levels of patients who will undergo elective surgery

Objective: Pre-operative fear and anxiety at different levels is seen in many patients in the preoperative period. This research is intended to determine whether the prolonged pre-operative waiting periods in the premedication room affect the patients' anxiety levels.

Material and Methods: After the ethics committee consent was obtained from the hospital where the study was conducted, the State-Trait Anxiety Inventory (STAI) FORM TX Pre-test form was completed to measure the situational anxiety of the patients, using face-to-face interviews at the first moments when the patient is taken into the room. While the patients were being taken to the operating room, the post-test survey form and a patient introductory information form were completed. Questionnaire Evaluation: Scores on the STAI FORM TX pre-test and post-test can range between 20 and 80 theoretically. High scores refer high levels of anxiety, and low scores refer low levels of anxiety. The average level of anxiety determined in applications varies between 36 and 41.

Results: This study included 250 patients (110 female and 140 male) with a median age of 43.1±15.7. The pre-operative STAI pre-test score average of the patients was 40.8±5.1, while their post-test score average was 40.9±4.9. There was no statistically significant difference between the anxiety level scores of the STAI FORM TX pre-test and post-test (p=0.868). When the relationship between the age groups and STAI FORM TX (pre-test) differences were examined, the median anxiety scores of the younger age group (15-30 years) were found to be significantly lower (p=0.004) than that of the middle age group (46-60 years). The STAI FORM TX pre-test score averages of the university graduates were found to be statistically significantly lower (p=0.006) than those of the patients who were only literate, when the STAI FORM TX pre-test averages of the individuals in the sample group were compared according to the educational status. The STAI FORM TX pre-test (p=0.001) and post-test (p=0.033) anxiety scores of the single participants were found to be statistically significantly lower than those of the married participants, when the mean scores of anxiety levels according to the marital status of the patients were examined. It was also found that STAI FORM TX pre-test score averages of the patients who responded to the question, "How did you find the premedication room?" with the answer, "Good," were higher than that of the patients responding to it with the answer, "Boring" (p=0.005). When the patients were asked about factors that could reduce their stress, 42.4% replied "being accompanied by a relative," 28% replied "watching tv," and 20.8% replied "listening to music."

Conclusion: All patients who were hospitalized for surgery were found to have anxiety and distress according to STAI FORM TX pre-test and post-test averages. However, the patients' prolonged waiting periods in the premedication room did significantly change their anxiety levels. The higher the patients' levels of education were, the less anxiety they experienced. This suggests that higher education leads to a better understanding and interpretation of information about their disease, which positively affects the feelings of educated patients. The married patients' levels of anxiety may have been higher than those of the single patients due to feelings of responsibility as parents. In order to reduce the patients' anxiety, it is suggested that they may be accompanied by a relative or allowed to relax with TV or music broadcasts.

Keywords: Anxiety, elective surgery, premedication, waiting period

ÖZET:

Elektif operasyon planlanan hastaların premedikasyon odasında bekleme sürelerinin anksiyete seviyelerine etkisi

Amaç: Ameliyat öncesi birçok hastada farklı derecelerde korku ve endişe görülmektedir. Bu arařtırmada ameliyat öncesi premedikasyon odasında bekleyen hastalarda, bekleme süresinin uzunluğunun kaygı seviyelerine etki edip etmediğinin belirlenmesi amaçlandı.

Gereç ve Yöntemler: Arařtırmanın yapıldığı hastanede etik kurul onayı alındıktan sonra, premedikasyon odasına alınan hastaların durumsal kaygılarını ölçmek amacıyla odaya alındıkları ilk dakikalarda STAI FORM TX (Durumluk kaygı ölçeği) ön test formu birebir görüme yöntemi kullanılarak dolduruldu. Hasta ameliyat odasına alınırken ise STAI FORM TX son test anket formu ve hazırlanan Hasta bilgi formu dolduruldu. Anket değerlendirilmesi: STAI FORM TX ön test ve son testten elde edilen puanlar kuramsal olarak 20 ile 80 arasında deđişir. Büyük puan yüksek kaygı seviyesini, küçük puan düşük kaygı seviyesini ifade eder. Uygulamalarda belirlenen ortalama kaygı puan seviyesi 36 ile 41 arasındaki deđişmektedir.

Bulgular: Bu arařtırmaya yaş ortalaması 43.1±15.7 olan toplam 250 hasta (110 kadın, 140 erkek) dahil edildi. Hastaların preoperatif dönemde bakılan durumluk kaygı ölçeği STAI FORM TX ön test puan ortalaması 40.8±5.1 iken, STAI FORM TX son test puan ortalaması 40.9±4.9 olarak saptandı. STAI FORM TX ön test formu ile son test formlarındaki kaygı düzeyleri puan ilişkisi arasında istatistiksel olarak anlamlı bir fark saptanmadı (p=0.868). Yaş grupları ile STAI FORM TX ön test farkları arasındaki ilişki incelendiğinde, genç yaş (15-30) grubundaki kaygı skorlarının, orta yaşa (46-60) göre puan ortalamasının anlamlı (p=0.004) ve daha düşük olduđu bulguları. Örnekleme grubundaki bireylerin STAI FORM TX ön test puan ortalamaları eğitim durumuna göre karşılaştırıldığında, üniversite mezunu hastaların kaygı skorlarının, okuryazar olan bireylerin puan ortalamalarına göre istatistiksel olarak anlamlı (p=0.006) ve daha düşük olduđu tespit edildi. Hastaların medeni durumlarına göre kaygı düzeylerinin puan ortalamaları incelendiğinde, bekar katılımcıların STAI FORM TX ön test (p=0.001) ve son test (p=0.033) kaygı skorlarının, evli bireylere göre istatistiksel olarak anlamlı ve puan ortalamasının daha düşük olduđu saptandı. Hastalara sorulan "Premedikasyon odasını nasıl buldunuz?" sorusuna "Güzel!" cevabı veren hastaların STAI FORM TX ön test puan ortalamalarının, "Sıkıcı" cevabını veren hastalara göre daha yüksek olduđu bulguları (p=0.005). Hastalara ameliyat sıralarını beklerken streslerini nelerin azaltabileceği sorulduğunda, hastaların %42.4'ünün, "bir yakınımın yanımda olması," %28'inin "tv izlemek" ve %20.8'inin "müzik dinlemek" cevabını verdiđi görüldü.

Sonuç: Ameliyat olmak için hastaneye yatan bütün hastaların STAI FORM TX ön test ve son test ortalamalarına göre kaygı ve sıkıntı yaşadığı saptandı. Ancak premedikasyon odasında bekleme süresinin uzunluğunun, hastaların kaygı seviyelerinde anlamlı bir deđişim yaratmadığı bulguları. Hastaların eğitim seviyeleri arttıkça kaygı seviyelerinin azaldığı belirlendi. Bu durum, bireylerin eğitim seviyesi arttıkça, bireylere hastalığı ve tedavisi hakkında verilen bilgilerin anlaşılması ve dođru yorumlanmasının duygular üzerinde olumlu sonuçlar yarattığını düşündürülebilir. Evli hastalarının kaygı seviyelerinin bekar hastalara göre yüksek oluđu, bireylerin ebeveyn rolünden dolayı üzerlerinde hissettikleri sorumluluk duygusundan kaynaklı olabilir. Hastalardaki kaygının azaltılması için, hasta ameliyata alınana kadar yanlarında bir yakınlarının bulunması, tv veya müzik yayını yapılarak hastaların rahatlatılması önerilmektedir.

Anahtar kelimeler: Anksiyete, elektif operasyon, premedikasyon, bekleme süresi

Ş.E.E.A.H. Tıp Bülteni 2017;51(4):283-292



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Date of receipt / Geliş tarihi: October 26, 2016 / 26 Ekim 2016

Date of acceptance / Kabul tarihi: September 5, 2017 / 5 Eylül 2017

INTRODUCTION

Many patients have different levels of fear and anxiety before surgery. Being sick, hospitalized and surgical intervention affects the lives of individuals in many ways (1,2). This anxiety and fear may depend on the type of anesthesia, as well as on the patient's previous experiences, personality traits, concerns for surgical interventions and post-operative pain. The high level of anxiety in the preoperative period may cause physical problems such as dizziness, nausea and headaches, but it also affects the post-operative anxiety. Patients' anxiety levels may be affected by many factors such as their previous experiences, their status during the arrival in the hospital, gender, age, and the type of surgery they will undergo (1,3). The patient who is reported that he should have surgery is in a state of stress. Many patients who undergo elective surgery define anxiety and this is considered as an expected response (4,5). Preoperative anxiety was found to be also associated with increased postoperative pain, analgesic requirement, and prolonged hospital stay (1,2,5).

Subject

The purpose of this study was to determine whether waiting in the premedication room to be operated for elective surgery had an effect on patients' anxiety levels. In the hospital where the study is conducted, the patients are operated according to the pre-prepared list. There is a premedication room in the operating room where the patients wait before being operated. Considering the physical conditions of the hospital, while the operation is being terminated in the operating room, the next patient is requested from the inpatient clinic to be taken to the premedication room. The patient coming from the inpatient clinic is met in the premedication room, the necessary documents are checked, and is kept under observation for a period of time until the operation room is emptied and prepared. This period usually does not exceed 15 minutes, despite there is a complication occurred in the patient during operation in the operation room

or if an emergency case is operated priorly. In some cases, patients may wait for approximately two hours. The aim of this study was to determine whether these waiting times of patients in the premedication room lead to an increase in anxiety levels and to identify factors that can help to reduce their anxieties while waiting.

MATERIAL AND METHOD

Location and Date of the Study

The data of the study were collected between March 2016 and August 2016 at the Health Sciences University, Sisli Hamidiye Etfal Training and Research Hospital.

Ethical Issues

The ethics committee approval of the study was obtained from the Ethics Committee of the Health Sciences University, Sisli Hamidiye Etfal Training and Research Hospital Ethics Committee, on 01.03.16 with the approval number 1112. Verbal consent for participation in the survey was obtained within the framework of voluntary initiative and willingness from individuals.

Sample Selection for the Study

The sample of the study consisted of 250 patients who were scheduled to undergo surgery between March 2016 and August 2016 in the hospital where the study was planned, who fulfilled the inclusion criteria and selected by the purposeful sampling method.

Sampling criteria;

1. The waiting time of the individuals in the premedication room to be more than 15 minutes,
2. To be at the age group of 15 years or higher,
3. Being literate and able to communicate,
4. Individuals to be having surgery in ENT, Urology, Brain Surgery, Orthopedics, General Surgery, Plastic Surgery, CVS and Pediatric Surgery departments,
5. Accepting voluntary participation in the research.

Data Collection Tools

The data collection tools listed below were used to collect the data.

Patient Information Form

This form, prepared by the investigator in the light of the literature, includes 11 questions about the socio-demographic characteristics of the patients, such as age, gender, education level and marital status, and characteristics related to the past health history.

STAI FORM TX Situational and Anxiety Scale

Spielberger describes anxiety as the unpleasant emotional and observable reactions such as sadness, perception and tension created by stressful situations. There are two types of anxiety described, called "state anxiety" and "trait anxiety", which are first determined by Cattell and Scherer with factor analysis in their study and then developed by Spielberger et al. (6). State anxiety is defined as a temporary emotional state that is characterized by subjective tension and fear emotions. Trait anxiety shows the relative tendency of anxiety in the individual, and it is the concentration and continuity of state anxiety. State-Trait Anxiety Inventory (STAI FORM TX) was developed by Spielberger et al. to measure state anxiety and trait anxiety. The adaptation of the scale to Turkish, and validity and reliability studies were carried out by Öner and Le Comte (6). The most commonly used scale for anxiety measurement was used also in this study (7).

Interpretation of Scores

The STAI FORM TX state anxiety scale is a 4-point Likert-type scale of 20 items in total. The scores obtained from STAI FORM TX pre-test and post-test theoretically range from 20 to 80. High score refers to high level of anxiety, whereas low score refers to low level of anxiety. The same is valid when the scores are interpreted in percentage order. That is, the low percentile sequence (such as 1,5,10) shows their is little anxiety. The average score level determined in

applications ranges from 36 to 41. STAI FORM TX is a 4-degree scale that ranges from "None" to "All". There are two types of statements in the state anxiety inventory (STAI FORM TX). Direct expressions express negative emotions and reversed expressions express positive emotions. The reversed expressions in the state anxiety inventory (STAI FORM TX) are 1,2,5,8,10,11,15,16,19 and 20th items. The total weight scores of the inverse expressions are subtracted from the total weight scores obtained for the direct expressions after finding the total weights of the direct and reversed expressions separately. To this number, a predetermined and constant value is added. For the state anxiety inventory (STAI FORM TX) this constant value is 50. The last value obtained is the anxiety score of the individual. The state anxiety scale (STAI FORM TX) is a very sensitive tool to evaluate the suddenly changing emotional reactions.

The STAI FORM TX post-test questionnaire consists of the same test as the pre-test form. The purpose of separating the test as pre-test and post-test is to measure whether the waiting period of patients in the premedication room affects anxiety levels.

Application of the Research

In the first minutes when the patients were taken into the premedication room, STAI FORM TX pre-test was filled using the face-to-face interview method to measure preoperative anxiety levels. The forms of individuals with visual impairments and who had difficulty in writing were filled in by the investigator as appropriate for the answers given by the patient. Patients waited in the premedication room until the surgery room was prepared and it was their turn. Questionnaires of patients whose waiting times were less than 15 minutes were excluded from the study. STAI FORM TX post-test questionnaire and patient information form were asked to be filled out by using the face-to-face interview method to determine whether the difference in waiting time of the patients changed the anxiety levels when patients were waiting more than 15 minutes. The forms of individuals with visual impairments and who had difficulty in writing were again filled in by the investigator as appropriate for the answers given by the patient.

Analysis Methods

The data were evaluated by descriptive and correlational analysis in SPSS (Statistical Package for Social Sciences) for Windows 21.0 program. Results were evaluated at 95% confidence interval and significance at $p < 0.05$ level. Ten expressions were reversed in STAI FORM TX (State anxiety inventory) score calculation (1, 2, 5, 8, 10, 11, 15, 16, 19 and 20th expressions). Total weighted scores for negative

expressions were subtracted from total scores for direct expressions. The previously identified and unchanging value of 50 was added to this number. The last value obtained was accepted as the individual's state anxiety score. Since the numerical variables obtained in the pre-test and the post-test did not meet the normal distribution criteria, independent two-group comparisons were made by Mann-Whitney U test and with Kruskal Wallis test in more than two groups. Subgroup analyzes were done by

Table-1: Descriptive characteristics of patients

		Mean±SD(±)	Min-Max
Age		43.1±15.7	15-80
		n	%
Gender	Female	110	44.0
	Male	140	56.0
Educational Status	Literate	20	8.0
	Elementary School	122	48.8
	High-school	74	29.6
	University	34	13.6
Marital status	Married	182	72.8
	Single	68	27.2
Have you had surgery before?	Yes	168	67.2
	No	82	32.8
Impression of previous surgical experience	Good	104	41.6
	Moderate	60	24.0
	Poor	13	5.2
	Does not have one	73	29.2
In the past have had or still having a psychiatric treatment?	Yes	17	6.8
	No	211	84.4
	Have had before, not now.	22	8.8
In the past have had or still have alcohol or substance use?	Yes	31	12.4
	No	205	82.0
	Have had before, not now.	14	5.6
At which department are you going to have surgery?	ENT	45	18.0
	Urology	55	22.0
	Neurosurgery	18	7.2
	Orthopaedics	19	7.6
	General surgery	71	28.4
	Plastic surgery	27	10.8
	Cardiovascular	9	3.6
	Pediatric surgery	6	2.4
How did you find the premedication waiting room?	Fine	101	40.4
	Warm	11	4.4
	Cold	38	15.2
	Boring	61	24.4
	Worrisome	39	15.6
What would decrease your stress while waiting for your surgery in the premedication room?	Watching Tv	70	28.0
	Listening music	52	20.8
	Reading book	18	7.2
	Reading magazine	4	1.6
	Having a relative next to you	106	42.4

Mann Whitney U test and adjusted by Bonferroni correction in more than 2 groups. Relations between numerical variables were examined by Spearman Correlation Analysis since parametric test condition was not provided. Statistical significance level of alpha was accepted as $p < 0.05$.

RESULTS

A total of 250 patients with an average age of 43.1 ± 15.7 years were included in this study. 44.0% of the patients were female, 56.0% were male. 72.8% of the patients were married and 27.2% were single. 67.2% of the participants stated that they had previously undergone another operation and 84.0% of the individuals stated that they had not received a psychiatric treatment before. 28.4% of patients were composed of individuals who came for surgery in General Surgery Department. This was followed by Urology (22%), ENT (18%) and Plastic Surgery (10%), respectively. 42.4% of the patients gave the answer "I'd have a relative next to me" to the

question "What would decrease your stress while waiting for your surgery in the premedication room?" (Table-1).

Table-2 shows STAI FORM TX pre-test and post-test averages. There was no statistically significant difference between STAI FORM TX pre-test form and post-test form anxiety levels observed in preoperative period ($p = 0.868$).

When the relationship between age groups and STAI TX FORM pre-test differences before waiting period was examined, it was found that there was no significant difference between the anxiety scores of middle-aged (46-60) and elderly (61-75); however, in young age group (15-30), the anxiety scores were significantly lower than the middle-aged group (46-60) ($p = 0.002$). When the difference between the age groups and the STAI FORM TX post-test performed at the end of the waiting period was examined, it was found that there was no statistically significant difference in the anxiety level in the young age group and in the middle age and elderly group according to the pre-test (Table-3).

Table-2: STAI FORM TX Pre-test-Post-test evaluation chart

	Mean \pm SD(\pm)	Min- Max	p
Pre-test score	40.8 \pm 5.1	20-59	0.868
Post-test score	40.9 \pm 4.9	26-56	

Table-3: Age groups assessment chart

		STAI FORM TX					
		Pre-test score			Post-test score		
		Mean	SD(\pm)	p	Mean	SD(\pm)	p
Age	15-30	38.6	5.7	0.007	40.2	5.3	0.318
	31-45	41.5	4.9		41.3	4.5	
	46-60	41.6	4.7		41.3	4.9	
	61-75	40.8	4.2		40.0	5.0	
	76-90*	44.0	7.9		41.7	5.7	

*The number of cases was insufficient, so they were not included in the analysis

Subgroup analysis by age

	Pre-test score
	p*
15-30 vs. 31-45	0.004
15-30 vs. 46-60	0.002
15-30 vs. 61-75	0.075
31-45 vs. 46-60	0.698
31-45 vs. 61-75	0.525
46-60 vs. 61-75	0.324

*Bonferroni correction $p < 0.0083$

Table-4: Educational Status Subgroup analysis

		Pre-test	Post-test
		p	P
Educational status	Literate vs. elementary school	0.230	0.198
	Literate vs. High-school	0.007	0.065
	Literate vs. University	0.006	0.041
	Elementary school vs. High-school	0.007	0.233
	Elementary school vs. University	0.012	0.086
How did you find the premedication room?	High-school vs. University	0.582	0.440
	Fine vs. Warm	0.780	0.402
	Fine vs. Cold	0.029	0.167
	Fine vs. Boring	0.005	0.041
	Fine vs. Worrisome	0.883	0.208
	Warm vs. Cold	0.269	0.124
	Warm vs. Boring	0.230	0.130
	Warm vs. Worrisome	0.851	0.906
	Cold vs. Boring	0.460	0.778
	Cold vs. Worrisome	0.087	0.018
Sıkıcı vs. Worrisome	0.044	0.009	

Bonferroni Correction p<0.0083 for education, p<0.005 for premedication room evaluation, minimum p value if the conditions cannot be provided

When the educational status of the patients were examined, statistically significant difference was found in the mean scores of STAI FORM TX pre-test results according to the educational levels (p=0.002) (Table-4). When the STAI TX FORM pre-test averages of the individuals in the sample group were compared according to the educational status, it was found that the anxiety scores of the university graduate patients were statistically significantly (p=0.006) lower than the average scores of the literate individuals (Table-4). When the participants' STAI FORM TX pre-test averages were compared according to their education level, it was found that the anxiety scores of high school graduates were statistically significantly (p=0.007) lower than the average scores of literate individuals (Table-4). It was found that the individuals who gave the answer "Fine" to the question "How did you find the waiting room?" had higher STAI FORM TX pre-test average scores than that of the individuals who gave the "Boring" answer (p=0.005). The relationship between the individuals who gave the answer "Worrisome" to the question "How did you find the waiting room?" in the STAI FORM TX post-test scale, and the ones who gave the answer "boring" was found significant (p=0.009).

When the difference between gender and STAI FORM TX state anxiety inventory was examined, it was found that the anxiety STAI FORM TX (pre-test

and post-test) values of female patients were higher than STAI FORM TX (pre-test and post-test) anxiety values of male patients, and the difference was not found to be statistically significant (p=0.353, p=0.101). As shown in Table-5, when the marital status of the patients were examined, STAI FORM TX pre-test and post-test anxiety scores of single individuals were found to be statistically lower than married individuals (p=0.001, p=0.033).

The relationship between STAI FORM TX pre-test and post-test scores was not statistically significant when patients' past operative stories were examined (p=0.073, p=0.293) (Table-5).

As shown in Table-5, no significant relationship was found between the department of patients' operation and STAI FORM TX pre-test and post-test scores (p=0.870, p=0.790).

DISCUSSION

The first reaction that a person shows when confronted with a danger or in the case of a disease is, anxiety. According to many researches, there is a high level of anxiety in patients who are hospitalized, especially in surgical operations. The applications are perceived as a danger to the patient and both pre-operative and post-operative tension and stress occur (2).

Table-5: Patient information form evaluation chart

		STAI FORM TX					
		Pre-test			Post-test		
		Mean	SD(±)	p	Mean	SD(±)	p
Gender	Female	41.1	5.6	0.353	41.4	5.2	0.101
	Male	40.5	4.7		40.4	4.6	
Educational Status	Literate	43.3	5.1	0.002	42.5	4.7	0.096
	Elementary school	41.4	5.2		41.2	4.9	
	High-school	39.6	4.7		40.5	4.7	
	University	39.4	5.1		39.8	5.0	
Marital status	Married	41.5	4.7	<0.001	41.3	4.7	0.033
	Single	38.8	5.6		39.9	5.2	
Have you had any surgery before?	Yes	40.8	5.4	0.859	40.8	5.0	0.586
	No	40.6	4.4		41.1	4.5	
Previous surgery history	Good	41.5	5.1	0.073	41.3	5.1	0.293
	Moderate	39.3	4.6		39.8	4.5	
	Poor	42.2	8.7		41.8	6.7	
	None	40.7	4.5		41.0	4.5	
In the past or still have had a psychiatric treatment?	Yes	42.2	4.3	0.469	42.2	5.1	0.575
	No	40.7	5.2		40.8	4.9	
	Have had before, not now.	40.2	4.7		40.7	4.5	
In the past have had or still have alcohol or substance use?	Yes	42.1	5.0	0.221	41.7	4.3	0.310
	No	40.8	5.1		40.9	5.0	
	Have had before, not now.	37.7	5.3		39.1	4.1	
At which department are you going to have the surgery?	ENT	41.5	5.1	0.870	42.1	5.1	0.790
	Urology	40.5	5.2		41.1	5.3	
	Neurosurgery	40.3	5.9		40.3	5.7	
	Orthopaedics	41.1	6.9		40.6	5.3	
	General surgery	40.9	3.8		40.6	3.5	
	Plastic surgery	40.7	6.3		40.0	5.7	
	Cardiovascular	39.6	4.0		40.6	4.0	
	Pediatric surgery	38.7	7.2		40.2	7.2	
How did you find the premedication room?	Fine	41.6	4.3	0.024	41.2	4.5	0.031
	Warm	40.9	4.6		42.3	5.3	
	Cold	39.6	5.2		39.6	4.7	
	Boring	39.5	6.1		39.9	5.4	
	Worrisome	41.7	5.0		42.3	4.5	
What would decrease your stress while waiting for your surgery in the premedication room?	Watching TV	41.6	4.8	0.457	40.7	4.2	0.757
	Listening music	40.5	5.7		40.1	5.3	
	Reading books	39.5	4.8		40.2	5.1	
	Reading a magazine	39.0	6.2		42.5	6.2	
	Having a relative next to you	40.6	5.1		41.4	5.0	

The preoperative STAI FORM TX pre-test and post-test anxiety scores of the 250 patients included in this study were 40.8 ± 5.1 and 40.9 ± 4.9 , respectively. This detected value is in line with previous studies using the STAI FORM TX state anxiety inventory. In the study conducted by Erdem et al. (4), the total of 108 patients were found to have

pre-operative STAI FORM TX score of 39.08 ± 10.92 . In a study conducted by Taşdemir et al. (1) with 107 patients, the mean preoperative anxiety scores were found to be 40.60 ± 11.23 .

In this study, the preoperative STAI FORM TX scale of patients, which 44% were female and 56% were male, was found to be higher than that of

males in females, but the difference was not statistically significant. The relationship between gender and anxiety was assessed in most of the studies conducted and it was reported that the level of anxiety in women was higher than that in men (1,2,5,6). Epidemiologically, depression and anxiety being more common in females than in males, seems to be supporting these findings.

When we look at the relationship between age and preoperative level of anxiety, various results are seen in the literature. While some researchers found the effect of age on preoperative anxiety levels to be significant, some found it insignificant (1,2,8,9).

The mean age of the patients in this study was 43.1 ± 15.7 . Pre-test anxiety level of preoperative STAI FORM TX in middle age group (46-60) was higher than younger group (15-30), and this value was statistically significant ($p=0.002$). There was no statistically significant relationship between age and anxiety level in the STAI FORM TX post-test results of patients who were waiting for surgery for more than 15 minutes in the premedication room after they had the pre-test ($p=0.318$). When looking at the values, it was seen that at the end of the waiting period, there was no change in the anxiety level of the middle age and elderly group while the the level of anxiety in the young age group increased, even though this increase was not statistically significant.

In a study conducted by Shevde and Panogopoulos (10) in New York with 800 patients, the level of preoperative anxiety in the elderly was found to be lower than in young and middle aged. In the study conducted by Taşdemir et al. (1) in 107 patients in Ege University Faculty of Medicine, preoperative anxiety scores of young and middle-aged group were found to be higher than those of advanced-age group, although it was not statistically significant.

Ramsey (11) found that anxiety rates were higher in the middle age group than in the young age group, and that he explained that the reason for the high level of anxiety in the middle age group may be due to the greater responsibilities of these age groups to their families (11).

In this study, STAI FORM TX state anxiety inventory pre-test score averages had statistically significant differences between educational levels. The state

anxiety scale mean score of university graduates were lower than the literates, and the state anxiety scale mean score of the high-school graduates was lower than the elementary school graduates.

In some studies it has been shown that with the increased level of education, the level of anxiety increases, whereas in some studies, the level of education did not affect the level of anxiety (1,2,6). In a study it was reported that pre-operative anxiety levels are higher in those who had education for more than 12 years (12). The level of anxiety can be expected to be low because educated patients will have a high level of knowledge about the operation they will have and would evaluate the risks of the surgery well. However, it is reported that having more information on some issues may increase the anxiety (1,5,9).

In this study, STAI FORM TX pre-test anxiety level of patients who defined previous operation experience as good and moderate was lower than that of patients with poor experience (Table-4).

Ramsey reported that the anesthesia-related anxiety of patients who had undergone anesthesia before ten years was less than those who did not have surgery for ten years (11). In a study conducted in our country, it was reported that the experience of anesthesia did not change the level of anxiety (1).

Surgery, an important stressor, causes stress reactions in the vast majority of patients, leading to anxiety. Various methods have been tested to reduce this anxiety (13,14). It has been found that various methods of reducing the stress and anxiety of patients, especially those treated in a hospital setting were quite useful.

In this study, the patients waiting for surgery in the premedication room were asked about the methods they preferred to reduce the stress they were experiencing; 42.4% of the patients stated that their stress would reduce if they had a relative with them, while 28.0% of the patients stated that watching television and 20.8% stated that listening to music would reduce their stress.

In a study conducted, it was found that patients needed at least one of their family members when they were in the hospital, so that they felt more confident (13). In a study conducted by Yardakçı and

Akyolcu (14), it was determined that visits performed during the preoperative period had a positive effect on the state anxiety levels of the patients.

In the study of Baffum et al. (15), in which they evaluated the effect of music on anxiety before angiography, the mean state anxiety score of the patients listening to music during the process decreased from 38.57 to 35.2. In a study conducted by Demir and Arslantaş (16), it was found that the relaxation exercise applied with music before coronary angiography decreased the anxiety levels significantly.

In this study, 40.4% of the patients scored the premedication room's conditions as "fine", while 24.4% of the patients scored as "boring", and 15.6% found to be "worrisome", when the effects of the conditions of the premedication room on the patients' anxiety levels while waiting for were evaluated. Surprisingly, it was seen that the level of anxiety of the patients who found the premedication room to be "fine" was higher than the patients who found it

"boring" (Table-5).

In this study, it was found that the length of the waiting periods in the premedication room where the patients wait before taken into the operating room did not affect the level of anxiety, even though they all have anxiety. However, 15.6% of the patients who stayed in the premedication room for more than 15 minutes had anxiety, and 24.4% were found to be bored. When asked to the patients what they preferred to reduce this distress and anxiety, 42.4% wanted a relative to be near them, 28% preferred to watch television and 20.8% to listen to music.

In other hospitals where patients are kept in the pre-operative premedication room, such as the hospital where this study is conducted, it is recommended to create an environment that allows patients to have a relative with them until being taken into the surgery room in order to reduce their anxiety and distress, and also to provide appropriate equipment for patients who want to listen to music or watch television.

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