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Satisfaction and anxiety in an initiative with local anesthesia

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Aim: To determine the levels of satisfaction and anxiety of patients in surgery under local anesthesia.

Materials and methods: This cross-sectional descriptive study was performed at the Ege University Faculty of Dentistry between December 2011 and January 2012. The study sample consisted of 350 patients. A sociodemographic information form and State-Trait Anxiety Inventory were used in obtaining the data. Figure-percentage distributions, mean, Student's t-test, one-way ANOVA, and correlation analysis within SPSS 15.0 for Windows were used in data analysis.

Results: The mean patient age was 31.58 ± 14.58 years, consisting of 64.9% females, 36.6% high school graduates, and 72.9% who were satisfied with their therapy. Conditional anxiety score of the patients was 39.03 ± 6.16, and constant anxiety score was 44.12 ± 6.38. The conditional anxiety score was greater in males compared to females ($P < 0.05$). Conditional anxiety was greater among patients with both lower and higher levels of education ($P < 0.05$).

Conclusion: Physicians and nurses within a health team should define factors that cause anxiety and be aware that levels of anxiety are important in terms of anxiety control.

Key words: Anxiety, satisfaction, oral surgery

1. Introduction

It is among the major objectives of a healthcare system to enable every individual in a society to access healthcare services and adequately benefit from them. However, as in various areas of health services, there are a number of factors that hinder the achievement of this objective in odontotherapy. Looking at the issue from the viewpoint of Turkey, the general problems of healthcare services and economic insufficiencies are the reasons mentioned first for society being unable to benefit from dental care services at the desired level. Nonetheless, people are not benefiting from dental care services at the desired level even in countries where these problems are experienced at minimum levels and the awareness of oral and dental health is highly developed in the majority of the society. This situation has revealed that the psychological dimension of dental care should be considered in a more holistic approach, and issues such as anxiety that develops in individuals in relation to their fear of dental treatment should be dealt with.

The anxiety usually experienced by people when they go for dental treatment causes them to delay or neglect their dental treatment, leading to increasing problems with their teeth, and also in difficulties with treating them. Our aim in this study was to assess the levels of satisfaction and anxiety in patients for whom an operation under local anesthesia was planned in the operating room of the Oral and Maxillofacial Surgery Department of Ege University's Faculty of Dentistry in order to be able to take the appropriate measures for the treatments to be attempted.

2. Materials and methods

This cross-sectional, descriptive study was conducted at the outpatient clinic of the Oral and Maxillofacial Surgery Department of the Ege University Faculty of Dentistry between December 2011 and January 2012. The study commenced after obtaining the approval of the Ege University Ethics Committee. The study consisted of 4000 patients who presented to the outpatient clinic of the Oral and Maxillofacial Surgery Department of the Ege University Faculty of Dentistry for mouth, teeth, and chin complaints. A total of 350 patients were chosen as the sample using a sampling method with a known population. A sociodemographic questionnaire and the

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State-Trait Anxiety Inventory were used for data collection (1). The data were analyzed using number-percentage distributions, averages, Student's t-test, one-way ANOVA, and correlation analyses in SPSS 15.0 for Windows.

3. Results

When the sociodemographic characteristics of the patients, who had a mean age of 31.58 ± 14.58 years, were examined, it was found that 64.9% of the patients were female, 53.4% of them were single, 36.6% were high-school graduates, 62.9% were unemployed, and 40.0% came for treatment for the second time (Table 1).

When the anxiety scores of the patients were examined by sex, the state anxiety scores of men were found to be higher than women. No significant difference was found between the trait anxiety scores of men and women (Table 2).

It seems logical to expect the increased experience of dental treatment in patients as they grow older and thus lowered anxiety. However, when the trait and state anxiety test scores of the patients who came for treatment were compared by age groups in our study, the difference was found to be statistically insignificant (P > 0.05).

While 43.4% of the patients stated that they saw the doctor within 0–1 h, 72.9% of them expressed their satisfaction with the treatment. The state anxiety score of the patients was 39.03 ± 6.16 and their trait anxiety score was 44.12 ± 6.38 (Table 3).

Table 1. Sociodemographic characteristics of patients.

Properties	N	%
Sex		
Female	227	64.9
Male	123	35.1
Marital status		
Single	187	53.4
Married	147	42.1
Widowed/divorced	16	4.5
Age (mean, years)	31.58 ± 14.58 (range: 7–79)	
Education		
Elementary	62	17.8
Junior high/high school	26	7.4
High school graduate	128	36.6
Undergraduate degree	39	11.1
Graduate degree	95	27.1
Work status		
Employed	130	37.1
Not employed	220	62.9
Number of treatments		
First	127	36.3
Second	140	40.0
Third	45	12.8
Fourth time or more	38	10.9
Total	350	100

Table 2. State and trait anxiety mean score of patients by sex.

Sex	N	Situational anxiety Mean ± SD	Trait anxiety Mean ± SD
Female	227	38.37 ± 6.19	44.27 ± 6.69
Male	123	40.26 ± 5.92	43.85 ± 5.79
TOTAL	350	t = −2.778, P = 0.006	t = −0.586, P = 0.558

3.1. Determining the patients' reasons for preferring the dental clinic

An attempt was made to evaluate the reasons of the patients participating in the study for choosing a healthcare center and to examine their answers to the questions in order to determine the significance of these reasons.

Examination of the answers relating to the quality of the service provided showed that 66.9% of the patients rated the quality of the service provided as "Very significant" and 30.3% of them as "Significant".

Meanwhile, 61.4% of the patients answered the question about the attitudes and behaviors of the staff as being "Very significant" and 36.0% of them as "Significant".

The number of patients who thought that the healthcare center where they were being treated should have more advanced technology and more facilities when compared to other healthcare centers was 245 (70.0%).

The number of patients who stated that a clean and comfortable environment was very important in preferring a treatment center was 270 (77.1%).

Additionally, 35.7% of the patients stated that closeness to their homes or workplaces did not affect their choice of the healthcare center from which they received service.

There were 208 patients (59.4%) who stressed that having access to services without losing time and waiting in lines was very important for their selection of a healthcare center.

The number of the patients who thought that medical staff sparing enough time for listening to their complaints was a very important reason for their preference of the healthcare center was 188 (53.7%).

When the answers about providing complete service were examined, 68.6% of the patients stated that it was very important that the healthcare center where they would be/are receiving treatment could provide complete service.

The number of patients who though that solving the problems they encountered and giving adequate information at the front desk was a very important selection factor was 199 (56.9%).

The number of those who expressed that it was a very important factor in their selection that the healthcare

Table 3. State and trait anxiety mean score of patients by educational status.

Educational status	N	Situational anxiety Mean ± SD	Trait anxiety Mean ± SD
Elementary and lower	88	39.98 ± 6.21	45.02 ± 7.06
High school	128	37.71 ± 5.98	43.45 ± 6.19
Higher than high school	134	39.67 ± 6.12	44.17 ± 6.05
Total	350	F = 4.791, P = 0.009	F = 1.588, P = 0.2065

institution in which we performed the study had a better image and reputation for reliability as compared to other healthcare centers in the same category was 214 (61.1%).

It was assessed as very significant by 54.9% of the patients that the management and staff of the healthcare center were in continuous communication with patients.

Approximately 44.3% of our patients stated that the recommendations of their friends, spouses, or close associates were important criteria for their choice of the healthcare center where they are/would be receiving treatment.

4. Discussion

When the anxiety scores of the patients were examined by sex, the state anxiety scores of men were found to be higher than women. No significant difference was found between the trait anxiety scores of men and women. This result is consistent with the study conducted by Özdemir et al. (2). However, the results of other studies conducted in Turkey and in other countries indicated that women have more fear and anxiety of dental treatment than men (3–13).

In their anxiety assessments, Locker et al. stated that the values were higher at early ages (8). Doerr et al. (3) also reported lower anxiety values at 55 years of age and over. A study by Elter et al. revealed similar results. This is attributed to the increased experience of dental treatment in patients as they grow older. When the trait and state anxiety test scores of the patients who came for treatment were compared by age groups in our study, the difference was found to be statistically insignificant ($P > 0.05$). This result was similar to the results of the study conducted by Arslan and Erten (14).

Spielberger et al., who explored the relationship between patients' educational status and anxiety, reported that patients with higher levels of education have developed effective skills in coping with stress and therefore do not perceive threats in the pressure created by new environments and events (1). Doerr et al. and Elter et al. reported that as the length of education increased, anxiety diminished (3,4). This result supports the view of Spielberger et al. (1). However, Görgün et al. found in their study that the highest level of anxiety was in those who had postgraduate education (5). According to some other researchers, the rate of having anxiety due to dental treatment and surgery is higher in groups with lower levels of education (10,15,16). However, the results of some other studies did not reveal any relationship between anxiety and education (5,7,12). In our study, a statistically significant difference ($P < 0.05$) was found when the state anxiety scores of those having education at primary school and undergraduate levels were compared to those who were graduates of high school. The patients with low and high levels of education had high states of anxiety.

This result may indicate that those with a low level of education have inadequate information about the treatment and those with a high level of education have too much information before the treatment, both of which increase their anxiety. Therefore, thinking from the perspective of controlling anxiety, it may be advisable to give general information and explanations to patients before an operation without going into too much detail, because it will cause the same increase in anxiety to give very detailed information as to give no information to patients before an operation.

The expectations of patients from a healthcare center and their criteria for satisfaction were determined and their statements were as follows: The majority of the patients (77.1%) stated that it was very important in the first place to have a clean and comfortable treatment environment in preferring the treatment center. As the priority ranking second, 70.0% of the patients expressed the need for having advanced technology and more facilities in the center where they are treated, as compared to other healthcare centers, and 66.9% of the patients placed the quality of service provided in third place when preferring a treatment center. Meanwhile, 72.9% of the patients expressed their satisfaction with the treatment they received. This result was similar to the result of the study conducted by Öner (10). The patients who were satisfied with the treatment were observed to have more anxiety than those who were not satisfied. When the state anxiety scores were compared, the difference was statistically significant ($P < 0.05$). This result differed from those of some other studies. The level of anxiety was found higher in the patients who were not satisfied with the treatment in the studies of González-Lemonnier et al.,

Kim et al., and Koyuncu et al. (7,17,18). The result of our study may be explained in that those patients who were satisfied with the treatment also had higher expectations from the treatment, which increased their anxiety.

These percentages of the reasons for selecting a healthcare center are noteworthy in terms of seeing that the patients, along with their rights of receiving diagnosis and treatment, also observed and questioned their other rights. This result demonstrated a patient profile where patients are now questioning and seeking their rights to the full extent, not compromising cleanliness and hygiene, and demanding a comfortable environment in which they feel relaxed. A high quality of service makes patients feel satisfied with that healthcare center and satisfied patients talk favorable about that healthcare center and recommend it to others. The more that patients feel confident in their relationships with health professionals, the more satisfied they are when leaving that healthcare center. The staff of a healthcare center should always be ready, willing, and eager to help patients. Attempts to increase the quality of service should begin primarily with providing health professionals with in-service training about the professional approach to patients and their relationships with patients.

In conclusion, the doctors and nurses in a healthcare center are all team members who can establish good communication with patients and can observe their psychological and social problems. In this respect, doctors and nurses should identify the factors that would create anxiety in patients and address their levels of anxiety before and after an oral surgery under local anesthesia. It is important for controlling anxiety to explain the procedure and give general information to patients before an operation. Thus, health professionals should plan and implement correct and appropriate procedures to help patients and to evaluate the outcomes of the care. Doctors and nurses should be willing, eager, and always ready to ensure patient satisfaction.

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