AN ASSESSMENT OF DENTAL ANXIETY IN ORAL SURGERY PATIENTS

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ÖZET

Oral Cerrahi Hastalarında Dentalanksiyetenin Değerlendirilmesi

Amaç: *Bu çalışmada, farklı cerrahi işlemler yapılması planlanan hastalarda dental anksiyetenin değerlendirilmesi amaçlanmıştır.*
Yöntem: *C.Ü. Diş Hekimliği Fakültesi A.D.Ç. Hastalıkları ve Cerrahisi kliniğine tedavi amacıyla başvuran 120 hasta tarafından hasta bekleme salonunda kişisel bilgi ve Süreksiz Durumluluk/Sürekli Kaygı Envanteri (STAI) formları doldurulmuştur.*
Bulgular: *Kadınlarda Durumluluk Kaygı (STAI-S) skoru erkeklerden daha yüksek görülürken, Sürekli Kaygı (STAI-T) skorları arasında fark gözlenmedi. Refakatçi ile gelen hastalarda STAI-S skorları diğer hastalardan daha yüksek çıkarken, STAI-T skorları benzer bulundu. Daha önceki dental tedavilere bağlı, normal veya ameliyat ile çekim bekleyen hastalarda anksiyete düzeyleri arasında önemli bir fark görülmedi.*
Sonuç: *Cerrahi gerektiren işlemlerin diş hekimliğinde en çok anksiyeteye neden olması beklenmekle birlikte, gerçekte hastanın anksiyete düzeyini belirleyen ana faktör kişisel durumudur.*
Anahtar Kelimeler: *Dental Anksiyete, Anksiyete Testleri, Oral Cerrahi.*

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SUMMARY

Objectives: *The purpose of this study was to evaluate dental anxiety among patients anticipating various surgical procedures.*
Methods: *120 patients who were admitted for specific dental treatment at the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Cumhuriyet University, participated in the study. The State-Trait Anxiety Inventory (STAI) questionnaires were completed by the patients while waiting for their treatments.*
Results: *Women demonstrated higher levels of State Anxiety (STAI-S) than men, but no difference for Trait Anxiety (STAI-T) scores. The patients with companionship had higher scores in STAI-S than others and had equal scores with others in STAI-T. There were not significant differences in the anxiety levels related to the previous dental treatment and anticipating extraction normally or surgically.*
Conclusions: *It is concluded that anticipating surgical treatment may be the most anxiety provoking procedures in dentistry. However, the major factor that influenced of anxiety level is the patient's individual condition.*
Key Words: *Dental Anxiety, Anxiety Inventory, Oral Surgery.*

INTRODUCTION

Provocation of anxiety by dental treatment is a universal phenomenon. In its severe form, anxiety may have an impact on the dentist-patient relationship and contribute to misdiagnosis. Patients who had experienced dental anxiety during dental visits reported that the worst experiences had occurred earlier in their lives (1,2,3).

Anxiety is defined as apprehension of danger and dread accompanied by restlessness, tension, tachycardia, and dyspnea unattached to a clearly identifiable stimulus. Its source is in the unconscious (4). Dental anxiety has also been identified as a significant barrier toward the receipt of dental care, particularly as the result of avoidance. Anxiety concerning dental treatment can be exacerbated by sounds, smells, sights, situations, prior experiences, friends, and so forth (5,6,7).

The identification of anxiety can actually be a rather difficult process. This may explain why many dental practitioners, while they are aware of dental anxiety and its potential impact on their practices, readily admit to a surprising lack of confidence about their ability to identify the condition and undertake its subsequent management (8,9,10).

Spielberger's State-Trait Anxiety Inventory (STAI) was initially conceptualized as a research instrument for the study of anxiety in adults. It is a self-report assessment device which includes separate measures of state and trait anxiety. According to the author, state anxiety reflects a "transitory emotional state or condition of the human organism that is characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity." State anxiety may fluctuate over time and can vary in intensity. In contrast, trait anxiety denotes "relatively stable individual differences in anxiety proneness ..." and refers to a general tendency to respond with anxiety to perceived threats in the environment (11,12).

The inventory consists of two forms, one to measure anxiety as a personality trait (STAI-T) and one to measure fluctuating anxiety (state anxiety) across a variety of situations or contexts (STAI-S). Each form contains 20 questions (11,12). Turkish edition of the inventory was developed by Le Compte and Öner in 1976 (13).

Scores on the STAI-S anxiety scale increase in response to physical danger and psychological stress, and decrease as a result of relaxation training. On the STAI-T anxiety scale, consistent with the trait anxiety construct, psychoneurotic and depressed patients generally have high scores. Scores on the STAI have a direct interpretation: high scores on their respective scales mean more trait or state anxiety and low scores mean less (11,12,14).

METHODS

The study was conducted in Cumhuriyet University, Faculty of Dentistry, Department of Oral and Maxillofacial Surgery. Patients anticipating surgical treatment were approached in the waiting room by a member of the research staff and asked to complete a questionnaire. The patients who were not willing to fill in the questionnaires were not included in the study. One hundred and twenty patients (60 males, 60 females) were enrolled the study.

The survey consisted of two sections. The first section was anxiety inventory (STAI) and second was sociodemographic and dental information of the patient, e.g. age, gender, education and companionship, previous dental treatments and visits.

Both STAI-S and STAI-T consists of 20 items, with scores ranging from 1 to 4 for each question. The subject indicates to what extent a given motion is representative of his or her state. A score of 1 means 'not at all', while 4 denotes 'very much'. To control for respect set, half of the questions are formulated in terms of positive emotions, whereas the others state negative emotions. The scaling of the positively formulated questions is reversed when computing the total score.

Data obtained from questionnaires were assessed statistically by SPSS for Windows version 7.5. All significance levels were set at 0.05.

In data of patients' demographics, to determine differences by sex Independent Samples T test was conducted. For age and education, One Way Anova test was used. The Kruskal-Wallis test was used to determine differences between "previous dental treatments" groups, and was used "visit period" groups too. Mann-Whitney U test was conducted to analyse "previous dental experience", and Independent Samples T test was used for "companionship" and "indication" groups.

RESULTS

Of the 120 patients, 50% were females and 50% were males with mean age of 27.90±0.80 years (range 18-57 years).

The means and standard error (Se) of the state and trait anxiety for the total population by sex, age, and education are shown in Table I. Women demonstrated higher state anxiety scores than men (48.10±1.48, and 42.08±1.22 respectively). For the others, no significant differences in STAI-S and STAI-T scores were found.

DISCUSSION

All patients had showed higher anxiety levels than Turkish patients' anxiety levels (13). The findings of our study show that women generally demonstrate higher levels of state anxiety then men (48.10 and 42.08 in STAI-S) but no difference for trait anxiety scores. This finding is in agreement with most previous reports (5,14,15,16). Surprisingly, Özdemir et al (17) were found higher anxiety scores of men than women.

Anxiety levels for age groups were compared and there was no difference for anxiety scores. This finding is not keeping with Stabholtz et al (5), Brand et al (18) and Hagglin et al (19). However, it is agreement with Öcek et al (16).

TABLE-I
Demographics of Patients

		n	STATE ANXIETY x±Se	TRAIT ANXIETY x±Se	TEST
Sex	Male	60	42.08 ±1.22	41.80±0.84	Independent-
	Female	60	48.10±1.48	43.37±1.06	Samples
			t=3.41 p<0.05	t=1.15 p> 0.05	T Test
	18-25	58	45.79±1.44	41.98±1.64	One
Age	26-39	49	44.86±1.64	41.98±1.01	Way
	40->	13	42.85±2.24	42.62±2.11	Anova
			F=0.41 p>0.05	F=0.29 p>0.05	
	< High school	18	44.50±2.60	41.72±1.99	One
Education	High school	35	45.09±1.90	44.86±1.32	Way
	> High school	67	45.25±1.32	41.63±0.82	Anova
			F=0.03 p>0.05	F=2.38 p>0.05	

TABLE-II
Dental Variants of Patients

		n	STATE ANXIETY x±Se	TRAIT ANXIETY x±Se	TEST
	Examination or Control	6	49.50±4.51	52.50±2.40	Kruskal-
Previous	Filling	13	45.62±4.05	42.54±1.99	Wallis
Dental	Extraction	18	40.11±1.82	42.50±1.49	
Treatments	Periodontal	4	47.00±6.00	40.25±3.52	
	Prosthetics and/	74	45.57±1.25	42.03±0.85	
	or Combination		KW= 4.87 p>0.05	KW=10.15p<0.05	
Previous	Yes	115	44.97±1.02	42.64±0.69	Mann-
Dental Experience	No	5	47.80±4.00	41.20±4.32	Whitney
			p=0.482p>0.05	p=0.594p>0.05	U Test
	None	6	46.83±3.30	40.00±2.61	Kruskal-
Visit Period	Periodically	25	48.72±1.92	43.76±1.97	Wallis
	If require	89	43.96±1.19	42.43±0.71	
			KW= 4.34 p>0.05	KW= 0.94 p>0.05	
Companionship	Yes	44	48.32±1.89	43.41±1.33	Independent
	No	76	43.22±1.08	42.11±0.74	Samples
			t=2.34p<0.05	t=0.85p>0.05	T Test
	Extraction	81	44.21±1.17	42.49±0.83	Independent
Indication	Impacted teeth	30	46.33±2.08	41.77±1.33	Samples
	surgery		t=0.92 p>0.05	t=0.46 p>0.05	T Test

In addition, the results showed that there were no differences among patients' anxiety scores and various education levels. This finding is keeping with Özdemir et al (17).

Our findings showed that no significant differences in the STAI-S scores related to previous dental treatment. However, there were significant differences in STAI-T scores, between examination or control group and the other treatment groups. This is not agreement with Stabholtz et al (5) and Özdemir et al (17). This might explain that the operative procedures are more anxiety-provoking than

examination or control. No significant differences were found in STAI-T scores among operative procedures when they were compared one by one.

Our study showed that there were no differences between patients anticipating extraction normally or surgically. This was surprising to us and it wasn't in agreement with previous studies (5,18,20).

The patients with companionship had higher scores in STAI-S than others and had equal scores with others in STAI-T. This is an expected situation.

In this study, a family history of dental anxiety was important with respect to child-onset anxiety. This finding is consistent with the study by Milgrom et al (21), who found that direct conditioning and modeling were both important predictors of dental anxiety originating in childhood.

Our study faces the limitation of small population, and further studies are needed to address the dental anxiety levels in different populations, which will help dental care providers to better manage their patients.

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