

The role of age, gender, education and experiences on dental anxiety

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SUMMARY

The aim of this study was to investigate the dental fear and anxiety levels and predisposing personal characteristics of the patients admitting to the Center of Dental Sciences of Gulhane Military Medical Academy. In the study, 400 patients were asked to complete a questionnaire. The survey consisted of two sections. The first section requested sociodemographic information of the participants including age, gender, education level, frequency of dental visits and knowledge about the first dental visit. The second section comprised of Corah's Dental Anxiety Scale (DAS). The analysis revealed that there was statistically significant difference between the anxiety scores and previous traumatic experiences ($p < 0.05$). No significant differences were found between the gender, age, education levels and the anxiety scores ($p > 0.05$).

Key words: Anxiety, dentistry, traumatic experience

ÖZET

Yaş, cinsiyet, eğitim ve deneyimlerin dental anksiyete üzerindeki rolü

Bu çalışmanın amacı Gülhane Askeri Tıp Akademisi Diş Hekimliği Bilimleri Merkezi Diş Hastalıkları ve Tedavisi AD'na başvuran hastaların diş hekimi korkusu, anksiyete seviyesi ve kişisel özelliklerinin araştırılmasıdır. Bu çalışmada 400 hastaya anket uygulanmıştır. Anketin ilk kısmında katılımcıların yaş, cinsiyet, eğitim seviyesi, diş hekimine gitme sıklığı ve ilk diş randevusundaki deneyimleri hakkındaki sosyodemografik veriler bulunmaktadır. Anketin ikinci kısmı ise Corah'ın Dental Anksiyete Skalası'ndan (DAS) oluşmaktadır. İstatistiksel analiz anksiyete seviyesi ve daha önceki travmatik deneyimler arasında anlamlı bir farklılık olduğunu ortaya çıkarmıştır ($p < 0.05$). Yaş, cinsiyet, eğitim seviyesi ve anksiyete değerleri arasında istatistiksel olarak anlamlı farklılıklar bulunmamıştır ($p > 0.05$).

Anahtar kelimeler: Anksiyete, diş hekimliği, travmatik deneyim

Introduction

Despite advancements in dentistry, anxiety and fear are still major concerns in daily practice (1). Dental anxiety is a very common dental health problem in populations of many countries (2-4). Proposed factors in etiology of dental anxiety are previous traumatic experiences (excessive pain during previous dental procedures, prolonged and exhausting treatments), environmental factors (examination room, appearance and noise of equipments, bad odor), low pain threshold, communicational issues (criticizing of patient for the oral hygiene, performing manipulations without explanation, malpractices, distrust of patient to the dentist), social interactions (unfavorable information by other persons or media) (5).

Dental anxiety is strongly associated with the oral hygiene. It is a common behavior delaying or abandoning treatment because of dental anxiety which may cause poor oral hygiene (6,7). It was reported that poor periodontal hygiene, tooth caries and tooth loss are more common in patients with high dental anxiety and number of restored teeth is higher compared to patients with normal dental anxiety (8). Therefore dental anxiety is a psychological disorder impairing not only periodontal hygiene but also health quality. Different researchers reported that the prevalence of dental anxiety is 5-20% in populations, and females are more anxious than males (9-11).

Attitudes of dentists or auxiliaries also have importance. Painful experiences in childhood strongly causes dental anxiety (12). Although dental anxiety can be observed in any age, onset is usually seen in childhood or adolescence (13). Patients who had experienced dental anxiety during dental visits reported that the worst experiences had occurred earlier in their lives (12-14). Therefore care should be exercised and atraumatic procedures should be preferred when treating children that may affect their future dental attitudes.

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Questionnaires and scales are used for the assessment of dental anxiety (15,16). Corah's dental anxiety scale (DAS) is commonly used for the assessment of dental anxiety (17). Several studies previously evaluated incidence and associated factors of dental anxiety (18-20). Possible factors, which may influence dental attitude of patients, such as first dental experience, complaints of admission and educational level were investigated in the present study.

Material and Methods

The study was conducted at the Department of Endodontics of Dental Sciences Center of Gulhane Military Medical Academy. Patients anticipating endodontic treatment were approached by one clinician and asked to complete a questionnaire. The patients who refused to fill in the questionnaires were excluded. The study samples included 400 patients (215 males and 185 females). The average age of the patients is 38.35 ± 7.82 years. After the patients were informed about the study, the patients filled in the questionnaires.

The survey consisted of two sections. The first section requested sociodemographic and dental information of the patient including age, gender, education and knowledge about the first and previous dental treatments and visits. The second section comprised of Corah's Dental Anxiety Scale (DAS). The scale consisted of 4 questions and each had 5 answer alternatives. According to the answers the value of DAS ranges from 4 (no anxiety) to 20 (highly anxious). The data of the patients were collected according to their age, gender, educational level and first dental experiences. Data obtained from questionnaires were assessed statistically by SPSS for Windows version 7.5. Multivariety analysis of variance test was used. All significance levels were set at 0.05.

Results

The means and standard error of dental anxiety for the total population by age, gender, education and the first dental experience are shown in Table I.

In this study, 215 male and 185 female patients filled in the questionnaires. The average DAS value of these patients was 8.30 ± 2.4 . The results showed that education had no significant effect on dental anxiety. Females tend to be more anxious than males, but it has not reached statistical significance ($p > 0.05$). Although patients in their 3rd decades (20-29 years) had showed the lowest DAS values, no statistical difference was found ($p > 0.05$) when they were compared with the others in their 4th (30-39 years) and 5th (40-49 years). There is a striking statis-

Table I. The means and standard deviations of dental anxiety

Feature	n	DAS score (mean±standard deviation)	Significance	
Age (years)	20-29	159	7.92±2.30	
	30-39	149	8.61±2.50	0.056
	≥40	92	8.38±2.49	
Gender	Female	185	8.52±2.50	
	Male	215	8.11±2.40	0.077
Education	Primary	79	8.64±2.20	
	High	131	8.08±2.48	0.416
	College	190	8.31±2.47	
Experience	Favorable	198	7.38±1.96	
	Unfavorable	202	9.21±2.51	<0.001

tical difference in respect to the patients' first dental experiences ($p < 0.05$). The patients who had bad or traumatic experiences in their childhood had significantly higher DAS values.

Discussion

Extreme dental fear and anxiety are the universal problems affecting a large population. They lead to avoidance of dental care and caries with a severe adverse consequences to the patient's oral health. The results of our study showed that women demonstrate higher levels of dental anxiety than men. Psychological emotions such as stress, depression, fear, social phobia and panic are more prevalent in females (21), and dental anxiety may correlate with such emotions (22). Also this situation may depend on the females' easier expressions of their emotions (23). Although Özdemir et al. found higher anxiety scores of men than women (24), our finding is similar to most previous reports that reported females tend to be more anxious than males and showed higher DAS values (25-30).

In our study, anxiety levels for age groups showed no statistically significant difference for anxiety scores. However, the individuals in the third decades (20-29 years) had showed the lowest DAS values. This was surprising to us and it was not in agreement with previous studies. This finding is not in accordance with Stabholtz et al. (25), Thomson et al. (30), Brand et al. (31) and Hagglin et al. (32) have reported that as age increases the DAS values decrease and decrease in DAS in aged individuals could be associated with good experience or adaptation of dental procedures and good relationship with dentists over years. Also another explanation could be perception of patient

to the pain in dental procedures which is less severe compared to other medical experiences like major surgery. In this study, the lower DAS values in earlier periods may be associated with the unexperience of patients for the dental procedures or better clinical conditions depending on the developments in dentistry that provides the clinicians and patients more uncomplicated procedures.

The increase in education level may provide a better oral health and hygiene and increased number of periodical dental controls (28). Recent studies demonstrated that increase in education level results as decreasing in dental anxiety (10,28). However, the results of our study showed that there was no relationship between the dental anxiety and various education levels. This result is in accordance with Özdemir et al. (24) and Ay et al. (33).

Etiologically, dental anxiety is not a homogenous group and appears from different factors (34). Some of the factors are negative acknowledgement, experiences and being a witness to a traumatical or unpleasant dental procedure. Specially, previous negative experiences have an important effect on the appearance of dental anxiety (35). The result of our study demonstrated that the patients who had negatively affected in their first dental experiences and had traumatical experiences in their childhood showed significantly higher DAS values and during the oral investigations we observed that these patients had obviously disqualified oral hygiene.

Within the limitations of this study, the first or the past traumatical dental experiences are important facts on affecting the dental anxiety of patients in the following years of their lifetime. According to our findings clinicians should pay attention to be not traumatic and painful and be more careful during the treatment procedures particularly in the childhood period.

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