Personality Traits And Dental Anxiety

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Abstract: Background: *Dental anxiety as a state anxiety and a psychological barrier can affect dental health status of individuals and dentist–patient relationship.*
Objectives: *1.To determine personality type using Eysenck's personality test; 2.To determine the level of dental anxiety using Corah's DAS; 3.To determine the correlation between dental anxiety and attendance patterns*
Materials and Methods: *A total of 250 questionnaires consisting of Eysenck's Personality Test, Corah's Dental Anxiety Scale and an item on attendance patterns were distributed among 250 dental patients (response rate 92.4%, n=231). Descriptive test, statistical analysis and Pearson's correlation coefficient were used to search for statistically significant correlations.*
Results: *140 (60.61%) of the representatives were with low DA, 65 (28.14%) - moderate DA, 14 (6.06%) - high DA and 12 (5.19%) - severe DA. as results showed there was a negative correlation between Extroversion - introversion and neuroticism-stability and dental anxiety in male group (extroversion-introversion: p= - 0.154, neuroticism-stability: p= - 0.021) but positive correlation in female group of representatives - extroversion-introversion: p= 0,087, neuroticism-stability: p= 0,236*
Conclusion: *Dental anxiety is a multidimensional phenomenon associated to age, sex and personality characteristics. Comprehensive knowledge of psychological aspects in dental practice are essential and can be helpful as for dentists as for patients.*
Key words: *attendance pattern, dental anxiety, personality traits*

I.　Introduction

Dental anxiety as a state anxiety may occur due to the dental treatment procedure and can be related to a painful previous dental treatment, negative expectations linked to earlier traumatic experiences, negative attitudes in the family or being reprimanded and criticized by a dentist.

The multidimensional phenomenon anxiety and in particular dental anxiety has been a research object in many studies provided. Some observed whether dental condition, measured by numbers of sound, decayed, missing, and restored teeth, was associated with dental fear, and whether age, dental attendance, and/or gender modified this association [1, 2, 3]. Others are focused either on how dental anxiety correlates with trait anxiety and dental health [4, 5] or what is the effect of dental anxiety on patients' perceptions of the dentist [6]. As a psychological barrier dental anxiety can affect dental health status of the individual and dentist–patient relationship, leading to misdiagnosis and delay or cancellation of dental visits. Observation on age-specific characteristics, personality types and dental anxiety of dental patients gives the opportunity as the patients' behavior to be more comprehensively studied, as the dentist-patient communication process to be improved. The aim of the present study was to investigate the correlation between anxiety and personality, and the impact of personality type and dental anxiety on dental attendance patterns.

II.　Materials and Methods:

In 2015 a total of 250 (response rate 92.4%, n=231) questionnaires contained Eysenck's Personality Test, Corah's Dental anxiety Scale and an item about attendance patterns were administered among randomly selected male and female patients in six dental surgeries. Representatives were divided into 4 age groups according to Havighust's age classification [7]: 18-29; 30-39; 40-59 and over 60 years old.

2.1. Eysenck's Personality Test
The adapted and validated for Bulgarian population version of Eysenck's Personality Test (EPT) was applied for describing personality traits. It consist of 96 items considering dimensions extroversion-introversion, neuroticism-stability, psychoticism and social desirability.

2.2. Corah's dental Anxiety Scale
Corah's Dental anxiety Scale (DAS) is a four item scale that measures anxiety about dental treatment. Values for each answer range from 1 to 5, giving a total range of 4 to 20 for the entire measure. The patient was considered as not dentally anxious for a DAS score<9, moderately anxious for a DAS score 9-12, dentally anxious reaching 13 or 14, or severely anxious for a DAS score ≥15.

2.3. Attendance Pattern
Regularity of dental attendance was determined by the question: "How often do you visit your dentist?". There were three response options: "Every six months/Once per year" (considered as regular visits), "Every other year or irregularly" and ''Only when I have pain or other problems''.


2.4. Ethical Consideration
As the respondents' anonymity was maintained and they were free to refuse or take part in the study, it was deemed unnecessary to seek ethics approval for the study. Thus the study included only those participants who agreed to the Free and Informed Consent.

III.   Statistical Analysis

Descriptive test, statistical analysis and Pearson's correlation coefficient were used to search for statistically significant correlations.

3.1.Results
The observed sample contained 231 representatives: males (41.6%, n=96) and females (58.4%, n=135) aging 18 – over 60 (average age 42.4314.14). Their grouping (Fig.1) was based on Havighurst's age classification: 18-29; 30-39; 40-59 and over 60 years old.
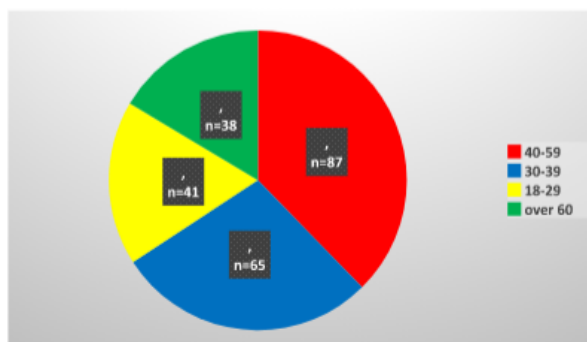

Fig.1 Frequency distribution (percent/number) of participants by age

Results showed 140 (60.61%) of the representatives were with low dental anxiety, 65 (28.14%) - moderate DA, 14 (6.06%) - high DA and 12 (5.19%) - severe DA (Fig.2). There was no statistically significant correlation between sex, age and dental anxiety level.
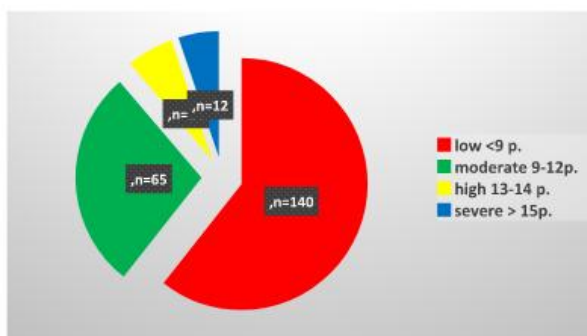
Fig.2 Frequency distribution (percent/number) of participants their dental anxiety levels

        According to the statistical analysis and Pearson's coefficient the following correlation between dental anxiety (DA) and personality traits was found: in the entire sample there was a statistically weak positive correlation between dental anxiety and neuroticism (p=0,117), a statistically weak negative correlation regarding dental anxiety and social desirability (p= -0.215). There were minor sex-related differences as in dental anxiety to social desirability correlation (males: p= - 0.205, females: p= - 0.235), as between dental anxiety and psychoticism (males: p=0.110, females: p=0.048). Regarding the dimensions extroversion - introversion and neuroticism-stability as results showed there was a negative correlation between them and dental anxiety in male group (extroversion-introversion: p= - 0.154, neuroticism-stability: p= - 0.021) but positive correlation in female group of representatives - extroversion-introversion: p= 0,087, neuroticism-stability: p= 0,236 (Fig.3).
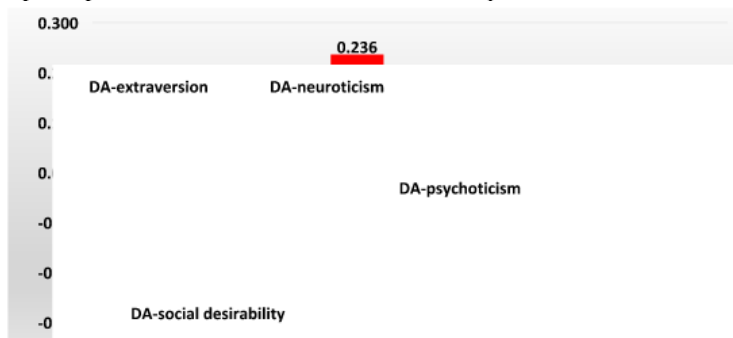
Fig.3. Correlation between dental anxiety and personality traits

Results about distribution of attendance pattern showed (Table 1.) that the highest number of respondents regular dental attendance (69.7%, n=161), followed by those who visit dental office when pain or other problem occur (23.38%, n=54); 6.97% (n=16) of representatives visit their dentist every other year or rarely. According to the further analysis it was found out there was a statistically significant negative correlation between age and attendance pattern- with age the per cent of patients to irregular visits gets higher.

Table 1. Distribution of attendance patterns

attendance sex	regular visits	>2 years	pain and other problems	total
females	101 (62.7%)	7 (43.8%)	27 (50%)	135 (58.4%)
males	60 (37.3%)	9 (56.2%)	27 (50%)	96 (42.6%)
total	161 (69.7%)	16 (6.97%)	54(23.38%)	231(100%)

There was a statistically significant negative correlation between dental anxiety and attendance pattern – patients at highest level of dental anxiety visit dentist irregularly or only in case of pain and other dental problems (Table 3.)

Table 3. Correlation between dental anxiety and attendance pattern

Attendance pattern	N		SD
Regular	161	7,25	2,89
>2 years period	16	9,38	4,44
Pain and other problems	54	9,65	3,93

p<0.05

IV.   Discussion

The results of the survey we carried out involved 231 participants: males (41.6%, n=96) and females (58.4%, n=135) aging 18 – over 60. They were distributed into four age groups following Havighurst's age classification: 18-29; 30-39; 40-59 and over 60 years old. Dental anxiety scoring was based on data collected from Corah's Dental Anxiety Scale and presented 140 (60.61%) of the representatives were with low dental anxiety, 65 (28.14%) - moderate DA, 14 (6.06%) - high DA and 12 (5.19%) - severe DA with no statistically significant correlation between sex, age and dental anxiety level.

Regarding the correlation between dental anxiety and personality traits we found out there was a statistically weak positive correlation between dental anxiety and neuroticism-stability as in the entire sample (p=0.117) as in the female group (p= 0,236), but negative correlation between them in the male group (p= - 0.021). There was same tendency about association between dental anxiety and the dimension extroversion – introversion: negative correlation in the male group (p= - 0.154) and positive correlation in the female group (p= 0,236).

Respondents with regular dental attendance were 69.7% (n=161), followed by those who visit dental office when pain or other problem occur (23.38%, n=54); 6.97% (n=16) of representatives visit their dentist every other year or rarely. There was a statistically significant negative correlation between age and attendance pattern- with age the per cent of patients to irregular visits gets higher.

V.   Conclusion

Dental anxiety is a multidimensional phenomenon associated to age, sex and personality characteristics. Comprehensive knowledge of psychological aspects in dental practice are essential for professionals in their communication with patients. Likewise improved communication skills of dentists can promote patients' trust and contentment in dental services.

Acknowledgements

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