

## ORIGINAL RESEARCH

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## Comparative study on the degree of dental anxiety among adolescents/young adults versus middle-aged/senior adults.

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### Abstract

Introduction: Dental anxiety is one of the most common diseases present in the global population. It induces aversion to dental procedures by causing a psychological response which misinterprets a dental stimulus as imminent danger. The purpose of this study was to analyze the degree of dental anxiety based on age groups, gender, background, but also on previous experiences, through a questionnaire distributed in different areas of Romania.

Materials and methods: A series of 14 questions relevant to the subjects was compiled in a questionnaire which was distributed to subjects of varying backgrounds. The questionnaire was formatted to allow the relevant drawing of conclusions from the collected data.

Results: 413 people responded to the questionnaire, of which 126 were women, 287 were men, 165 were from rural areas, and 248 were from urban areas. The age groups were divided in the following way: <35years, included adolescents/young adults, and >=35 years, included middle-aged adults/seniors.

Conclusions: It has been found that adolescents and young adults are more anxious than middle-aged adults and seniors, and that previous unpleasant experiences have left their mark on the patients' anxiety levels before the visit to the dentist.

**Keywords:** dental anxiety, dental fear, young adults.

### Introduction

Dental anxiety can be defined as a general reaction on the part of the patient who feels a hold on the visit to the dentist or dental treatment, with the projection of negative events that might happen. This behavior may lead to the avoidance of presentation to the dental office, even if the patient is in pain [1,2].

Since it is such a common condition, it is considered imperative that dentists place more emphasis on this problem. It is estimated that about 20% of people have high levels of dental anxiety, and prior to appointments, about 40% patients experience anxiety [3,4].

Some authors suggest that dental anxiety may have both exogenous and endogenous origins. Exogenous types of anxiety are conditioned by the negative dental experiences of the past that the individual has had, and endogenous types of anxiety may be explained by the vulnerability and reactions a person has in relation to situations they perceive as dangerous [5].

The most common cause is considered to be the trauma resulting from experiences from the past, usually from childhood. A traumatic

experience or a traumatized parent who induces fear in the child may initiate dental anxiety early in life [6,7].

### Material and methods

A questionnaire containing 14 questions was designed to achieve the goal of the study. The questions were short, concise, easy to understand. The questionnaire was distributed in 3 counties of Romania. The responses were collected between November 1, 2021 and March 1, 2022. Anonymity and confidentiality were respected.

The first 4 questions were designed to provide information about age, gender, background, and the existence of a dentist they consult regularly. The following questions focused on the reasons for the presentation to the dentist and on how the patients feel in the dental office. The following questions focused on the previous complicated/painful experiences and their examples, on knowing the stages of treatment and how their mood was influenced after they were informed. The last 3 questions focused on improving patient-dentist relationships and influencing those

around them regarding the perception of the visit to the dentist.

Over 4 months, 413 responses were obtained that were analyzed to achieve the objective of the study.

## Results

After collecting the results, 59.3% of the responses were those of people under the age of 35, in the adolescent/young adult category, and 40.7% were from people over the age of 35, in the middle-aged/senior adult category. (figure 1)

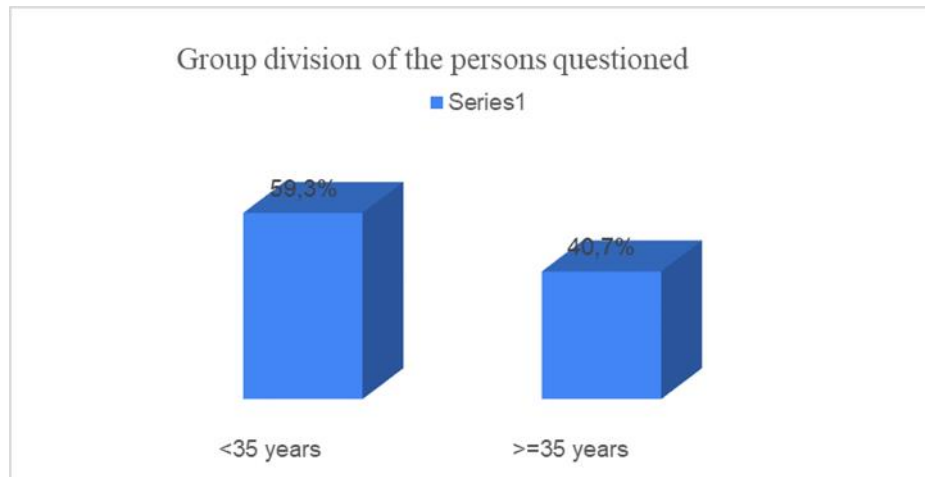


Figure 1. Group division of the persons questioned.

In terms of gender distribution, 69% women and 31% men answered, and depending on their background, 60% of the answers came from urban, and 40% from rural areas. Of all those surveyed, 61% stated they had a dentist they visited regularly, and 39% said they did not.

As for the reasons for the presentation to the dentist, 127 of those surveyed said that they presented when they noticed a cavity in one of the teeth, 106 said that they had regular check ups once a year, 70 at every 6 months. Of the respondents, 62 presented when analgesic medication was no longer effective, and 48 when a tooth was broken.

When asked about their feelings before entering the dentist's office, 17% said they felt anxious, 22% felt nervous, 18% experienced

fear, 17% felt apprehensive, and 26% felt relaxed. (figure 2) Related to complicated or painful experiences in the past, 28% of those surveyed said they had experienced them, and 72% denied having had unpleasant experiences. (figure 3) The most common complications after dental treatment were: pain 34%, inflammation of the area 26.4%, local bleeding 12%, and 27.6% said they had no complications. Regarding the knowledge of the treatment stages, 373 stated that they were explained the steps of the treatment, and 40 others were not informed of the treatment plan. Of those who confirmed their knowledge of the treatment stages 293 said they felt calmer, 70 said they did not change their condition, and 10 said their fear increased.

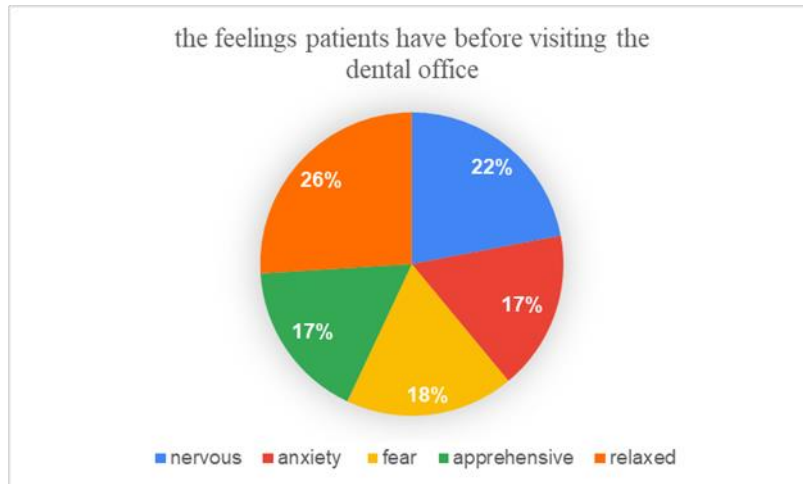


Figure 2. The feelings patients have before visiting the dental office.

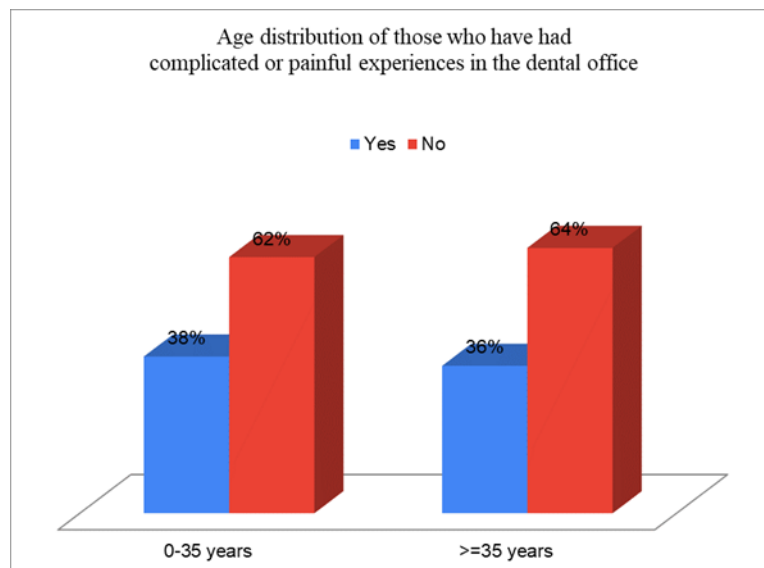


Figure 3. Age distribution of those who have had complicated or painful experiences.

From the point of view of the dentist-patient relationship, all the respondents stated that empathy and communication were factors that could positively influence the patient's condition and help them calm down.

It was observed that 67.3% of those surveyed were not influenced in any way by those around them before the visit to the dentist, 17.9% were reassured by encouragement, and 14.8% became more anxious.

### Discussions

For this study, a total of 413 people, 245 adolescents/young adults and 168 middle-aged adults/seniors responded, including 287 women and 126 men.

Differences were observed among those who had a dentist they visited regularly according to the age category, namely 154 of adolescents and young adults regularly saw a physician, and 92 of middle-aged/senior adults confirmed that they had one. Of those who responded affirmatively, 52% belonged to the rural environment and 46% to the urban environment. Other studies have found no difference depending on the environment of origin regarding adherence to regular dentist appointments [4].

A total of 215 participants in the first age group responded that they had anxiety, nervousness, and fear prior to the visit to the dentist, while only 90 of those in the second age group reported such conditions associated

with the visit to the dentist. It was observed that 38% of adolescents and young adults surveyed had unpleasant or complicated dental practice experiences, and 36% of middle-aged adults/seniors experienced such situations. There are studies that show greater interest in oral health among people over 35, which may indicate lower levels of dental anxiety, while other studies have identified a correlation between age and dental anxiety. Moreover, in another study, it was observed that adolescents had higher anxiety levels than older people, and a different study of adolescents found that girls were more anxious than boys [4,8,9,10,11].

Another study supported the idea that people with high anxiety levels experienced painful or unpleasant experiences in their history, changing their expectations about future dental treatments, associating the visit to the dentist with an unpleasant, painful, and stressful event. Additionally, it has been shown that dental anxiety is not linked to the type of dental treatment performed be it either surgical, prosthetic, or endodontic [12,13].

A different study emphasizes the positive impact of knowing the stages of treatment on the patient's anxiety, helping them feel safe and calm, without any differences in age groups. In this study, much of the adolescents/young adults and middle-aged adults/seniors who were surveyed confirmed that after knowing the treatment stages they felt more peaceful and their anxiety reduced, however, some patients reported that their anxiety increased. The few people who claimed that dental anxiety intensified after talking with the dentist belonged to the adolescents/young adults' category [14].

The study showed that the level of dental anxiety is higher in women compared to men, and there are other studies that support the same. Moreover, it is known that women express their feelings much more easily, and men face social norms that do not allow such free expression [1,15,16].

Thus, we can say that regardless of age, it is important to inform the patient at every stage of work, and to express empathy and patience. Other studies have argued the same thing, namely that communication can reduce the level of dental anxiety and thus create an

effective dentist-patient relationship. There are studies that have focused on other methods of reducing dental anxiety, such as: background music, breathing breaks, distracting discussions, freedom of free expression of emotions [17,18].

## Conclusions

Adolescents/young adults have a higher level of dental anxiety than middle-aged adults/seniors, the first category being easier to influence by those around them, the state of fear and anxiety being more easily induced.

Dental anxiety causes most people to see their dentist only when they have a problem, avoiding regular visits that could prevent cavities, gingivitis or periodontitis.

**Conflict of interest:** None to declare.

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