

## Emotional Anxiety in Adolescents - A Special Role in Dentistry

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**Annotation:** Anxiety and fear are part of the normal development of a child, and, as a rule, the development of fear and anxiety are transient. Panic fear of dentists is a disease called dentophobia, odontophobia or stomatophobia. A person suffering from such a disease simply cannot cross the threshold of a dental office, even when the toothache becomes completely unbearable. It is important here to distinguish the usual anxiety before a visit to the doctor from a panic state. If anxiety gives way before the arguments of reason, then, of course, there is no disease. If at the very thought of dental treatment, blood pressure jumps to unknown heights, a rapid heartbeat begins, and you cannot follow even the simplest instructions of a doctor, then you have dentophobia. Alas, you can't hide from dental problems. Caries and tooth loss are fraught with gastrointestinal diseases, migraines, even scoliosis. In addition, prevention is not only much less painful, but also cheaper than serious treatment. So, what should dentophobes do?

**Keywords:** Fear, dentophobia, fear of the dentist, children's reactions, correction of fear and anxiety.

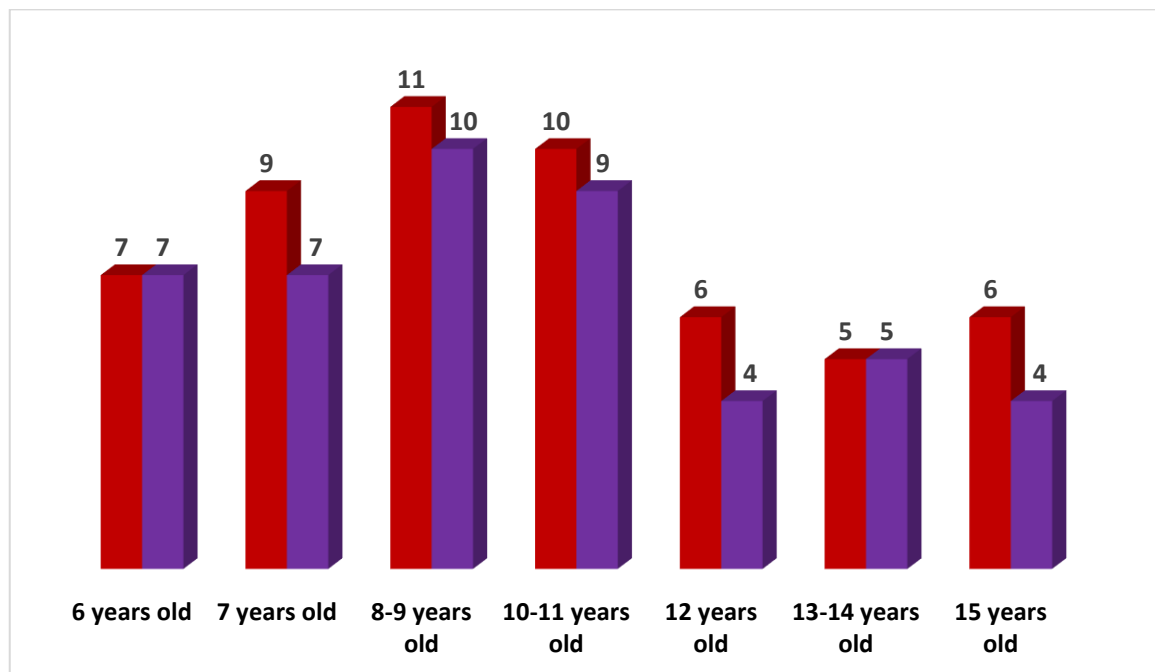
The problem of anxiety occupies a special place in modern scientific knowledge. A significant amount of research has been devoted to her, not only in psychology, but also in medicine, physiology, philosophy, and sociology.

In the last decade, interest in the study of anxiety has increased significantly due to drastic changes in the life of society, generating uncertainty and unpredictability of the future and, as a result, experiences of emotional tension, anxiety and anxiety. At the same time, it should be noted that even now in our country anxiety is studied mainly within the narrow framework of specific, applied problems (school, exam, competitive anxiety, anxiety before visiting the dentist, during dental procedures, etc.). A similar situation in the study of the problem of anxiety is largely due to the logic of the development of domestic psychological science, in which the study of emotions, emotional states, and dominant emotional experiences of an individual was conducted mainly at the psychophysiological level, and the area of stable formations of the emotional sphere remained, in fact, unexplored. The study of anxiety in children and adolescents (the genetic aspect) also has, as a rule, a pronounced applied, "official" character. Understanding anxiety as an emotional state, and anxiety as a stable personal education (the latter term is also used to refer to the whole phenomenon), we proceed from the fact that a certain level of anxiety is normally characteristic of all people and is necessary for optimal adaptation of a person to reality. The presence of anxiety as a sustainable education is evidence of violations in personal development, which prevents normal development, activity, and communication. Anxiety is considered here as an emotional and personal education, which, like any complex psychological education, has a cognitive, emotional aspect. Anxiety is considered as an experience of emotional discomfort associated with the expectation of trouble, a premonition of impending danger. The fact that anxiety, along with fear and hope, is a special anticipatory emotion ensures its special position among other emotional phenomena. The main problem with dental admission is that most medical manipulations seem or are aggressive. A child in a dental clinic is surrounded by a huge number of irritants that cause physical discomfort and disturbing emotions, so the behavior of the child patient often takes on a protest character. For some children, dental fears and anxieties do not go away and become permanent and problematic. There are many different mechanisms that have been proposed to explain the development of detophobia in children; however, there is a general opinion that the etiology of childhood dentophobia is multifactorial. Exogenous sources of detophobia are external factors, which include direct experience (for example, traumatic) and indirect experience (indirect information).

Endogenous sources of dentophobia are internal factors that make people susceptible to the development of dental anxiety. The vast majority of children suffer from acupuncture and are concerned about the feeling of pain, namely with intraoral anesthesia. Especially, palatal injections cause dentophobia. The presence of fears and anxieties is considered part of the normal development of a child and corresponds to a consistent and predictable pattern of adult life. Poor communication between the dentist and the patient not only contributes to the development of dentophobia, but also plays an important role in maintaining dental anxiety. Therefore, it is important that dental staff be aware of how their behavior may affect children. Strategies for correcting dental fear and anxiety (SSB) in children include, but are not limited to, minimally invasive dental aspects such as atraumatic restorative treatment (AVL) and methods of chemical-mechanical caries removal (HMK); hypnosis; behavioral interventions or methods behavior management; music; relaxation and pharmacological agents, including the use of benzodiazepines and antidepressants. Medications provide only short-term effective solutions, but at the same time the recurrence rate is high and the risk of side effects of drugs is increased. Choosing the right treatment for dental anxiety is not always easy. A cooperating dental patient is crucial for the success of treatment, so it is important for the dentist to manage the psychoemotional state of the patient, especially the child. In some countries, specialized dental clinics have been established where adult patients with severe dental anxiety can go, and these clinics provide specialized care, including both non-pharmacological and pharmacological treatment. In addition to helping to treat dental anxiety in patients, these clinics promote dental care in the short and long term.

The aim of the study was to determine the level of anxiety of children at outpatient dental appointments in order to improve the effectiveness of dental care for children. The study was conducted on the basis of the Samarkand State Medical University in 2020-2023. The children who applied to the dental clinic were selected using a sampling method of 100 child patients, who were divided into two groups - the control group (46 children) and the main group.

The examined children, according to physiological and biochemical age norms, were divided into age groups:

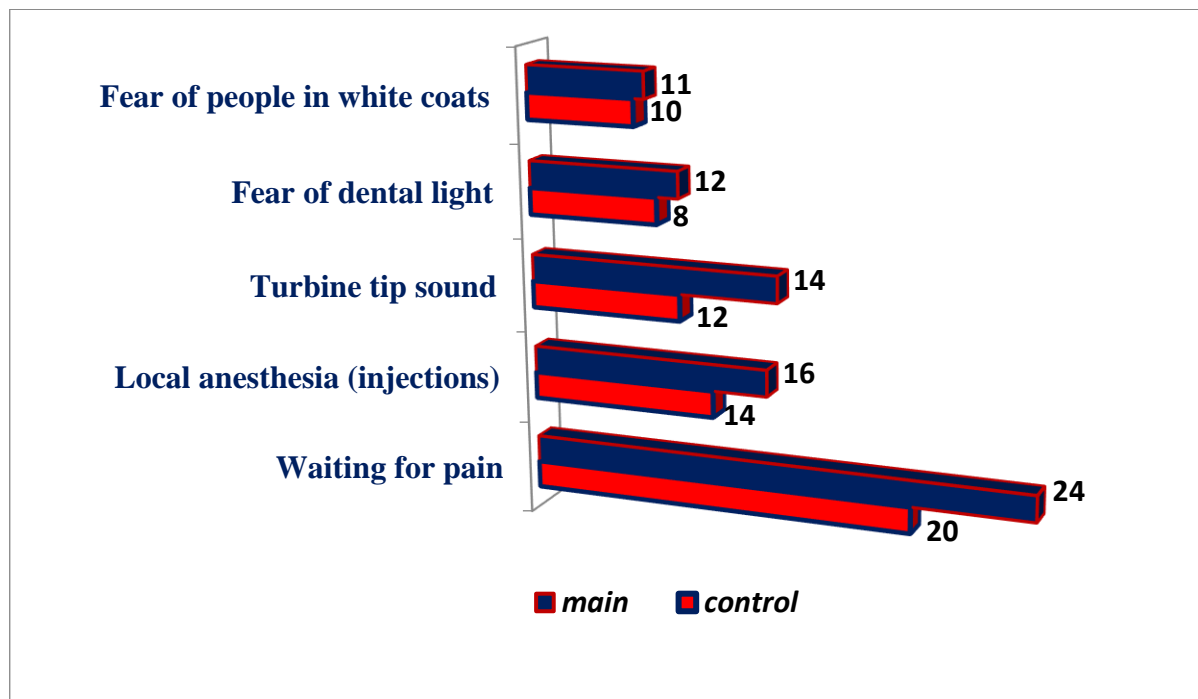


*Figure 1. Children being examined*

The tasks of the psychological and sociological research included: assessment of emotional tension, identification of stomatophobia, objective assessment of children's behavior at a dental appointment, identification of factors causing dental anxiety. The tasks of the somatic status study included: measurement of diastolic blood pressure, measurement of heart rate, followed by calculation of the autonomic Kerdo index. The tasks of the biochemical study included: studying the concentration of

salivary cortisol and determining the rate of salivation. Changes in the activity of the autonomic nervous system are the result of the influence of dental anxiety experienced by a child. Fear and anxiety are the cause of the development of vegetative reactions affecting the functioning of the cardiovascular system. The indicator of the ANS activity changing under the influence of psychoemotional stress is the autonomic Kerdo index, which requires values of heart rate and diastolic blood pressure to calculate. To do this, heart rate and blood pressure were measured twice in children – before and after the use of NFMCPN. The Frankl behavioral scale was used - an objective assessment of anxiety, according to which the behavior of children at the dental can be divided into four categories: absolutely negative, in which there is a refusal of treatment; negative – treatment is accepted reluctantly; positive – treatment is accepted with caution; absolutely positive – good contact with the doctor, laughter and joy of the child. In children aged 6 years, the Lusher color test was used to assess the psychoemotional state, according to which 4 points scored by the patient correspond to a favorable emotional state, 3 – satisfactory, 2 – unsatisfactory (specialist help is required), 1 – the child is in a crisis state and needs the help of a psychologist or psychotherapist. Depending on the age, all children were divided into 3 groups: 6-year-olds (19 children), 7-10-year-olds (46 people), 11-15-year-olds (45 people). In a sociological study to identify the causes of dental anxiety, it was found that most of all anxiety at an outpatient dental appointment is caused by the expectation of pain -  $50\% \pm 2.15$ . The next big irritant is local anesthesia (injections) -  $33\% \pm 2.97$ ; the sound of a drill is feared by  $32\% \pm 2.3$ ; lamp light causes psychoemotional tension in  $3.8\% \pm 1.1$ , and dentist's remarks about the condition of the oral cavity – in  $2.7\% \pm 1.3$  children. (Table 1)

Table 1



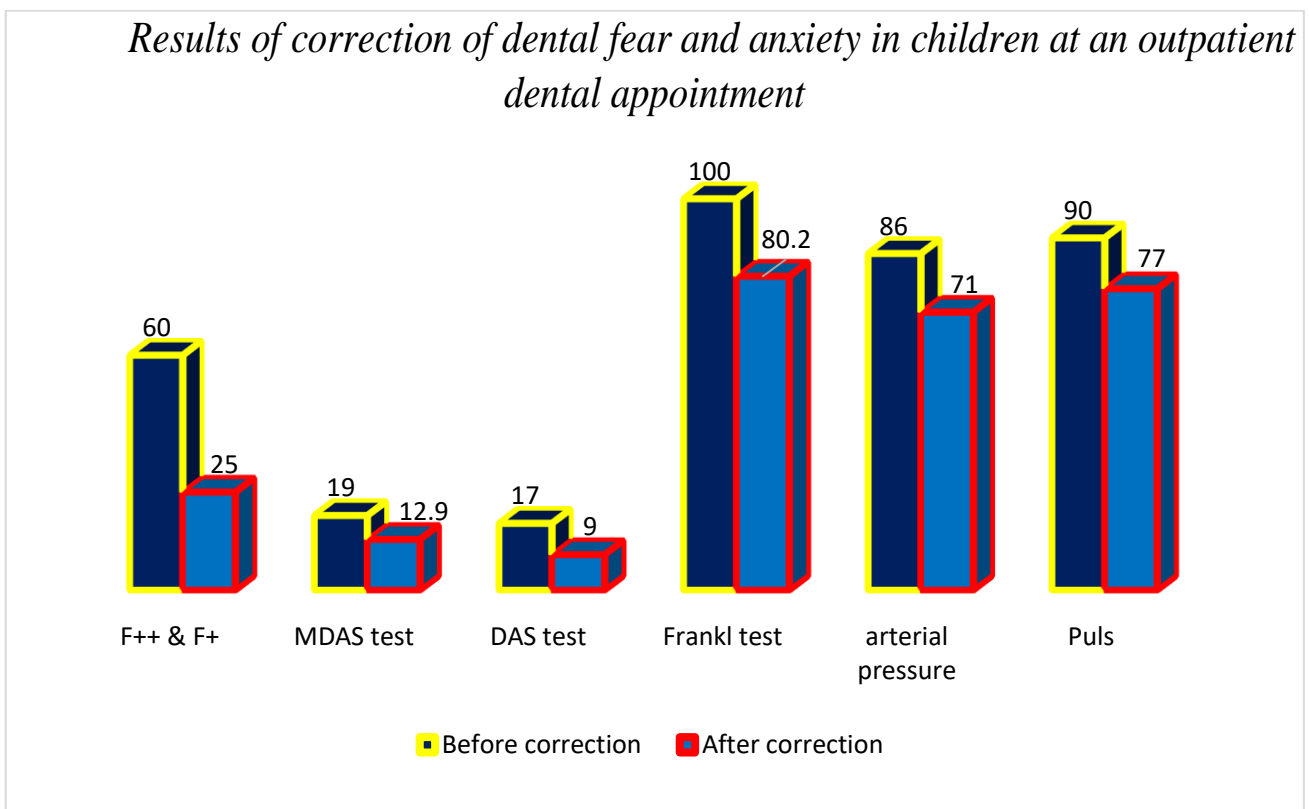
**Results and conclusions:** thus, dental anxiety and dentophobia in children and adolescents are often the reason for late treatment, leading to a complicated treatment process and a worse prognosis; these patients have poor contact with a specialist and often do not follow his recommendations. They also reduce the effectiveness of local anesthesia, which leads to the need for additional injections of anesthetic, and this study found that injections are a major irritant for children -  $33\% \pm 2.97$  of patients consider injections a cause for concern. It is also necessary to avoid, if possible, excessive criticism about the condition of the patient's oral cavity, and devote more time to preventing the further development of existing dental diseases. the main attention in preparing children for dental treatment, a pediatric dentist should pay attention to explaining the safety of the sound of the turbine tip; the painlessness of local anesthesia (with a demonstration of the thin small needles used) and subsequent manipulations after the onset of anesthesia. In addition, it was found that anxiety during dental

treatment leads to incomplete cooperation with the dentist, which leads to unnecessary difficulties in performing dental procedures and unsatisfactory results. It was found that psychotherapeutic methods of correcting psychoemotional stress are not given enough attention, despite their undoubted advantages.

**Conclusion:** thus, it can be concluded that dental anxiety is common among children aged 6-15 years and as a result of our research, we found that children with low levels of anxiety visit the dentist more often for preventive examination, and children with high levels of anxiety go to the dentist, as a rule, only in emergency cases;

- the diagnosis with which the child is referred to the dentist does not affect the level of anxiety;
- children with whom a preliminary conversation was conducted before visiting the dentist experienced a lower level of anxiety;
- among the main reasons for fear of visiting the dentist are: the expectation of pain, unpleasant sensations during treatment and negative dental treatment experience in the past. (Table 2)

**Table 2**



Thus, it can be concluded that a visit to the dentist for preventive purposes reduces the level of anxiety of the child at the reception, a preliminary conversation before visiting the doctor also has a beneficial effect. Among the possible causes of childhood fears is the excitement and anxiety of the parents themselves.

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