

## FEATURES OF CHILDREN'S FEAR AT A DENTAL APPOINTMENT

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### ABSTRACT

The problem of anxiety occupies a special place in modern scientific knowledge. It is the subject of a considerable amount of research, not only in psychology, but also in medicine, physiology, philosophy and sociology.

**Keywords** competition anxiety, psychophysiological level, problem of anxiety, emotional phenomena.

### INTRODUCTION

In the last decade the interest of Russian psychologists to the study of anxiety has significantly increased due to dramatic changes in the life of society, generating uncertainty and unpredictability of the future and, as a consequence, the experience of emotional tension, anxiety and anxiety. At the same time, it should be noted that at present in our country anxiety is studied mainly within the narrow framework of specific, applied problems (school, exam, competition anxiety, anxiety of operators, test pilots, athletes, in psychotherapy, etc.). Such a situation in the study of the problem of anxiety is largely conditioned by the logic of development of domestic psychological science, in which the study of emotions, emotional states, 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 (genetic aspect) also has, as a rule, a pronounced applied, "service" character. The study of anxiety at different stages of childhood is important both for revealing the essence of this phenomenon and for understanding the age patterns of development of the emotional sphere of a person, formation, consolidation and development of emotional and personal formations. It is anxiety, as many researchers and practical psychologists note, that underlies a number of psychological difficulties of childhood, including many developmental disorders, which serve as a reason for referrals to the psychological service of education. Anxiety is considered as an indicator of "preneurotic state", its role is extremely high in behavioural disorders, such as delinquency and addictive behaviour of adolescents. The importance of anxiety prevention and its overcoming is important when preparing children and adults for difficult situations (exams, competitions, etc.), when mastering new activities. Understanding anxiety as an emotional state and anxiety as a stable personal formation (the latter term is also used to denote the whole phenomenon), we proceed from the fact that a

certain level of anxiety is normal for all people and is necessary for optimal adaptation of a person to reality. The presence of anxiety as a stable formation is evidence of disorders in personal development, which prevents normal development, activity, and communication. Anxiety is considered here as an emotional-personal formation, which, like any complex psychological formation, has cognitive, emotional and operational aspects. Anxiety is considered as the experience of emotional discomfort associated with the expectation of ill-being, anticipation of impending danger. The fact that anxiety, along with fear and hope, is a special, anticipatory emotion, provides its special position among other emotional phenomena.

A major problem with dental appointments is that most medical manipulations seem or are aggressive. The child in the dental clinic is surrounded by a huge number of stimuli causing physical discomfort and disturbing emotions, so the patient-child's behaviour often takes on a protesting character. The nature and severity of the child's behavioural response to the conditions of dental treatment is determined by a number of factors (see the scheme): - the nature and strength of stimuli; - the nature of the actual needs of the patient - the child; - the level of the child's sensitivity threshold to stimuli; - the level of the child's basic anxiety; - the intensity and lability of anxiety emotions; - the effectiveness of the child's psychological defence and self-control. The stimuli at a dental appointment include material stimuli directly affecting the patient's receptors, as well as triggers - inducers of associations and memories associated with negative experiences. During a dental appointment, a child may encounter up to 60 stimuli and triggers of different modalities associated with safety hazards: visual, auditory, olfactory, gustatory, proprioceptive, static, tactile, thermal, nociceptive, as well as complex psychological factors (state of uncertainty in a new situation; assuming the worst; lack of confidence in one's own abilities to overcome a dangerous situation; lack of confidence in the availability of support to overcome a dangerous situation). As a result of the above factors, the dentist may encounter different manifestations of patient-child contact at a dental appointment. The dentist who receives a child should organise the work in such a way that the treatment is effective and the child acquires (consolidates) a positive attitude towards dentistry. Receiving a child patient implies close interaction and cooperation in the "triangle of paediatric dentistry", which unites the child, his/her parents and the staff of the dental clinic. There are several types of children's behaviour at the reception (according to Write): - cooperative children; - cooperative children; - non-cooperative children. The participation of authoritative parents in the reception helps the doctor's work, while the intervention of irresponsible, overprotective, authoritarian and aggressive parents can cause serious interference. Depending on the behaviour of children at dental appointments, Frankl distinguishes four types (groups) of children whose behaviour should be managed using different methods (see table). Types of children's behaviour at dental appointments and dentist's tactics

Characteristics of the group according to the Frankl scale	Behaviour management tasks	Means Rating
1. most negative behaviour -- - refuses treatment - cries/shouts loudly - frightened, aggressive - shows other signs of overt negativism	neutralisation of protest behaviour	physical fixation,

deep sedation, general anaesthesia Rating 2. negative behaviour - - - shows unwillingness to be treated and resistance - may be withdrawn and sullen - does not cooperate with attitude change Rating 3. positive behaviour ++ - accepts treatment - sometimes wary - willing to follow treatment instructions - can cooperate (with some reservations) positive attitude development, good behaviour development appropriate communication behaviour behavioural techniques Rating 4. most positive behaviour ++ - good rapport with dentist and his team - cooperates at all stages of treatment - laughs, enjoys the situation positive attitude development, good behaviour reinforcement appropriate communication A severe form of SWB is dental phobia (stomatophobia, dentophobia), which is characterised by the presence of excessive SWB for at least 6 months during which dental care is actively avoided [11], with negative consequences for children's oral health compared to peers (e.g. more untreated carious lesions).

Stomatophobia is strongly associated with clinically significant deterioration in oral and dental health [9], which in turn leads to a looping of anxiety and increased avoidance [4]. This often means a higher likelihood of irregular dental care with only emergency dental care or even sometimes complete avoidance, leading to poorer oral health [4]. The prevalence of PRS among 4 to 18 year olds ranged from 6 to 19%, with a mean prevalence of 10%. In cases of self-reported children only, the mean prevalence ranged from 12 to 17%. In five-year-old children with dental anxiety, showed that statistically significant high prevalence and intensity of caries were observed. 2-3% of patients avoid dental care completely.

Purpose of the study: to investigate the prevalence of stomatophobia in children aged 6-15 years at outpatient dental appointments. Material and Methods. In 2020, on the basis of the Department of Paediatric Dentistry of Samarkand State Medical Institute, a questionnaire survey of 100 children aged 6 to 15 years was conducted using the modified dental anxiety scale (MDAS), according to which it is possible to score a sum of points from 5 to 25, and the number of points above 19 indicates a high dental anxiety of the patient, the possible presence of dentophobia. The MDAS includes five items to measure anxiety about visiting the dentist (e.g., dental treatment tomorrow, being in the waiting room), dental treatment (e.g., drilling a tooth and polishing a filling) and local anaesthesia. Also, patients were asked what causes the greatest fear at dental appointments: 1) anaesthesia, injections 2) the sound of the drill; 3) the light of the lamp; 4) the doctor's remarks about the condition of the oral cavity; 5) the expectation of pain or 6) their own answer.

In children aged 6 years, the Lusher colour test was used to assess the psycho-emotional state, according to which 4 points scored by the patient correspond to a favourable emotional state, 3 - satisfactory, 2 - unsatisfactory (specialist help is required), 1 - the child is in crisis and needs the help of a psychologist or psychotherapist. Based on 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). The data were statistically processed with Microsoft Excel 2010 using parametric statistical methods.

It was found that 47% of children aged 7-15 years experienced dental anxiety before a visit to the dental clinic (mean sum of MDAS scores  $19 \pm 1.3$ ). When the MDAS scale results were further analysed, it was found that children aged 11-15 years were most affected by dental anxiety (67% of cases).

The Lusher colour test revealed that 6-year-old children generally have an unsatisfactory psycho-emotional state when visiting the dentist ( $2 \pm 0.23$  points), which entails the need for behavioural management techniques. It was found that the greatest anxiety at outpatient dental appointments is caused by the expectation of pain -  $50\% \pm 2.15$ . The next big stimulus is local anaesthesia (injections) -  $33\% \pm 2.97$ ; the sound of the drill is feared by  $32\% \pm 2.3$ ; the light of the lamp causes psycho-emotional tension in  $3.8\% \pm 1.1$ , and the dentist's remarks about the state of the oral cavity - in  $2.7\% \pm 1.3$  children.

Thus, we can conclude that stomatophobia is common among children 6-15 years old, and the main risk factors for its occurrence include: expectation of pain, local anaesthesia and the noise of the drill.

Analysis of scientific literature has revealed that despite the presence of studies on the study of psychoemotional stress of children at outpatient dental appointments, there is still no effective way to correct it, which makes it very relevant to find a solution to this problem. To address the objectives of this study, the prevalence of PRS in children at outpatient dental appointments was identified and methods of its correction were developed. The study was conducted on the basis of Samarkand regional specialised children's dental polyclinic (2020-2021) Patients who applied to the dental clinic were divided into two groups - control group (46 children) and main group (54). In the control group the number of boys was 27, girls - 19. In the main group there were 30 boys and 24 girls.

The examined children, according to physiological and biochemical age norms, were divided into age groups: Age periodisation of patients in the main and control groups

The objectives of the psychological and sociological study included: assessment of emotional tension, identification of stomatophobia, objective assessment of children's behaviour at dental appointments, identification of factors causing dental anxiety. The tasks of somatic status examination included: diastolic blood pressure measurement, heart rate measurement with subsequent calculation of Kerdo vegetative index. The tasks of the biochemical study included: examination of salivary cortisol concentration and determination of salivary secretion rate. As a result of NFQIP application in children, significant differences in the studied indicators of the two groups are revealed. There is a significant difference between physiological, biochemical, psychological indicators of patients of the main and control groups. That is, it can be stated that the application of the proposed methodology allows to reduce the risk of emergency conditions in the present and dentophobia in the future. Other conditions of dental care are created - more comfortable for both patients and doctors, which reduces the risk of emotional burnout of dentists.

Dental anxiety and dentophobia in children and adolescents is the reason why they often seek dental care late, leading to more complicated treatment and a worse prognosis; these patients have poor contact with specialists and often do not follow their recommendations.

Also, they reduce the effectiveness of local anaesthesia, which leads to the need for additional anaesthetic injections, and the present study revealed that injections are a major irritant for children -  $33\% \pm 2.97$  of patients consider injections as a cause for anxiety. On the basis of the fact that NFMCCPN have shown their effectiveness in the practice of paediatric dentistry, which is proved by lower RK and IR in children of the main group, better hygienic condition of the oral cavity, we consider it necessary to widely introduce the technique in practical healthcare.

Its advantages include: safety, absence of side effects; it is easily learnt and applied by a doctor; comfortable relationships between a paediatric dentist and a patient are established, which improves the possibility of providing quality care and reduces the risk of emotional burnout of a specialist; reducing the risk of emergencies; reducing the risk of dentophobia in the future. The use of NFMCCPN can improve the medical effectiveness of dental treatment.

The ways proposed by other researchers to correct psycho-emotional tension in children at dental appointments, such as: atraumatic restorative treatment (AVL) and chemical-mechanical caries removal (CMR) techniques; hypnosis; behavioural interventions or behaviour management techniques; music; relaxation and pharmacological agents, were reviewed. Analysis of available publications revealed that stomatophobia is strongly associated with clinically significant deterioration of oral and dental health, which, often means a higher likelihood of irregular dental care using only emergency dental care or even sometimes complete avoidance, resulting in poorer oral health. In addition, it has been found that anxiety during dental treatment leads to incomplete cooperation with the dentist, resulting in unnecessary difficulties in performing dental procedures and unsatisfactory results. It was found that psychotherapeutic methods of psychoemotional tension correction are not given enough attention, despite their undoubted advantages. It was found that after their application stomatophobia is not revealed, ANS function tends to balance sympathetic and parasympathetic components (thus indicating a decrease in psychoemotional tension), biochemical and physiological indices come to normal, patients have a more favourable attitude to the upcoming dental treatment (according to the results of Frankl and Lusher tests) and their motivation to maintain oral hygiene increases. The hygienic condition of the oral cavity in a year in 6-10-year-old patients of the control group is worse by 105%; the effectiveness of the sealant method in the main group was 81%, and in the control group 67%; the reduction of caries growth in the main group in relation to the control group was 19.0% by the end of the present study.

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