

ABSTRACT OF THE PHD THESIS:

Evaluation of dental anxiety in children with epidemiological studies and biomarkers of stress

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The majority of the population of Romania, adults as well as children, have a poor oral health. One of the reasons of this situation is the fear of dental treatments. This PhD thesis puts forward to distinguish the causes of the origin of dental anxiety in children in order to find and elaborate a proper methodology of solving this problem. The research done within this thesis includes different questionnaires: Modified Dental Anxiety Scale (MDAS), Dental Fear Survey (DFS), Dental Beliefs Survey (DBS), Spielberger's State and Trait Anxiety Inventory (STAI-S and STAI-T). It is ment to bring information about the various aspects of anxiety in correlation with psychological constitution, the opinion of the small patients about the therapeutic procedures and the doctor himself. Beside these evaluations with a subjective nature, objective factors of stress, salivary biomarkers of stress have also been detected, aiming to identify the real aspect of the actual situation.

The general part of the thesis treats in four chapters the topic of dental anxiety, leaving from the definition, etiology and forms of manifestation, through the methods of assessment, it gets to the modalities of surmounting it and the special aspects of the child patient in the dental office.

The personal contribution consists of five studies with different methodologies, from epidemiological evaluations to putting into practice of specific methods of fighting dental anxiety in children.

The first two studies are extended epidemiological surveys, cross-sectional randomized studies with two different locations: the central part of Romania (Tîrgu-Mureş and Sfîntu-Gheorghe) and the southeastern part of Hungary, Békés County. The 713 subjects assessed were children of Romanina nationality aged between 11 and 18 years. None of these groups were examined before from the viewpoint of dental anxiety. The methodology of evaluation was a systematic one, based on international questionnaires for the measurement of dental as well as constitutional anxiety.

In the third chapter, the different aspects of dental fear and anxiety of Romanian children who live in Romania and abroad in Hungary have been compared. The purpose was to reveal the impact of living in a foreign country on dental fear and anxiety, as well as to discover the differences in the dental care system of the two countries.

The fourth study was an experimental one, in which we have applied the method of modelling with film with the aim of reducing dental anxiety on a group of 120 children. For an objective evaluation, the change in salivary biomarkers of stress has been examined.

In the fifth study, on a smaller group of 36 subjects we investigated the effect of preliminary preparation for dental treatments, by analyzing the change in salivary biomarkers of stress in children who have undergone a minor dental intervention (dental prophylaxis).

Based on all these studies the following were concluded:

1. There is a moderate level of dental anxiety among the children from the central part of Romania as well as the Romanian children from Hungary.
2. In the same time there is a tendency of positive evolution, as a decrease of the values which describe dental fear and anxiety were observed.
3. Nevertheless, in comparison with the international results, we obtained higher scores in case of every scale and in every group examined.
4. A particular characteristic of the subjects from Romania was that the highest scores were obtained around the middle of adolescence (14 years), while the youngest children (11 years) were the bravest ones.
5. The results of the two cross-sectional studies performed in the two neighbour countries suggest that the level of dental fear and anxiety in the Romanian children, who live as a minority in Hungary and the ones residing in Romania, resembles. So residence in a foreign country does not affect dental fear and anxiety in a significant manner.
6. In the same time, the role models in childhood do not influence dental fear of children in neither of the two countries.
7. Getting injection and drilling were the most fearful moments of dental treatment, but without reaching the level of phobia.
8. The details of Dental Beliefs Survey pointed out the differences in the dental care systems and the relation between doctors and their small patients in the two countries. While in Romania treatments carried out under the pressure of time represented the biggest problem, in Hungary the behavioural aspects of the doctor-patient relationship were the most objected features. This conclusion can be considered the most important one, because it identifies the origin of dental fear and anxiety, showing in the same time the way to a possible solution.
9. The importance of health care education of children is unequivocally accepted, but the moment of this has to be carefully chosen. Our research has revealed the fact that it is not advised to happen right before the intervention.
10. The method of modelling with film is an efficient modality for reducing dental anxiety in spite of the fact that first it increases the level of anxiety in children. To acquire the correct model of behaviour, it is necessary to attract the attention of children to the model to be followed and also to resume the conclusions. Moreover, these sessions have to be repeated.

KEYWORDS: dental anxiety, Romanian children, Modified Dental Anxiety Scale, Dental Fear Survey, Dental Beliefs Survey, salivary biomarkers of stress