

ABSTRACT OF PhD THESIS

EVALUATION OF THE DENTO- FACIAL ESTHETICS AND OF THE ORTHODONTIC TREATMENT NEED IN CENTRAL ROMANIA REGION

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Nowadays, dento-facial appearance has a significant role in social life, malocclusions having a negative impact on the individual, creating discomfort and affecting his life quality. For this reason the role of orthodontics is increasingly important both for detecting dento-facial abnormalities and for predicting and correcting their evolution.

Knowing the prevalence of malocclusions and the orthodontic treatment need in a population, we can appeal to interceptive measures to stop their development or to harmonize the dento- facial components by means of the orthodontic treatment. Also, by knowing the specific features that characterize the soft tissues facial profile of a population, treatment goals can be established for that population.

These issues were summarized and analyzed in this paper.

The first part: "Present state of knowledge" summarizes present goals of the orthodontic treatment: facial and dental aesthetics, functional occlusion, stability of occlusion, psychosocial and cultural factors and bioethical issues.

The motivation of the research is presented in the second part "Personal contribution". It concerns the need to determine the dento-facial and mental health state of a population who lives in a certain area and to compare it with the health state of other groups, to determine the need for the orthodontic treatment and the degree of dental and facial attractiveness of a population from the Mures area and to develop specific aesthetic goals of treatment for people living in this area.

We conducted three studies which achieved these goals.

In the first study we evaluated the prevalence of malocclusion with aesthetic and psychosocial impact on children, young people and adults who asked for orthodontic treatment in the counties of Mures, Covasna, Harghita. We examined whether there is a correlation between: presence of the anomaly and area of origin, type of anomaly and gender, type of anomaly and social background. We performed a retrospective study in which we analyzed the records and study models of 417 patients aged between 12 and 29 years who were treated at the Clinic of Orthodontics and Dento-Facial Orthopedics in Tîrgu-Mures between 2010- 2013, patients from both urban and rural areas of the 3 counties mentioned above.

In the second study we determined the need for orthodontic treatment and the degree of dental attractiveness in children and young people from Mures County using IOTN (Index of Orthodontic Treatment Need) in order to achieve public health information on orthodontic treatment need and to establish measures of preventing malocclusions with aesthetic impact. We determined the addressability to the orthodontist according to gender and age of the population in this area. We selected a sample of 140 patients, children and young people aged between 12-25 years who were treated at the

Clinic of Pedodontics and Orthodontics in Tîrgu Mures between 2010-2014. Patients were given IOTN scores and were diagnosed with Angle dental class. Then, the patients were asked to evaluate themselves aesthetically by means of the aesthetic component of IOTN.

In the third study we measured the angular variables that define the soft tissue profile of a group of population from Mures County and we compared the obtained values of the two genders with other population groups. These values can lead to the elaboration of the specific aesthetic goals of treatment for people in this area. We conducted a retrospective longitudinal study in which we analyzed images of 103 subjects with orthodontic diagnosis, patients and students of UMF Tîrgu Mures aged between 18 and 28 years. Angles were traced and measured: the naso-frontal, naso-labial, mento-labial and facial angles.

GENERAL CONCLUSIONS OF THE THESIS

1. There is a higher prevalence of malocclusions with aesthetic impact in the population from Mures, Covasna, Harghita Counties than in other parts of the country, Angle Class II being present in 65.76% of cases.
2. Addressability for treatment is higher among girls and urban population where there is a greater concern for the aesthetic aspect
3. Statistically, there is a significant relationship between dental abnormalities and social background, malocclusion are significantly more common in urban areas.
4. Most of the patients asking for orthodontic treatment belonged to the age groups of 12-13 years and 21-25 years, these proved major aesthetic changes.
5. The specialist's esthetic perception quantified by the aesthetic component AC of IOTN is consistent with the patient's one.
6. The survey showed that there is no correlation between the method of assessing the orthodontic treatment need by AC, DHC and Angle class. A small orthodontic treatment need assessed by AC is associated with a moderate need for treatment assessed by DHC and Angle class.
7. The widespread use of IOTN is useful to compare the treatment need of various groups of population. IOTN could be used for developing malocclusion prevention programs.
8. Taking into account the values obtained for the components of orthodontic treatment need assessment we can conclude that the population of Mures County has a good dental aesthetics and also a good dental attractiveness.
9. Statistically, there are significant differences between the values of the angles characterizing the soft profile of the two genders.
10. The obtained angle values can be used as standard values when comparing subjects with the same racial and ethnic characteristics and who present dental class I.
11. The obtained mean values are reference values in determining orthodontic treatment objectives and in developing clinical guidelines for orthodontic and dental treatment adapted to the specific treatment needs of the population of Central Romania, the success of an orthodontic treatment is appreciated from an aesthetic point of view in accordance with them.

This thesis comes as an answer to two problems in orthodontics: insufficient information on the epidemiology of malocclusion with aesthetic and implicit psycho-

social impact and orthodontic treatment need in Central Romania and also the lack of clinical guidelines for orthodontic treatment containing data specific to this population. Knowledge of these parameters allows the development of prevention programs in order to improve the physical and psychosocial health of the population.

Keywords: malocclusion, dento-facial aesthetics, orthodontic treatment need, facial profile.