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Abstract

Comprehensive Evaluation of Skeleto-Dental Anomalies (CESDA) study: lessons for dental curriculum planning

Skeletodental anomalies may cause oral dysfunction, deform facial appearance, affect social communication and quality of life. Providing data on the most preventable skeletodental anomalies helps in planning a preventive-oriented dental curriculum.

The aim of this study was to assess the prevalence of preventable skeletodental malocclusions in mixed dentition, in 9- to 11-year-old children, in Tehran.

Materials and method:

In this cross sectional study, 1331 9- to 11-year-old students (705 boys and 626 girls) were selected randomly among 4th and 5th grades in elementary school classes of 19 districts, in Tehran. Skeletal and dental characteristics as well as oral habits of the subjects including skeletal and molar relationship based on the Angle classification, facial vertical height, facial asymmetry, face profile, overjet, overbite, crossbite, mouth breathing, digit sucking, tongue thrust, bruxism were recorded by four calibrated orthodontists. Data was analysed using SPSS Ver20.

Results:

The results of this study indicated that 41.4% of subjects had malocclusion, of them, 35.3% had class II malocclusion and 6.1% had class III malocclusion. All types of abnormal overjet and overbite was more frequent among boys than girls. Straight profile was more frequent among girls, while convex and concave profiles among boys. In ages higher than 10 years old, higher number of straight and concave profiles were observed comparing to others. Of all subjects, 14.2% had mouth breathing, with a higher frequency among boys. Crowding was observed among 51% of all subjects. All the oral habits except tongue thrust were more frequent among boys than girls. All the oral habits except digit sucking were more among subjects older than 10 years old.

Conclusion:

The dental curriculum should be reoriented towards the prevention and treatment of the most prevalent and preventable skeletodental anomalies in early ages.

Since, most of the studied anomalies are preventable, including the education of treatment and prevention of certain anomalies in dental curriculum can reduce the burden of orthodontic skeletodental anomalies.

Key words: preventive orthodontics, skeletodental malocclusion, mixed dentition