

# Anthropometric Parameters and Facial Analysis in Adolescents

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Facial anthropometric analysis is essential for planning cosmetic and reconstructive facial surgery. In this study, multiple face measurements were performed on adolescents to provide a complete anthropometric profile of the face of this group and to compare their facial morphology. The standard of a perfectly proportioned face is one that is distinguished by balanced individual parts and smooth outlines that form an oval.

**Materials and Methods:** Anthropometric measurements of the face were obtained from 92 adolescents. In addition, the prevalence of different types of face was determined. The data obtained were compared with published data.

The overall attractiveness of a face depends on all anatomical elements, including skin, subcutaneous tissue, muscles, bones, and teeth. To achieve or approach the aesthetic ideal, doctors must have a clear idea of the proportions of facial features, the method for analyzing its defects and the possibility of using special methods for eliminating them. The etiological factors contributing to the development of dentoalveolar anomalies are numerous and varied [7].

Anthropometry is one of the main methods of anthropological research, which consists in measuring the human body and its parts in order to establish age, sex, racial and other features of the physical structure, which makes it possible to give a quantitative characterization of their variability. Anthropometric methods are of great importance in applied anthropology, and in recent years have begun to play an important role in anthropometric (orthopedic) cosmetology. [2]

By examining various ethnic, age and sex groups, and measuring the size of various parts and recording variations in the position and shape of cranial and facial structures, broad standards have been developed that describe the human head. As a specialized part of anthropometry, "human measurements", the study of the head came to be called "craniometry" or "cephalometry". [1]

Cephalometry (measurement of craniofacial parameters), an ethnographic definition of skull morphology, has been studied by anthropologists for centuries. [6] Cephalometry is an effective method for assessing the structure of the individual's dentoalveolar system, identifying the formation features inherent in variants of dentoalveolar anomalies, and studying the changes that occur during the growth of the face [4].

Diseases of the ENT organs, in particular hypertrophy of the pharyngeal tonsil and "adenoid" growths, play an important role in changing the parameters of the face and the dentoalveolar system [4]. The trend towards an

increase in the incidence of pathology of the pharyngeal tonsil in children is steadily growing, which negatively affects the formation of the structures of the nasomaxillary complex [3,5].

**Results:** A complete set of mean anthropometric data was obtained for each sex. It was found that boys compared to girls have statistically significantly longer foreheads, as well as higher values for morphological height of the face, width of the lower jaw, distance to the arch of the upper jaw and distance to the arch of the lower jaw. In both sexes, the most common face types were mesoprosopes, leptoprosopes, and hyperleptoprosopes. The boys 'students had significantly wider faces and mandibles than the girls, while the girls' mandibles were only significantly longer than their boys.

**Conclusions:** Differences in statistical significance were noted in the head and face regions among the sexes, as well as among the age group. By establishing facial standards for patients, this study facilitates preoperative planning as well as postoperative evaluation of patients who are accordingly planned or to undergo facial reconstructive and aesthetic surgery.

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