



Soft-Tissue Cephalometric Norms In Jordanians

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بسم الله الرحمن الرحيم

" رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى
وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَدْخِلْنِي بِرَحْمَتِكَ فِي
عِبَادِكَ الصَّالِحِينَ "

صدق الله العظيم

(سورة النمل الآية ١٩)

DEDICATION

To my Family,,,,,

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INTRODUCTION

In orthodontics, much attention has been devoted to facial esthetics, harmony, and balance ⁽¹⁾, that is well proportioned and balanced soft tissue contours presume well defined underlying skeletal and dental structures.

Knowledge of the facial skeleton and its overlaying soft tissue in determining facial harmony is essential. It was assumed that the soft tissue profile configuration was primarily related to the underlying skeletal configuration, however several investigators have noted that soft tissue behaves independently from the underlying skeleton because the soft tissue covering the teeth and the skeletal face is highly variable in its thickness. Much research has displayed that soft tissues are a major factor in determining a patient's final facial profile. The successful treatment planning for patients who require orthodontic should include both hard and soft tissue cephalometric analysis.

The importance of facial esthetics and soft tissue relations in orthodontic treatment was emphasized by Angle as early as 1907 ⁽²⁾. Angle pointed out that the soft tissues were an important factor in facial harmony.

Holdaway^(r), found that treatment goals were much improved when soft tissue features were taken into account during treatment planning. Furthermore, analysis of the soft tissue profile has the benefit of assessing the external appearance and therefore is likely to reflect an outcome closer to that perceived by an observer.

Several researchers set out to quantitatively assess which soft tissue relationships might contribute to or detract from facial harmony and esthetics and to explain how this information could be used in orthodontic treatment planning^(t-v).

Legan and Burstone^(A) and Holdaway^(A), developed soft - tissue analysis that gained wide acceptance in clinical and research work in both orthodontics and orthognathic surgery.

However, these cephalometric norms were specific to 1 ethnic group—white subjects of European American ancestry and might not apply to other ethnic groups. Researchers in several countries have sought to establish cephalometric norms for their citizens, and many studies have attempted to determine the morphological variables for various ethnic and racial groups. Some reported great ethnic differences, with others reporting fewer, compared with the white norms.

Knowledge of the normal dentofacial pattern for each ethnic group would tend to improve treatment success and to establish optimal facial harmony. This has led to the introduction of cephalometric norms for different ethnic and racial groups.

Orthodontics is still a young branch of dentistry in Jordan. However, the numbers of Jordanian patients seeking orthodontic treatment and orthognathic surgery have been increasing, and more Jordanians are working or studying outside Jordan. Nevertheless, no published data have established cephalometric soft tissue norms for Jordanian adults, Accurate and comprehensive soft tissue norms are needed for them.

REVIEW OF LITERATURE

Cephalometric analysis plays a very important role in orthodontics where it aids in the diagnosis, treatment planning and facilitates communication between specialists. Even with the latest 3D technology, cephalogram is still integral tool that provides a fundamental data for the comprehensive of craniofacial complex.

For the sake of clarity the review of literature would be presented under three main topics.

- 1- Head orientation on lateral cephalometric radiographs.
- 2- Soft-tissue cephalometric norms among different ethnic groups.
- 3- Computer assisted cephalometric analysis.

1-Head orientation on lateral cephalometric radiographs

The value of radiograph as a diagnostic aid in orthodontics was proclaimed by W. A. Price in 1900, 20 years after discovery of x-rays. The method of radiographic cephalometry was derived