

# **Dentoalveolar Compensation in Relation to Mild Skeletal Discrepancies**

**A thesis  
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# Abstract

The purposes of this study were to determine the cephalometric parameters that describe the dentoalveolar compensation in relation to skeletal jaw discrepancies, and to determine the difference in dentoalveolar compensation in both genders for a sample of some Iraqi adults having mild skeletal discrepancies.

The sample was selected according to a range of overjet and overbite between 1-5 mm. and consisted of 70 Iraqi adults (31 males and 39 females) aged 18-31 years. Clinical examination and digital lateral cephalometric radiograph were performed for each individual. Six linear and thirteen angular cephalometric measurements were measured for each individual radiograph using AutoCAD program 2006.

To evaluate dentoalveolar compensation for skeletal jaw discrepancies quantitatively, correlation analysis was performed between skeletal and dental measurements, and between the skeletal parameters and dentoalveolar heights. The most appropriate parameters describing dentoalveolar compensation were determined, for these parameters regression equations were obtained. The following results were utilized:

1. Females reveal dentoalveolar compensation more than males as they tend to have convex profile.
2. The most important parameters describing the dentoalveolar compensation in the sagittal relationship were: AB-SN angle, AB plane angle, and mandibular length as skeletal parameters, while U1-SN, L1-SN, OP-SN angles, and MxPABH as dentoalveolar parameters.
3. The most important parameters describing the dentoalveolar compensation in the vertical relationship were: MP-SN and PP-MP angles as skeletal parameters whereas U1-SN, L1-MP, and OP-SN angles as dental parameters.