

Craniofacial Morphology of Skeletal Class III Malocclusion in Two Different Age Groups

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INTRODUCTION

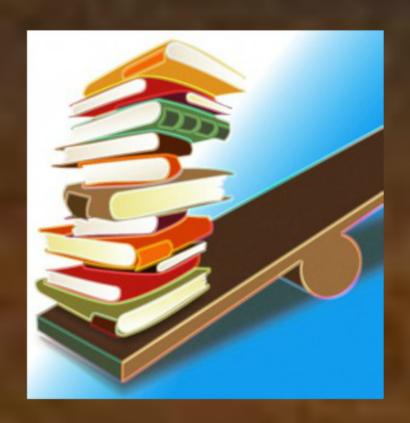
Severe malocclusion causes a distorted facial appearance and results in a significant burden on the quality of life for those affected.



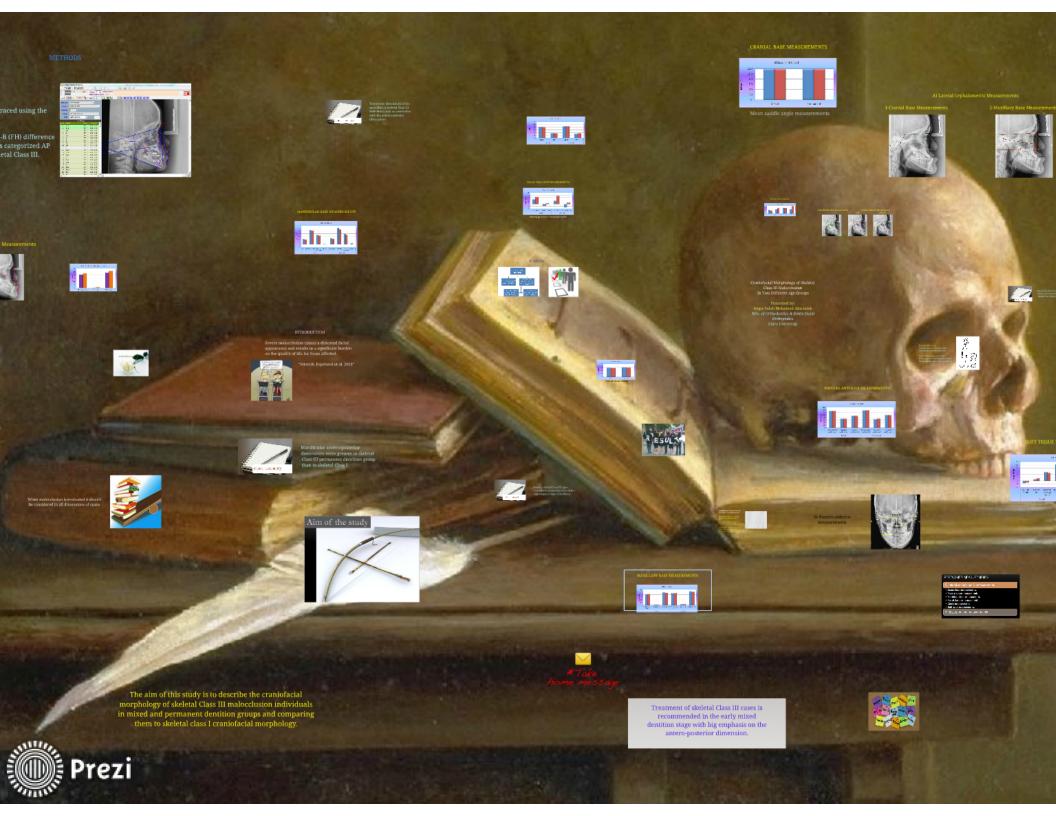
"Stenvik, Espeland et al. 2011"



When malocclusion is evaluated it should be considered in all dimensions of space.







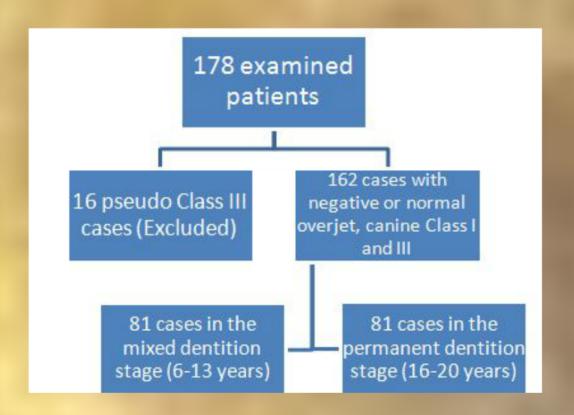
Aim of the study

The aim of this study is to describe the craniofacial morphology of skeletal Class III malocclusion individuals in mixed and permanent dentition groups and comparing them to skeletal class I craniofacial morphology.





SUBJECTS



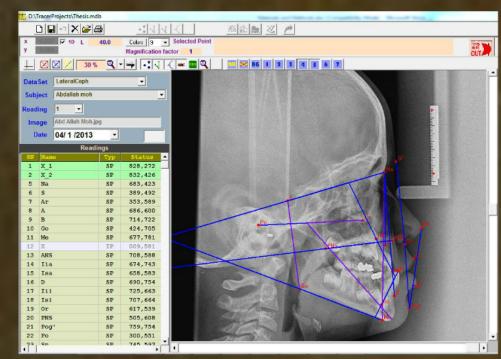




METHODS

Radiographs were digitally traced using the Tracer Software.

According to A-D' (Beatty), A-B (FH) difference (McNamara), the sample was categorized AP into skeletal Class I, and skeletal Class III.





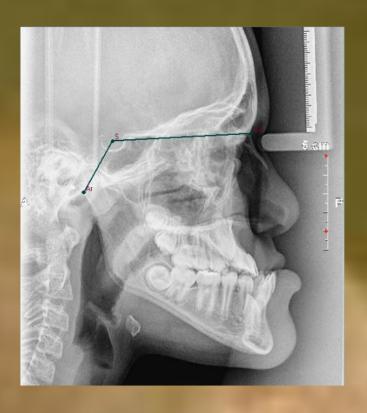
Different measurements were selected and performed on the whole sample twice by the main investigator, and once by another observer.



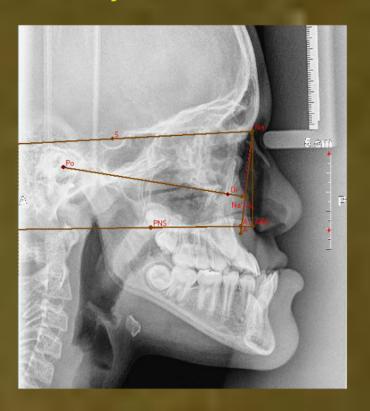


A) Lateral Cephalometric Measurements:

1-Cranial Base Measurements



2-Maxillary Base Measurements



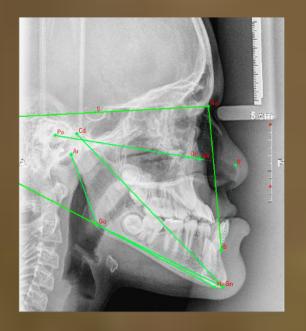


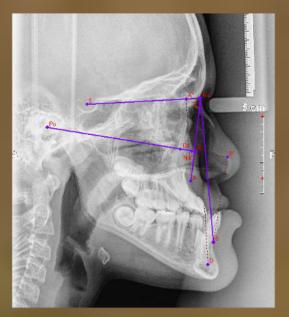
3-Mandibular Base Measurements

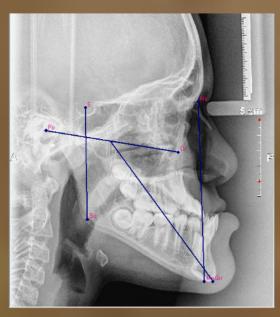
4-Facial Skeleton Measurements

A-P







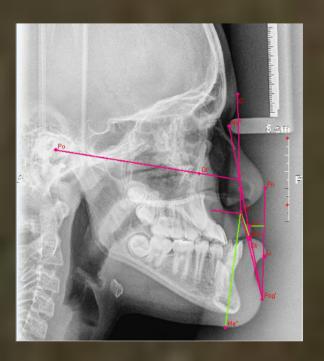




5-Dental Measurements

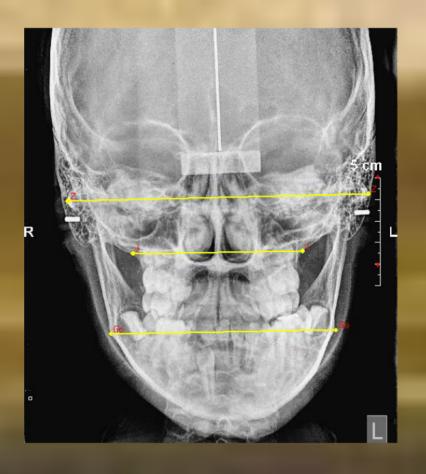
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6-Soft Tissue Measurements

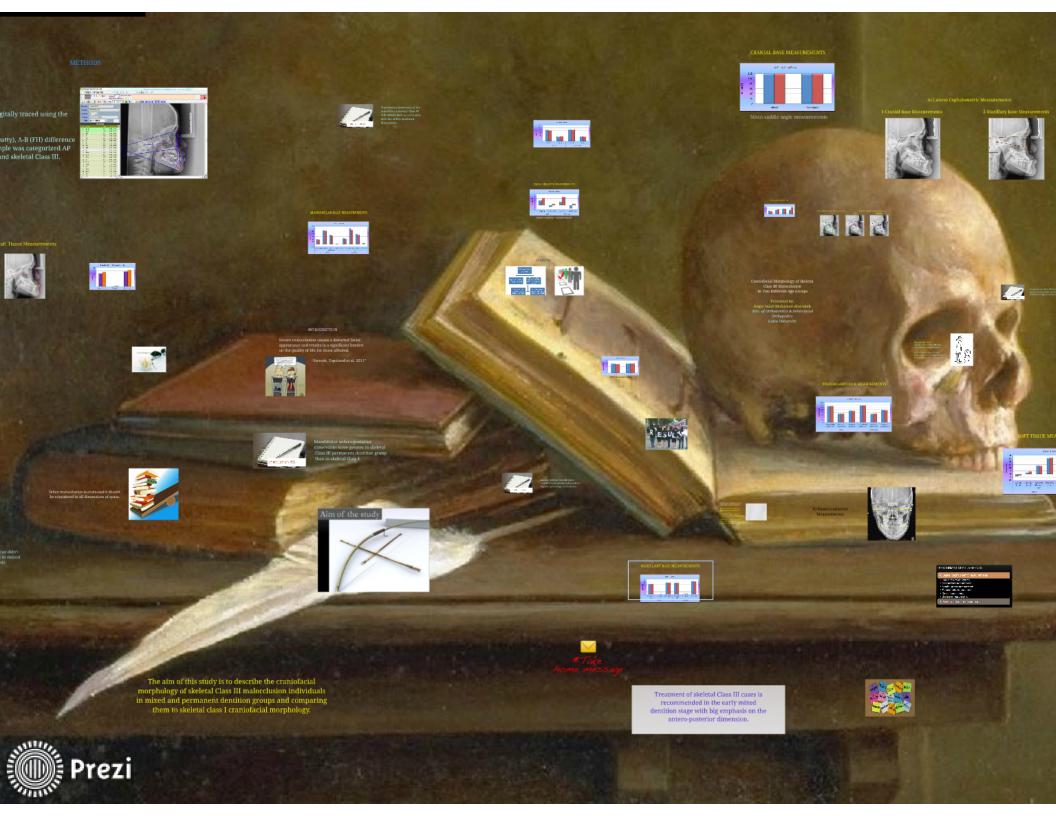




B) Postero-anterior Measurements









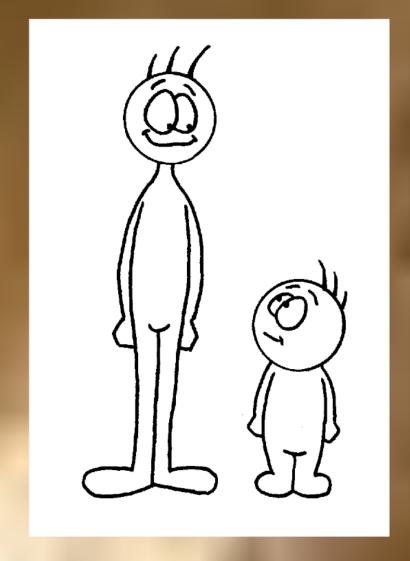
Demographic data:

Classification of Class III cases according to growth pattern:

Normal: 60 subjects (75.6%)

Vertical grower: 12 subjects (15.6%)

Horizontal grower: 7 subjects (8.9%)





Classification of skeletal class III according to the aberrant jaw:

Maxillary retrusion cases were found to be 4 subjects (5.6 %)

Mandibular protrusion cases were found to be 50 subjects (63.3 %)

Combined mandibular protrusion and maxillary retrusion cases were found to be 25 subjects (31.1%)





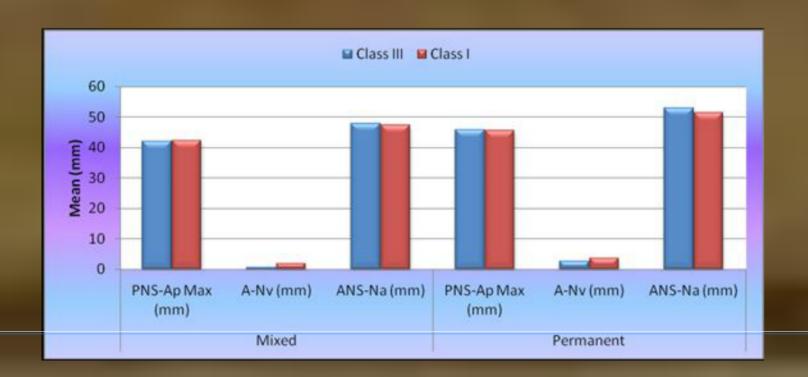
CRANIAL BASE MEASUREMENTS



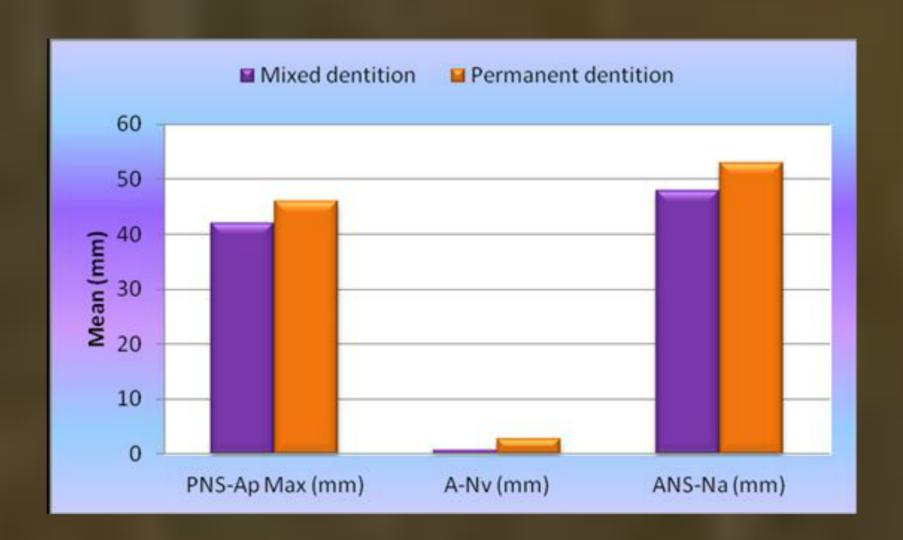
Mean saddle angle measurements



MAXILLARY BASE MEASUREMENTS

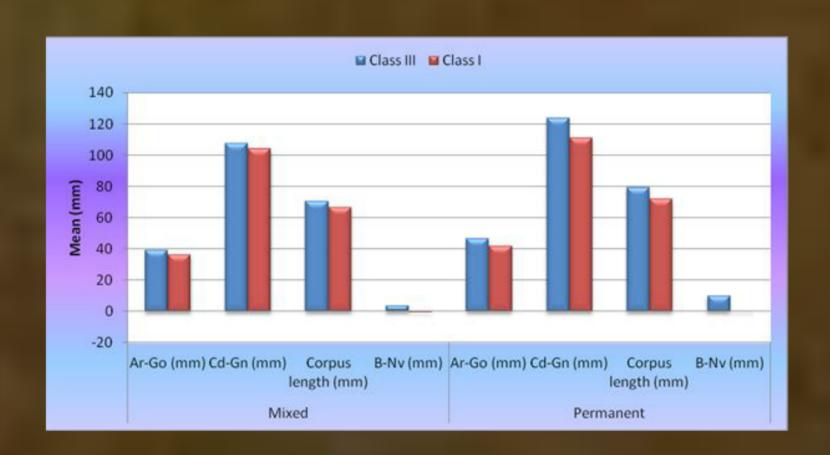








MANDIBULAR BASE MEASUREMENTS

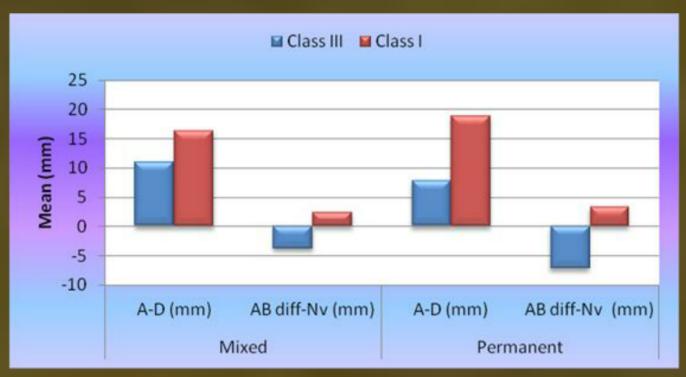








FACIAL SKELETON MEASUREMENTS



Antero-posterior measurements

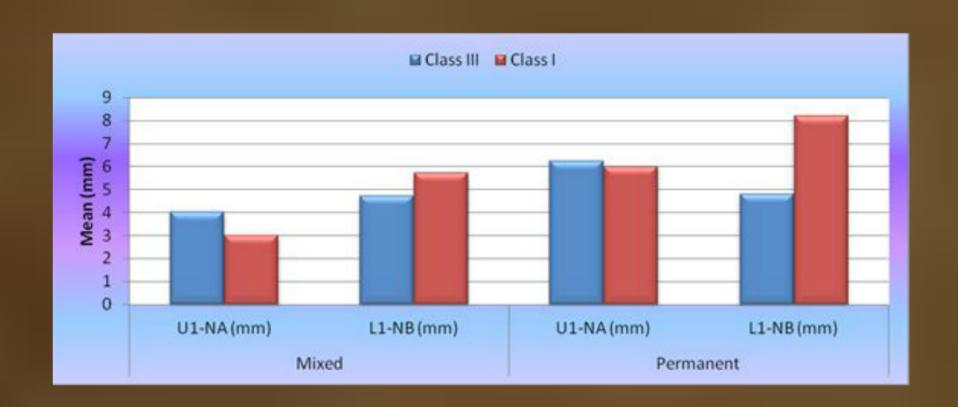




Vertical Measurements

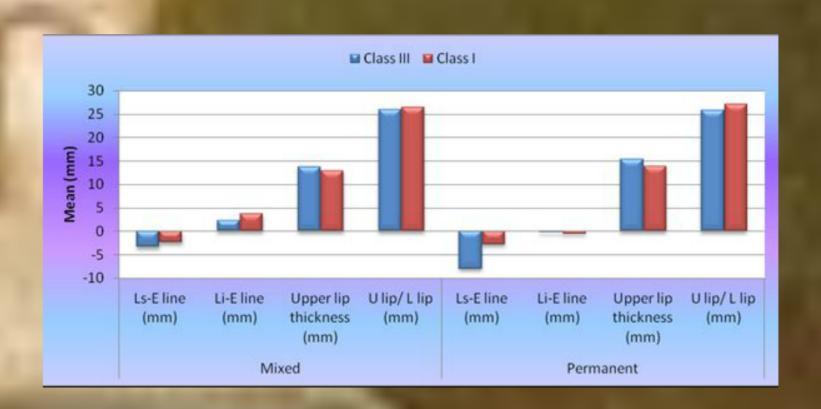


DENTAL MEASUREMENTS



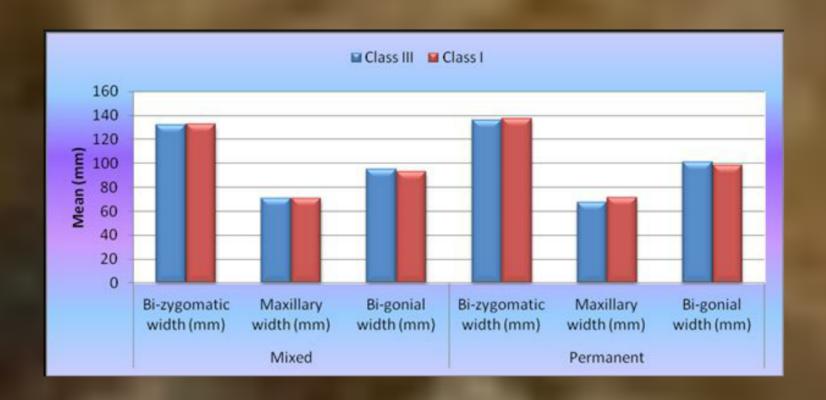


SOFT TISSUE MEASUREMENTS

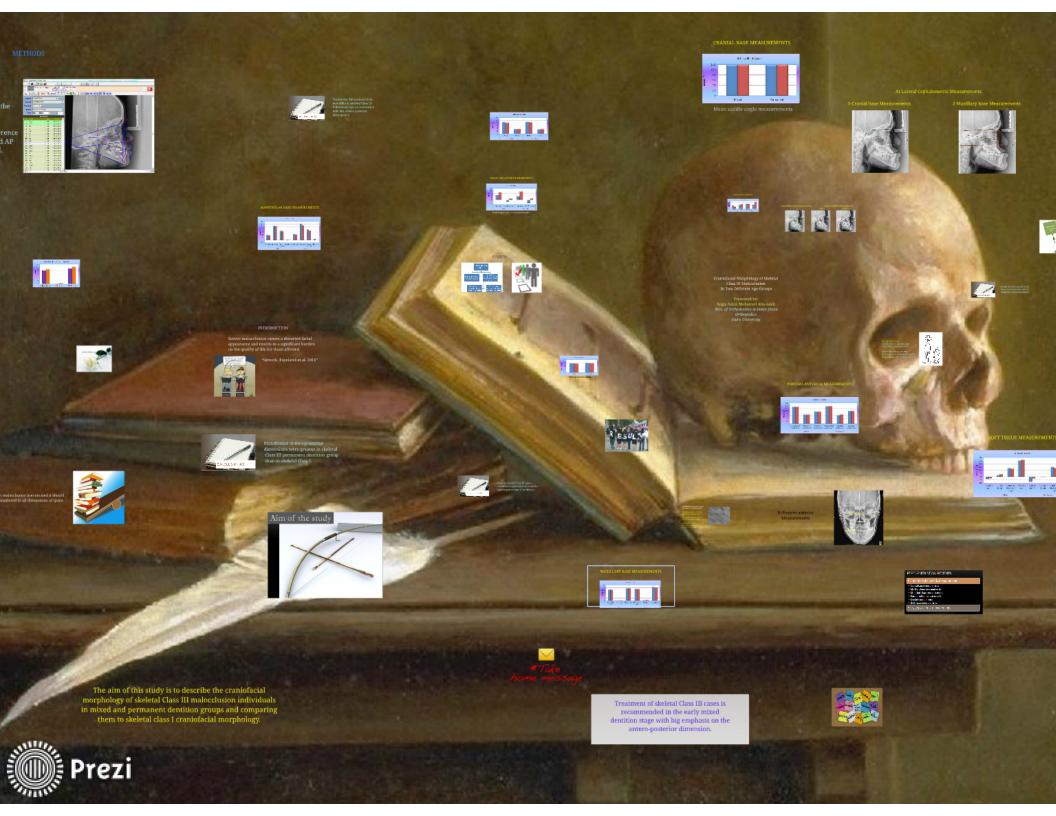


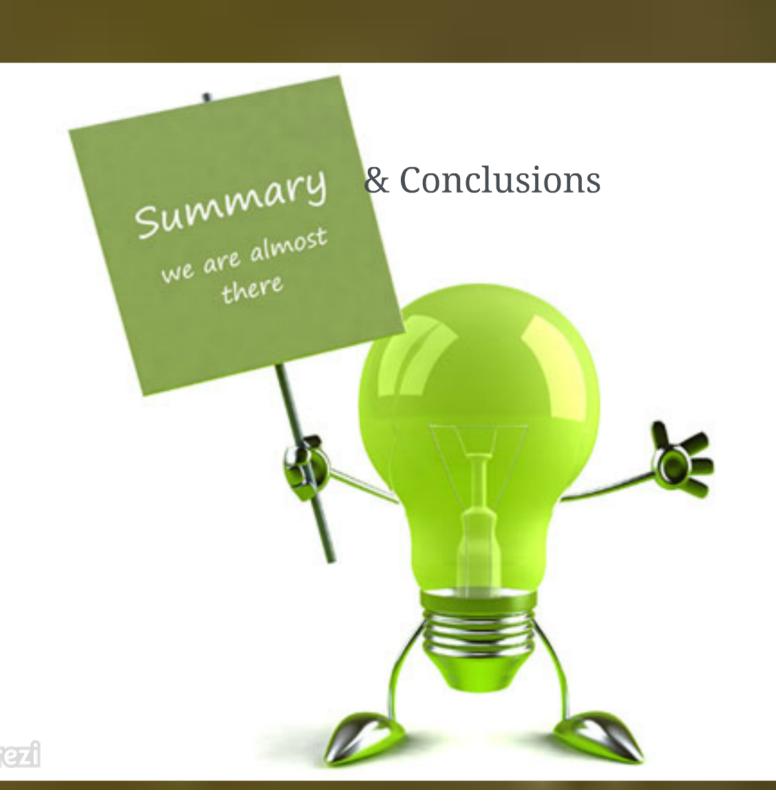


POSTERO-ANTERIOR MEASUREMENTS













Among skeletal Class III types, mandibular protrusion showed the highest percentage of incidence.





Among skeletal Class III facial types, normal growth pattern showed the highest incidence.





Mandibular antero-posterior dimensions were greater in skeletal Class III permanent dentition group than in skeletal Class I.





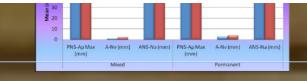
Mandibular rotation didn't increase with age in skeletal Class III individuals.





Transverse dimensions of the mandible of skeletal Class III individuals had no correlation with the antero-posterior discrepancy.







Treatment of skeletal Class III cases is recommended in the early mixed dentition stage with big emphasis on the antero-posterior dimension.



