

Abstract template for original research.

No.	<ul style="list-style-type: none">● Title: Use all capital and bold.● The name of the presenter must be underlined & not bold.● Indicate affiliations with superscript numerals.● Write name and email address of the Presenting Author● No reference, figure or tables● Word count (not exceed 250 words)
-----	---

EFFECT OF ENVIRONMENTAL XXXXXXXXXXXXXXX

Mun Xi Chua¹, Hamid Ismail Suffian¹, Bala Ramanathan²

¹Department of Restorative Dentistry, mUniversiti Malaya, Kuala Lumpur, Malaysia

²Department of Department of Paediatric Dentistry & Orthodontics, Universiti Malaya, Kuala Lumpur, Malaysia

Presenting author: Mun Xi Chua; email: abcxxxxx@gmail.com

Background: The amount of incisor decompensation during pre-surgical orthodontics may affect the outcome of Class III orthognathic cases. **Objective:** The purpose of this study was to assess the lower incisor changes post-orthodontic decompensation in Class III surgical cases and to investigate the amount of crowding as a predictive factor. **Materials and methods:** This was a retrospective study reporting on 22 Class III orthognathic cases. The lower incisor angulation (LIA) and distance of the lower incisor edge to the A-Pogonion line (Li-APo) were measured on pre-treatment and pre-surgical lateral cephalograms whereas crowding was measured on digitised pre-treatment study models. Pearson's correlation ($p < 0.05$) was used to assess the correlation of crowding with LIA and Li-APo changes, and prediction of the lower incisor decompensation was conducted using linear regression analysis. **Results:** Results showed lower incisors were retroclined at $79.84^\circ \pm 7.08^\circ$ and positioned ahead of APo line by $6.52 \text{ mm} \pm 2.97 \text{ mm}$ at the start of treatment. Pre-surgical LIA and Li-APo were found to increase following orthodontic decompensation to $90.43^\circ \pm 5.96^\circ$ and $10.34 \text{ mm} \pm 3.25 \text{ mm}$, respectively. There was a moderate positive correlation ($r = 0.592$) between crowding and Li-APo changes which was statistically significant, $p \text{ value} = 0.004$, and had a strong predictor with 31.8% predictability. However, LIA showed a weak correlation ($r = 0.329$) with crowding and was not statistically significant ($p = 0.135$). **Conclusion:** Li-APo changes during orthodontic decompensation can be predicted with 31.8% predictability using the formula; $\text{Li-APo change} = 2.064 + 0.503 (\text{crowding})$.