

# **ARTICULATORY DISORDERS AND MALOCCLUSION, A CORRELATIVE STUDY**

**Thesis Protocol**  
submitted for the partial fulfillment of the  
M.D. Degree in Phoniatics

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بسم الله الرحمن الرحيم

الحمد لله الذي هدانا لهذا وما كنا

لنَهتدي لولا أن هدانا الله.

صدق الله العظيم

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*Ahmed Nagy Abdelfattah Ahmed Nagy Abdelrahman*

*To My  
Grandmother,  
My Parents,  
My Family,  
My Professors,  
My Friends and  
Colleges.*

Ahmed Nagy

## **ABSTRACT**

The aim of this study is to assess whether or not a correlative effect exist between the form of dental occlusion, and the speech performance efficiency level, the subjects were divided into groups A to F, A was subjects of normal occlusion, and no individual teeth abnormalities, B had the same occlusal pattern as A; but with individual teeth Abnormalities, group C, Class II occlusion, with no individual teeth abnormalities Group D had the same occlusal pattern as C, but with individual teeth abnormalities, Group E with class III occlusion and Group F had the same occlusal pattern but with individual teeth abnormalities. The test battery assessed the intelligibility, and articulatory performance of the patients, whether or not nasal intonation of speech existed by simple tests, and nasometer as well as visual viewing by the Nasal fiberscopy. Then speech laboratory measurements were employed to compare formant transition time & consonant duration in subjects. Conclusion: Class II occlusion have a better performance than Class III, & both classes in addition to class I subjects will have better performance in absence of individual tooth abnormalities, however most subjects are perceptually free from articulatory errors due to speech adaptive capacity.

**Key words:** Malocclusion, Articulatory disorders, Speech adaptive capacity, Formant transition time, Consonant duration.

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## **List of Abbreviations**

**ATP** : Adenosine Tri-Phosphate

**EMG** : Electro Myography

**VC** : Vowel Consonant Time

**CV** : Consonant Vowel Time

**Vs** : Versus

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