Author's response to reviews

Title: Prevalence of dislalias in 8 to 16 year old students with an anterior open bite in the municipality of Envigado-Colombia,

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Author's response to reviews: see over
Before addressing each comment, we would like to express our appreciation for the detailed revision and comments since they allowed us to improve this manuscript. The suggestions made by the reviewers have been taken into account and the answers are written below each comment.

**Referee 2**

1-For comparison, Brunelle et al. (1993) reported prevalence and distribution of several selected occlusal characteristics in the US population estimated for over 7000 sample persons from 8 to 50 years of age in the years 1988-1991. Eight percent of the population in their study had severe overbite of 6 mm or more, less than 5% of the population had AOB, posterior crossbite was found in 9.4% of all assessed persons and less than 1% of this population had negative overjet.

Answer: the article by Brunelli et al (1996) examined malocclusion prevalence, but not its relation to dyslalias. The present investigation related malocclusion prevalence and the presence of dyslalias using a sample size that was representative of the studied population. [PubMed](http://www.ncbi.nlm.nih.gov/pubmed/8594094)

2- Children in the earlier stages of school performance frequently have missing or partially erupted teeth. That precludes temporary positioning of the tongue within the maxillary arch, resulting in lateralization of some fricatives and affricates until their dental status is improved either through orthodontic or orthognatic management.

Answer: regarding patient age, this comment is true and it was considered as such in our investigation. The inclusion criterion was 8 years of age or older. About tongue position in the maxilla: consonant classification for Spanish in Colombia describes phonemes according to articulation mode and point. According to articulation mode, they are classified as occlusive, nasal, fricative, affricate, lateral, and vibrant. Fricative: the sound is produced by narrowing the articulatory organs. Such narrowing produces a sound of friction. They are also known as “continuous” since they may be prolonged for as long as the expiration lasts. These consonants are /V-F-S-Y-J-G/
Affricate: the sound is produced by the combination between occlusive and fricative, where a complete closure of the articulatory organs is first produced followed by a small opening where air passes through, providing both movements in the same articulatory point: /CH-X/.

Keeping these definitions in mind, this investigation assessed tongue position in consonant pronunciation related to anterior open bite (i.e. articulation point instead of articulation mode). The following points were evaluated: bilabial, labiodental, interdental, dentoalveolar (maxillary-mandibular), palatal, and velar. According to our results, phonemes /T-D/ were responsible for 47-56% of distortions by lingual interposition since they are dental according to articulatory point. Phoneme /S/ was accountable for 25% of lingual interposition since it is mandibular alveolar. Finally, phonemes /CH-Ñ/ were responsible for a small percentage, since they belong to the palatal group.

As a conclusion, articulation mode does not affect occlusal relationship, whereas articulation point does. The following paper supports these findings and conclusions.


3- Subjects with persistent severe malocclusion class II, class III and open bite (OB) are not capable of producing certain consonants using standard articulatory placements or by establishing adaptive strategies. For this reason also anterior open bite (AOB) is likely to be of concern to speech pathologists.

Answer: we agree that an altered anterior-posterior relation may affect speech; however, anterior open bite is the most common pathology associated with phonation problems as stated by Mehrent, 1987 and Smithpeter et al, 2010.

4- Difficulty approximating lips in severe cases can result in the tongue protruding through the space created between the upper and lower teeth centrally and lead to labiodental production of bilabials and interdental articulation of lingualveolars.

Answer: this is true. Bilabial interposition /B.P.M./ by labiodental and alveolar and dental /L-N/-T-D/ by interdental rectify the articulation point. Labial incompetence does affect speech by changing the articulation point.

5- In conclusion: the cognitive value of this study is debatable since, as shown, causative relationship between open-mouth posture, dentition and articulation is rather well recognized in the literature as well as necessity of close cooperation between speech therapists and orthodontists.

Answer: cause and effect between anterior open bite and dyslalias is known. However, it is still unknown whether the altered phonation opens the bite or an open bite alters phonation.

6- In addition, the paper is written in a very bad English, including grammatical and syntactic errors. Many utterances and even whole sentences are entirely incomprehensible.
Answer: the manuscript has been meticulously revised and edited to correct grammatical and spelling errors.

7- Level of interest: An article whose findings are important to those with closely related research interests

Answer: the level of interest lies in the representativeness of the studied population. Public policies may be proposed to governmental organizations to correct this type of abnormality.

8- Quality of written English: Not suitable for publication unless extensively edited
Statistical review: No, the manuscript does not need to be seen by a statistician.

Answer: the manuscript has been thoroughly revised and edited to make it suitable for publication.

We appreciate your observations and look forward to your response.

Regards,

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