Reviewer's report

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

Version: 2

Date: 12 January 2015

Reviewer: Maria Hortis-Dzierzbicka

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The submitted paper is not suitable for publication unless extensively re-edited. And even so, it has only a limited value of an epidemiological study, because it explores the incidence of no more than one type of malocclusion and accompanying articulation disorders in a population of school children (8-16 years of age) in a restricted region of a country (Columbia).

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.

Dental occlusal problems frequently compromise articulatory precision and result in oral distortion of anterior consonants. The dental and orthodontic literature contains some fairly consistent information regarding the effects of dental problems and malocclusion on speech. 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.

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.

The authors of the paper under review are of the opinion that „more work is needed to clarify whether AOB leads to phonetic changes or, […] on the contrary, […]the phonetic alterations [that] cause AOB. [English corrected].

Yet this question has been discussed in the literature, where two of the most common and well recognized causes of AOB are: nasopharyngeal airway obstruction (as for Class II malocclusion) and thumb sucking. The mouth-open posture prevents the anterior teeth from meeting and leads to the abnormal configuration of the palatal vault. 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 linguaalveolars.

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 therapeutists and orthodontists.

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.

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

**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.

**Declaration of competing interests:**

I declare that I have no competing interests