Author's response to reviews

Title: Malocclusion, dental aesthetic self-perception and quality of life in a 18 to 21 year-old population: a cross section study

Authors:

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Author's response to reviews: see over
Dear Editor BMC Oral Health

Please find our answers as follows:

In the Abstract:

**REVIEWER**
Line 11
“...(revise and rewrite, what are they?)”

**AUTHORS**
The stepwise multivariate logistic regression analysis was used to test for the relationship between the poorer oral aesthetic self-perception and parental and soldier’s education, *per capita* income, history of caries in all teeth and only on anterior teeth, dental trauma, previous orthodontic treatment and malocclusion.

**REVIEWER**
Line 12
“(add the summary of important findings here, including the p values AND Odd ratios)”

**AUTHORS**
The prevalence of malocclusion was 45.6%. Incisor teeth crowding and misalignment of lower incisors were the most common types of malocclusions. A statistically significant and independent association between malocclusion and poorer oral aesthetic self-perception in the multivariate analysis was observed. Subjects with severe malocclusion conditions showed 88% higher prevalence [prevalence ratio =1.88 (95% CI, 1.30 – 2.72); p=0.001] of poorer aesthetic self-perception comparing to those with minor malocclusion.

In the Subjects and Methods:

**REVIEWER**
Line 11
“...(please rewrite this sentence)”

**AUTHORS**
The sentence was considered unnecessary in this new version, so it was deleted.

**REVIEWER**
Line 16
“...(rewrite this sentence)”

**AUTHORS**
The sentence was considered unnecessary in this new version, since it was mentioned that clinical mirrors and periodontal probes had been previously sterilized. It was deleted.

**REVIEWER**
Line 34
“...(DMF-T, spell it out)”

**AUTHORS**
To control for possible confounding clinical variables, data on dental trauma [14] and dental caries (history of caries measured by the DMF-T index: number of decayed, missing due to caries and filled teeth) [12] were also collected.

**REVIEWER**
**Line 42**
“Pilot study (do you need this section)”

**AUTHORS**
This section was deleted from the text.

**In Statistical analysis**

**REVIEWER**
“*What type of test did you use (chi-square? Mention it after describing the variables). Explain why you used these tests, what was it that you wanted to investigate, then mention the independent and dependent variables.*”

**AND**
**Line 16 of this section**
“(revise and rewrite)”

**AUTHORS**
The Chi-square (\(\chi^2\)) and Fisher’s exact test were used to test for the relationship between the poorer oral aesthetic self-perception and parental and soldier’s education, *per capita* income, history of caries in all teeth and only on anterior teeth, dental trauma, previous orthodontic treatment and malocclusion. The significance level was set at p< 0.05. These tests were chosen because it was decided to dichotomize the variables in order to carry out the logistic regression analysis. The stepwise multivariate logistic regression analysis [15] was used to adjust the association between the poorer oral aesthetic self-perception and parental and soldier’s education, *per capita* income, DMF-T in all teeth and only on anterior teeth, dental trauma, previous orthodontic treatment and malocclusion. Statistically significant variables with a p-value <0.20 in the bivariate analysis were entered into the logistic model, starting with the variable that had the highest level of statistical significance and following in descending order. Odds ratios (OR) and confidence intervals (95%) were converted into prevalence ratios (PR) as recommended by Schiaffino et al. [16]. The data were analyzed using SPSS 16.0 (SPSS, Inc., Chicago, IL, USA).

The dependent variable was the poorer oral aesthetic self-perception as assessed by the OASIS with the cutoff point at the 75th percentile. Scores between 17 and 29 accounted for poorer self-perception. The independent variables were parental and soldier’s education (cutoff point at eight years of schooling, since it represents the final of the primary degree of formal education in Brazil); *per capita* income (cutoff point at the distribution’s median – BR reais of 525.00); history of caries in all teeth and only on anterior teeth (cutoff DMF-T zero or non-zero); dental trauma (present or absent); previous orthodontic treatment (yes or no); and malocclusion assessed by the DAI (cutoff point - DAI scores \(\leq\) 30: minor malocclusion, scores > 30: severe malocclusion).

**In Results:**

**REVIEWER**
**Line 22**
“(revise and rewrite)”

**AUTHORS**
Results of logistic regression showed that DAI remained statistically significant (p=0.001) after adjusted for per capita income, DMF-T in anterior teeth and dental trauma. Individuals with severe malocclusion showed 88.0% higher prevalence [prevalence ratio =1.88 (95% CI, 1.30 – 2.72); p=0.001] of poor aesthetic self-perception compared to those who had minor malocclusion status (Table 4).

In Discussion:

REVIEWER

Line 42

“...(please read the article you mentioned and check the accuracy of the comments you made)”

AUTHORS

Thanks for alerting us. We have corrected it.

According to a review [6] it was found that patients focus on esthetics and social aspects of oral health-related quality of live as reasons for seeking orthodontic treatment. However, undergoing orthodontic intervention has been found to enhance some aspects of quality of life, particularly esthetics, but not necessarily social acceptance. Moreover, self-esteem does not appear to be affected in long term.

In References:

REVIEWER

Please add DOI for ref number 1 , and check ref 27

AUTHORS

1. Borzabadi-Farahani A. A review of the evidence supporting the aesthetic orthodontic treatment need indices. Prog Orthod, in press. doi:10.1016/j.pio.2012.03.003


Sincerely yours.

Dikson Claudino and Jefferson Traebert