Reviewer’s report

Title: Prevalence of sleep-disordered breathing and association with orofacial symptoms among Saudi primary school children

Version: 0 Date: 27 Jan 2018

Reviewer: Thikriat Al-Jewair

Reviewer’s report:

This cross-sectional study determined the prevalence of SDB among school goers in Saudi using Chervin et al's PSQ. There is scarcity of data on SDB in this population and therefore this study is important. The manuscript however requires major revision.

-Abstract: in the methods section, make clear it's the parents that completed the questionnaires not the children.

-Background: major weakness in structure and flow.

* Page 4; first paragraph: Lines 53-57: missing citation, SMJ 2016"Prevalence and risks of habitual snoring and obstructive sleep apnea symptoms in adult dental patients". Add to the adult studies

* Page 5, Line 13: "mouth breathing…. Is the PRIMRAY cause..” This is a very strong statement given the multifactorial nature of the condition. Also on the same page lines 42-47: there is a difference between causation and association and thus the two terms shouldn't be used interchangeably. Evidence is conflicted with regards to association between OSA and craniofacial growth patterns.

* Page 6: "the role of dentists…". Delete

-Methods:

* Page 7, first paragraph: "the search method..." what was the purpose of the search and how were the results of this search applied in the study?

* Excluding children with "known medical condition" needs clarification

* An a priori sample size calculation is missing. Since the authors had run a pilot study, have cold have used the results of the pilot to determine the main study’s minimum sample size

* I suggest that the authors consider adding a paragraph on the city of Riyadh --population and schools, then focus on the method by which the sample was selected.
* Was the sample selection within each school random? If so, how?

* It would be helpful to divide the methods section into subheadings to improve flow.

* While the abstract stated that the study used the PSQ questionnaire, after reading the methodology, the authors stated using a two-part questionnaire, a first part and a second part, being the PSQ. Was the first part developed by the authors or was it adopted from a previous questionnaire? Data should be consistent across all sections. It would be helpful to include the questionnaire as a table.

* Add information about data normality.

-Results: major revisions of tables and text are needed. Suggest calculating Odds ratios and reporting results for snoring and sleep apnea separately. It was not explained why the authors used the "one or more" categories of the respiratory and orofacial variables to calculate associations with SDB.

-Discussion: Again, the study used a 2-part questionnaire, which should be discussed in addition to the PSQ. The associations between SDB and orofacial symptoms needs further discussion.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited
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