**Reviewer’s report**

**Title:** Prevalence of Dental Caries and Associated Factors among 12 Years Old Students in Eritrea

**Version:** 0 **Date:** 05 Jul 2017

**Reviewer:** Jose Leopoldo Ferreira Antunes

**Reviewer's report:**

This study assessed the prevalence of caries in a sample of schoolchildren in Eritrea. Authors should be commended for having attempted to fill this gap in the literature, without funding for research. The theme is relevant for dental public health; the text is well written and reads smoothly. This reviewer considers this report to be a provisional documentation of dental disease in this country.

The main problem with the study is the sample design. Sample size estimation used the formula for random sampling. The number of individuals is clearly insufficient and the formula used to calculate this number is not applicable because the sample was planned to follow a multistage design.

Furthermore, the multistage sampling also adopted inappropriate methodological options:

- Authors have not informed which towns were encompassed. Are the sample related to Asmara?
- If there were 16 subzones in the central region, exclusively choosing two schools is obviously insufficient to complete a multistage sampling.

With an insufficient number of participating schools and children, the resulting sample cannot be considered representative of any wider setting. I would strongly recommend authors to correct the explanation of the sample design.

A convenience sample was obtained for ease of access. This convenience sample included two schools (one at an urban area, the other at the rural zone) and 225 children. Results reported here do not allow for inferences for the whole country or any of its regions. Nothing more than this can be ascertained about the sampling design.

**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.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
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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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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