Reviewer’s report

Title: General and Erosive Tooth Wear of 16-year-old Adolescents in Kuantan, Malaysia: Prevalence and Association with Dental Caries

Version: 0 Date: 05 Dec 2016

Reviewer: Stephen Mason

Reviewer’s report:

General comments:

Overall, the paper should add significantly to the literature, however it is felt the BEWE data and results could have more prominence. The use of the BEWE index has become a relatively well established methodology for assessing ETW around the globe in recent years. Comparing and contrasting the BEWE findings with other cohorts seems a missed opportunity. Although on a different population age range, the authors should refer to the some papers by Bartlett et al, including the one below and some of its associated references including some of the observations / conclusions in their discussion

http://dx.doi.org/10.1016/j.jdent.2013.08.018

Abstract/Results

1) Authors should specific criteria for prevalence statistic in Abstract to aid interpretation of 99.8%, 45.5% and 27.8% values

2) Penultimate sentence in conclusion needs adjusting/completing.

Should it be "… for both general toothwear and caries is the occlusal surface of molars..." Clarify which molar surface. It should only be one

3) Last sentence - should add "In this population….”

Introduction

1) General comment - more references could be provided throughout the introduction

2) First sentence "… new emerging dental public health problem which has not yet reached …"

3) Final sentence of opening paragraph could be emphasised more, since this is pivotal distinction in this manuscript
4) Para 3. Recommend avoid describing the previous Malaysian research as using a "small group of subjects" when the sample size of this research is similar. With regards to the last sentence, the Authors should expand, explaining and justifying the relevance of the study population chosen i.e. being based in Kuantan, Pahang. This should include the relevance Kuantan to the Malaysian population as a whole.

5) Para 4. The authors are potentially underplaying the importance of their dataset relating the prevalence and severity of erosion to caries. The reviewer is not aware of significant datasets with this information and recommend some expansion of this text and add references.

Materials and Methods

1) Parental consent is clearly described. Was double informed consent followed? i.e. consent from the 16y old children as well.

2) Were there any issues with access to the school system once the Ministry of education had given their permission

3) Personal observation - not sure Cohen's kappa value =0.87 should be described as "indicating an almost perfect alignment"

Results

1) Authors should specific criteria for prevalence statistic to aid interpretation of 99.8% and 45.0% values (note: Abstract quotes 45.5%). This sentence is confounded by the comments regarding Table 2 and Figure 1. The authors should explain the discrepancy in number of teeth examined 16521 and the number reported in Table 2. The legend for Figure 2 is unclear (number subjects, teeth etc)

2) Similarly for the ETW paragraph and Figures 2 and 3.

Discussion

1) First sentence - is it "difficult to make a meaningful comparison"? Or that care should be taken regarding interpretation

2) It is felt the BEWE data and results could have more prominence. The use of the BEWE index has become a relatively well established methodology for assessing ETW around the globe in recent years. Comparing and contrasting the BEWE findings with other cohorts seems a missed opportunity. Although on a different population age range. The authors should refer to some papers by Bartlett et al, including the one below and some of
its associated references including some of the observations / conclusions in their discussion

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**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?**
If not, please explain in your comments to the authors.

No

**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 recommend additional statistical review

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

Not suitable for publication unless extensively edited

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