Reviewer's report

Title: Caries Prevalence and Dental Health of 8-12 Year-Old Children in Damascus City in Syria during the Syrian Crisis; a Cross-Sectional Epidemiological Oral Health Survey

Version: 1 Date: 10 Dec 2018

Reviewer: Peter Bottenberg

Reviewer's report:

I am generally not all that pleased with the replies of the authors. The changes in the manuscript are minimal and did not really improve it.

Also, statistical analysis could be improved. If the authors state that there was a relation between dmft and DMFT (at least in the references, a correlation analysis on their data material could have shown this (or not).

Furthermore, there is not a relationship between area and caries but a difference between areas. Otherwise, some risk factor must be supposed to exist in specific areas. A further analysis with socio-demographic variables (if available) might have given an argument to speak of a relationship but it remains to be shown.

Below you find my remarks on the rebuttal supplied by the authors.

Rebuttal: Caries was recorded as the enamel level and surely even before cavitation occurs and this is as to the WHO standards for it takes in consideration even the slightest caries degrees and hence these guidelines were followed.

My Remark: of course, WHO allows recording at enamel level, although nowadays many studies record at dentinal level in order to relate this to operative treatment need (Castro et al. BMC Oral Health (2018) 18:122). If you have the data, you should split them according to enamel and dentine in order to discern between first clinical signs and established lesions.

Rebuttal: As for the intra-examiner-reliability of the recording … The study was done by a single examiner. Yet, indeed no test-retest was done and I yes I totally agree that it could have been better had I been able to repeat the tests for a part of the study sample but still there is enough reasoning for not taking that action. Repeating the examinations is not favorable at all in children of such an age for they will neither like it nor accept it nor be a good practice to go examining their oral cavity again for so many reasons like making them develop some sort of negativity
towards the dentist. Another important issue is that not all schools' administrations showed complete cooperation. All in all, I agree to your point totally but for the above-mentioned reasoning I guess it wasn't crucial or of so much importance especially when taking in consideration the big sample size that helps in reducing such errors. Still, this will be added to the limitation of the study and will be addressed in the paper. (Changes have already been made according to your kind advice and this have been added to the revised manuscript and can be found on the 10th page of the uploaded file in the "Limitations" section under "Logical Limitations"). by the way: it is logiSTIcal considerations...

My remark: You should be aware that nowadays calibration by photographs is quite well established and does not traumatize children (or even adult patients). In the annotated version two references are given for your instruction.

Rebuttal: "You recorded DMF-s/dmf-s: which surface on what tooth was more affected (expand information given on page 8)? Did this differ according to sectors (as DMF t and s seem to be quite different per sector)?" I quote you in here. Well, I would like to draw your attention sir that the DMFTs and the dmfts indices are the ones that are usually used on large size epidemiological surveys as you know and these are the ones used in our study too and NOT the DMFSs or the dmfss and you can double check the original manuscript to find out there has been no mentioning at all for the DMFSs index in the entire manuscript. The use of the DMFSs as am sure you know would have proven inadequate and unnecessary especially with a large sample size of 1500 children and under such circumstances not to mention that no preventive measure was applied earlier to study its effectiveness.

My remark: The way you presented your results leads to confusion. You probably intend to use a kind of sloppy plural form by adding an "s" at the end of the acronym. Just drop all the "s" throughout the manuscript to conform it to current practice.

Rebuttal: Many other indices were recorded and published as it was a full oral health survey. Still, we cannot double publish the other results as you know for it is counter scientific research publishing laws and good practise.

My remark: You could then have referred to already published data and shortly summarize these findings.

Rebuttal: Still, no one publication can cover all the data as only the dental aspect of the research made us reach the limits of the words counts despite of trying to make it as brief as possible.
My remark: You can have more space for a more comprehensive presentation of several oral health indicators by dropping table 1 and in my humble opinion better present one comprehensive paper than slicing up data like a sausage.

Data were normally distributed indeed and also there is another simple and clear reason behind using means and not medians. It is a caries prevalence and dental health survey sir and the overall health is the average indices values (even if any too high or too low values existed had there been any) and still this is what the WHO guidance suggests.

My remark: generally, not to confound less statistically learned readers and to allow comparability with previously published data, mean +/- SD is accepted. You should then supply the information on normal distribution (SPSS offers this possibility)

Unfortunately, no clear accurate straight-forward data about the circumstances before the crisis are available and the comparison of before and after is not applicable.

This is not true: in table 1 (which is referenced in your text after tables 2 & 3) you have at least three papers from Syria published in 2009-2016 [# 16, 20, 26] which may reflect the pre-crisis situation. By the way: do all these references in table 1 pertain to enamel lesions?

**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.

No

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No

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