Reviewer’s report

Title: The effect of mobile personalised texting versus non-personalised texting on the caries risk of underprivileged adults: a randomised control trial

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Reviewer: Katerina Kavvadia

Reviewer's report:

This is an interesting paper on an innovative method to alter caries risk in economically disadvantaged adults, via personalized mobile texting.

However the paper would merit of an extensive revision in writing since not only is too long but is also confusingly written, has many unnecessary details on the methods and results, and seems to focus more on the methods and statistics rather than the actual intervention effect. Methods and Materials as well as results details presented in the Tables and Figures are also repeated in the document. More specifically:

Title. A more appropriate title is: The effect of mobile personalized texting on the caries risk of underprivileged adults: a randomized control trial.

Introduction
Pg5, line 8 and 9. The Cariogram calculates its outcome based on an algorithm and not simply as total, as it is mentioned in the introduction. The authors should consult the Cariogram manual to revise this statement.
Aim: pg 5, lines11-18 too long and confusing.
To be revised: "The aim of this study was to compare personalized vs non personalized text messaging on the chance to avoid new caries with the Cariogram, in an economically disadvantaged adult population. The null hypothesis is that no difference would exist regarding chance to avoid new caries, between the group receiving personalized information and a comparison group receiving non personalized information, in economically disadvantaged adults."

Methods
Too many details are given in general, should be revised by adding information in the flow charts and avoiding repetitions in the text, some details could be also uploaded as an Appendix.
Subjects: The age is a factor to be considered since older individuals might not be as perceptive to mobile texting, and this may influence the results between the two groups. A detailed age distribution for the two groups should be thus presented.
Pg7, lines 11-21 Too many details for the allocation concealment, could be added as Appendix.
Pg 9, line 16: What does it mean the programmer was supposed to send…..Did he send the necessary
texts?
Pg 10, paragraph 1: Re organize this paragraph into two with subheadings Personalized Group, line 3 and Non personalized group, line 12. Line 18 New paragraph. The interventions…
Pg 11, line 19: this work was carried out at the OHSRC, during a 7 month period (between ….dates) for the baseline data and 8 month period (between ….dates) for the follow up.
Pg 12, line 2, what do the authors mean with CRA adjusting?

Statistical analyses
Pg 12, line 10: Unclear what is Q13. It is mentioned much later.
Line 13, to add what where the Cariogram percentage outcomes for scores 0,1,2,3
Line15, "with the Cariogram manual and as previously used [6]."

Results
Authors analyzed data only comparatively between the two groups and found no difference. The analysis within the groups before and after the intervention is missing, in order to investigate whether mobile texting was effective on Cariogram changes regardless of the personalized or not approach.
Pg 13, Lines 4-15: Details for participants to be presented in the flow diagram.
Pg 13, Lines 18-23: Dates were already discussed in Methods
Pg 14, Lines 3-5: To be moved in the discussion session.
Pg 14, Lines 7-9. Unclear

Discussion
The selected methods need to be discussed. Why was mobile texting selected as an intervention method? Why was CRA was selected as a primary outcome? Why was Cariogram selected versus other caries risk assessment methods?
One of the study limitations to be discussed is that it did not investigate the effect of mtexting on the actual disease level, ie caries, gingivitis, periodontal disease but rather used CRA.

Tables
Table 2: Educational level and smoking status, why are they presented, were they used in the analysis?
Tables 4 and 5 to include in title what were the primary and secondary outcomes. What do scores 0,1 stand for and why aren't scores 2 and 3 presented? This to be added in the Methods and Materials section.
Figure 1, no need to include, Cariogram pie chart, since it is a well know caries risk assessment method, and readers could search the web for more info.

Abstract to be revised accordingly to all of the above

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

Yes
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.

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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