Author's response to reviews

Title: Socio-behavioural factors and early childhood caries: A cross-sectional study of preschool children in central Trinidad:

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Author's response to reviews: see over
May 23rd  2013

Dr. Christopher Foote
Executive Editor
Biomed Central

Dear Dr. Foote,

**RE: Socio-behavioural factors and early childhood caries; A cross-sectional study of preschool children in central Trinidad.**

As requested we have submitted a second revision for the above-mentioned manuscript.

In this revision we have attempted to address all the comments and suggestions arising from the previous submission.

Thank you for your consideration.

Sincerely,

**Rahul Naidu**  
*(Corresponding author)*

Attached (below):  Response to Reviewers (*4 pages*)
Response to Reviewer 1

1. The manuscript still requires some editing for language, syntax and formatting.

   We have undertaken further language editing and formatting in this revised manuscript.

Response to Reviewer 2

1. The English language can be improved

   We have addressed this in this revised manuscript.

2. The document is still sloppy with a lot of typo's; several sentences miss a subject and a conjugated verb... Many sentences in the abstract should be rephrased.

   We have edited the text and reworded the abstract.

3. I question the reliability of the kappa value - it decreased from 1 to 0.9 without any explanation.

   The original value was based only agreement for decayed teeth. The revised value reported was for dentition status - decayed, missing, filled teeth.

4. The Fisher-Owens model is cited but not applied in the study. Why not?

   The Fisher-Owens model guided the conceptual basis for exploring some plausibly relevant social and behavioural determinants (child and family level), related to ECC. The statistical analyses did not specifically consider the domains proposed by Fisher-Owens.

5. How were teeth lost due to trauma taken into account in the study?

   Primary teeth considered to have been lost due to trauma, were coded separately and not included in the count for caries experience.

6. How were missing values taken into account?

   Missing values were assumed to be missing completely at random and so were excluded from the modelling.

7. The authors should make a difference between higher proportion of children with visible caries experience and a higher rate of caries. They should make clear to the reader what outcome is considered in every analysis. Now, it looks like they interchange both themselves.

   In the Discussion section of the revised manuscript we have clarified which analysis we refer to when commenting on the findings.
8. That the final model results in both “having a previous dental visit” and “having difficulty finding a dentist” being associated with dental caries is striking and should be better elaborated in the discussion.

This apparently contradictory finding has been discussed at more length in the revised manuscript on (page 13, paragraph 2, lines 8-13), where we state:

“In this present study the Poisson regression model showed a higher rate of visible caries experience was found in children who had a previous dental visits. This somewhat contradictory finding might be explained by previous dental attendance being as a result of a caries related problem as symptoms such as pain or infection would be more likely in children with a higher rate of caries experience. This would be consistent with the issue of symptom-based dental visits for ECC [25, 26].”

9. The definition of S-ECC is not correctly cited. What is more, it is different for the different age categories that were seen in this study!

The AAPD /AAP 2011 definition for S-ECC has now been cited in full in the Background (page 3, paragraph 1, lines 4-7). In the Method section we also report the modified criteria that was used in the present study (page 10, paragraph 1, lines 1-3).

10. Do we need in the introduction citations of more than 20 years old?

These citations have been removed from the revised manuscript.

11. Re-phrase aims and objectives; one of both is sufficient.

The objective have been removed and the aims reworded

12. Omit the word influence in a cross-sectional study!

This has been done

13. Why is it an analytical survey?

The word ‘analytical’ has been removed.

14. The sample selection will have introduced selection bias, which needs discussion in that section!

Selection bias is discussed under limitations of the study (page 14, paragraph 4, lines 1-2, continued on page 15 lines 1-7.)
15. The reader needs more precise, more concrete description of the clinical variables! E.g. what is the difference between tooth status and caries experience?

More detail is now given under the section ‘Clinical variables’ in particular the how the recording of dentition status relates to caries experience (page 6 paragraph 5, lines 1-4, continued on page 7, lines 1-2.

16. It still has not been elucidated why the Frankl Behaviour rating scale was applied.

The rationale for including this measure is elaborated on in the Discussion (page 11, paragraph 3, lines 2-7 continued page 12, lines 1-2), in relation to dental behaviour management problems (DBMP) where we state:

“DBMP in preschool children can have implications for service provision with respect to choice of treatment, need of specialist referral and clinical resources requirements. A measure of DBMP should therefore form part of the oral health assessment for young children [19].”

17. It should be d3 and not D3, and this should be added to the abstract.

This correction has been made in the Abstract and main text.

18. I still dispute the calculation of mean dmft scores as they are no good measures of central tendency in a non-normal distribution, so meaningless.

Though not statistically meaningful, from a clinical perspective we briefly report mean dmft scores to illustrate that disease burden was confined to relatively few children (page 9, paragraph 4. lines 1-4). If this is still unacceptable we are willing to remove this section from the results.

Bivariate analyses related to the mean dmft have now been removed.

19. Hearing and eyesight are not considered part of general health?

Though a part of overall health, we considered that parents and caregivers may view these problems as distinct from systemic illness such as asthma, cardiac problems etc.

20. If results are not statistically significant, they should not be reported as such in the results section! E.g. SES and caries.

Non-significant results are no longer reported or discussed as such in this revised manuscript.
21. Only results of multivariate model should be in abstract.

The abstract has been edited as requested. For accuracy the term multivariate models has been replaced with 'Multiple variate models' in the revised manuscript.

22. Replace results by OR’s and 95% CI’s, but first bring some categories with small numbers together.

The results of a logistic regression (GLMM) for presence / absence of visible caries experience with OR’s and 95% CI’s, is now included (Table 3) and described in the Results (page 11, paragraph 2, lines 1-5).

23. How should the reader interpret the estimated rate in table 4. Please explain thoroughly. It should be 95% CI with lower and upper limits.

This table (now labelled table 2) is described in the Results (page 11, paragraph 1, lines 1-8). Tables 2 and 3 have been edited with respect to the CI’s.

24. Fig 1: can be deleted as it does not add anything to what is explained in the text.

This Figure was retained in error in the previous revision and has now been deleted.