Reviewer's report

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

Version: 1  Date: 3 January 2013

Reviewer: Roos Leroy

Reviewer's report:

Major Compulsory Revisions
1. The English language can be improved
2. Is Caroni Education District representative for Trinidad? If not the title should be re-phrased and this should be discussed in the discussion in a more clear way!
3. The discussion is far too long. The authors should discuss the results of their research instead of giving a literature review.
4. After reading the whole manuscript I still do not understand why the results of the dental behavior are also discussed in this paper. What is the relationship with the title of the manuscript?
5. Please define at which level caries experience was assessed (abstract & text)
6. The authors state that caries experience was not normally distributed – still they calculate the mean of that variable. What is the sense of doing that? The authors should rather present the prop of children with caries experience.
7. The first sentences of the results section of the abstract should be re-written.
8. It is not clear in the abstract whether the results of the simple or the multivariable analyses are presented.
9. “For inclusion in the sampling frame very small schools (enrolment <15) and very large schools (enrolment >60) were excluded from the sampling frame” – why was this done? What about selection bias??
10. The only stratification factor for selecting schools was “government assisted”? There were no other variables that had to be taken into account? School population? Size?
11. What about families where more than one child went to the same school? Were they all selected for participation? What about clustering of data?
12. “The following variables were selected for inclusion in this study” – for child selection in the study? Please re-phrase.
13. So no data on dietary habits, oral hygiene habits or dental attendance was collected nor evaluated?
14. Oral exams were performed without mouth mirror? Why? What is the impact on the data?
15. Statistical analysis: based on the description of what was done I wonder if the authors fully understood what was done... In addition, how can one build a predictive model for ECC based on a cross-sectional study? What is meant by: “95% confidence intervals for main outcome variables”? “dmft” should be replaced by visible caries experience. “adjusted” should be added to OR.

16. Was the kappa statistic calculated at tooth, child or tooth site level? A kappa of 1 seems very unrealistic...

17. “severe early childhood caries” should be defined and a reference should be added.

18. You cannot talk about an effect in a cross-sectional study. Also, replace “predictors of caries experience”.

19. I wonder if reference 4 on page 10 is the correct reference.

20. “involve early dental attendance, that is, by 12 months of age, to establish a ‘dental home’ early in a child’s life” – based on which evidence?

21. The results of the regression analyses should be discussed in a correct way! For some variables, only the most extreme category is significantly different from the reference value. This should be explained to the reader and hence the conclusions of the study should be re-written!

22. “Oral health rating may therefore have some utility in planning of oral health services and oral health promotion strategies as a proxy measure of treatment need, particularly when dental screening of...” – do not make too general conclusions!

23. “In a recent systematic review it was concluded that parental oral health behaviour was an intermediary in the development of ECC, ..” – what is the link with the present study?

24. “Dental health educators should consider the social context of parental oral health behaviour, using more supportive rather than ... “- idem.

25. Limitations – which other factors may explain the different results of the present study?

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

27. Table 1:
   o replace the mean dmft – cfr supra
   o re-evaluate the categories you made – the small n in some subgroups may be responsible for the non-sign results

28. Table 2 & 3
   o Replace “effect”
   o re-evaluate the categories you made – the small n in some subgroups may be responsible for the non-sign results
   o what does “**” mean?
29. Table 4:
- Wald statistic is not informative and can be omitted
- The very wide CI for “poor” should be evaluated with the statistician and if it is correct, it should be discussed in the text.

Minor Essential Revision
The authors should re-read their manuscript as there are many typo’s

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests