Reviewer's report

Title: Feeding and smoking habits as cumulative risk factors for early childhood caries in toddlers, after adjustment for several behavioral determinants: a retrospective study.

Version: 3 Date: 19 February 2013

Reviewer: Gerardo Maupome

Reviewer's report:

Major Compulsory Revisions

1. Let us return to the fundamental part of my review in the first submission. Authors cannot claim a direct link between breastfeeding+smoking and more severe caries based on the data presented.

In the resubmission, authors returned to the drawing board, brought to the analysis plan a non-individual level socioeconomic status (SES) estimator (cost of housing per square meter in the area where the participant lived), and found that the impact of SES was rather overwhelming in terms of severity; see 3d before last para in Results: "No child with high caries severity belonged to a family living in high-cost housing, whereas more than 50% of toddlers belonging to families living in low-cost housing had moderate or a high caries severity". The point this reviewer tried to drive home in the 1st submission was that breastfeeding and smoking during pregnancy are health behaviors largely tied to SES: a cursory look at Table 2 shows that these 2 factors mimick each other along the caries severity continuum, and are the exact opposite of the SES gradient.

Given this information, the ensuing approach followed by the authors is counterintuitive: analyze their data separately for each one of the 3 SES levels to identify the role of the non-SES factors WITHIN each SES level (apparently, Table 4), instead of asking themselves whether the role of SES was strong enough to obliterate the contributing effects of smoking during pregnancy and breastfeeding toi caries severity. Exactly why this was done remains obscure -- without much explanation except the closing phrase in second para of Discussion: "In the present study, SES was significantly, albeit marginally, related to caries severity." More telling is the cover letter: "We really think that the direct/indirect effect of smoking has a role on the ECC. This is the main reason that even in the new version of the manuscript we decide to maintain the main focus of our paper on feeding practice and smoking habits. We added SES and dietary habits (sugar beverage other than milk)."

Such statements are -- based on the data presented -- either incorrect or have a priori decided what the findings will be. They also depict an incorrect interpretation of the findings, which permeates the study in the Discussion, Conclusion, and Abstract sections.
2. Figure 1 is not a flowchart, and does not describe the route of participants along the study.

3. Housing costs are not described in the Data Analysis plan. This is one manifestation of the major problem I describe above and below in the present review section.

4. Closing para in Results section presents data that do not resemble what I think is Table 4. (Table 4 lacks number and title).

Minor Essential Revisions

1. Language still needs attention. Some parts are weaker than others -- eg, Abstract needs a lot of attention to English.

2. Background, 4th para. What do you mean by pattern of caries is 'specific'?

Discretionary Revisions

None.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'.