Author's response to reviews

Title: Characteristics associated with the use of public dental services by the adult population of the state of Minas Gerais, Brazil

Authors:

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Version: 3 Date: 16 July 2014

Author's response to reviews: see over
Dear Professor Dr. Thiago Ardenghi,

On behalf of all authors, I would like to resubmit the manuscript entitled “Comparing adult users of public and private dental services in the state of Minas Gerais, Brazil” for your appreciation and editorial analysis for publication in BMC Oral Health. We have detailed below all the modifications made, considering the reviewer evaluation.

We look forward to hearing from you regarding your decision.

Sincerely,

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1. My main comment is in regard to the statistical analysis approach which in turn may lead to misunderstanding the results. In the hierarchical approach proposed by Victoria and colleagues (Victora et al., 1997), it is assumed that distal factors determined intermediate/proximal factors and, consequently, the outcome. This type of analysis adjusts the effect of each variable for only those on the same level or above in the model. Considering that “predisposing variables” belong to level 1 they should not be adjusted for the levels below as it seems to have been done.

Thank you again for the opportunity for clarifying this issue. Predisposing factors is the most distal level in our analysis, accordingly to Andersen and Newman (1973). This group of variables is not from level 1. So we add a Figure 1, that explain the hierarchical approach of our study (please see Figure 1).

We follow the methodology proposed by Victora et al. (1997). The authors proposed this methodology to diarrhea, which socioeconomic factors are more distal and environmental conditions are more proximal factors to the outcome. As these authors stated: “This approach may be extended to situations with several variables in each hierarchical level. For example, model 1 could include other socioeconomic characteristics (...). Their measures of effect are assessed in this first model. All of these variables could be kept in the subsequent models, or only a subset of them, such as those reaching a certain P level (say, P<0.1). A decision to select will depend on the number of variables being considered. Studies with two or three variables at this level may keep all of them, while those with many variables may consider dropping out those not reaching certain criteria in order to avoid an excessive number of parameters and unstable estimates in subsequent models. The second model would add to the socioeconomic
block (model 1) environmental variables such as water supply, sanitation and crowding. Again, either all or some of these would be retained for further analyses, and so forth for the subsequent levels.”

We also add more details about our statistical analysis in the last paragraph of Methods:

“... Model 1 included ‘Education level (in years)’, ‘Race/Color’, ‘Number of people in the household’ – predisposing factors. Their measures of effect were assessed in this first model. Those variables that reach p value <0.20 were kept in model 2. In model 2, ‘Family income (in dollars)’ and ‘Size of town (in number of inhabitants)’ – enabling factors were included together with those kept in model 1. Those variables that reach p value <0.20 were kept in the model 3. In model 3, ‘Self-assessment of oral needs’, ‘Self-reported need for dental treatment’, ‘Complaint of a toothache’, ‘Need for a total prosthesis’ - Self-reported needs were included together with those variables kept in model 2. Those variables that reach p value <0.20 were kept in the model 4. In model 4, ‘Need for a prosthesis’ and ‘Total of teeth needing treatment’ - Needs diagnosed by the healthcare professional were included together with those kept in model 3. Those variables that reach p value <0.20 were kept in the model 5. In model 5, ‘Time elapsed since last dentist visit’ - Characteristics of use of healthcare services were included together with those kept in model 4.”

2. Also, it is not possible to understand which p values were taken into consideration to make the decision to include or exclude variables from the models. The authors did not show the p values from the variables as a whole. They only presented p-values for each category.

In Table 2 we developed a multiple logistic regression using Complex Samples. So, we had p values for each category and not for variables as a whole. We used the lower p value presented for each variable. For example, in Table 2, model 1, p values for ‘Race’ were 0.001 and 0.301. So, considering that 0.001 is lower than 0.20 we maintained this variable in model 2.

3. Finally, the new texts added in the second version are not clear, as they present many typographical errors as well as poor expression English.

The same professional, a native English speaker (please see the attached letter), attest the fact that our manuscript has no grammatical and/or lexical errors. Please, if possible, this professional asked for details about the mistakes identified by this reviewer. We corrected the typographical errors that we found.
May 28, 2014

To Whom It May Concern,

I do hereby attest to the fact that the article, “Comparing adult users of public and private dental services in the state of Minas Gerais, Brazil”, has been translated and proofread by me (once before the author’s first submission and again after reviewers’ request) and that no grammatical or lexical errors exist within this text. Any further claims regarding grammatical and/or lexical errors should be specifically pinpointed and highlighted within the text with a suggested change by the reviewer for due contemplation of its validity and accuracy.

Sincerely,

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