Author's response to reviews

Title: Adolescent gender differences in the determinants of tobacco smoking: a cross sectional survey among high school students in Sao Paulo

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Author's response to reviews: see over
Dear Dr. George Thomson,

Thank you for the detailed and careful corrections of the manuscript “Adolescent gender differences in suspected determinants of tobacco smoking: a cross sectional survey among high school students in Sao Paulo” (# 706023059437307). All of the reviewers’ suggestions were useful, and they have helped us to make our manuscript more understandable.

We are now sending you the new version of the manuscript that has been revised according to the reviewers’ and editor suggestions.

We accepted the suggested changes and our comments for the two reviewers and the Associate Editor are described below.

**Reviewer's report (1):**

Discretionary Revisions: Findings on gender inequalities are connected with other determinants of smoking. Authors have described a lot of variables which could have impact on smoking habits among boys and girls, and they claim that their results may be substantially important for the development of gender-specific programs and for building preventive models based on factors that could be more significant for either boys or girls. There is no need to design only sex tailored intervention, but there is a need to influence determinants connected with gender.

We agree. We changed “gender-specific programs” for “influence determinants connected to gender”.

Two changes were made:

1) Last sentence of the abstract: “The study results may be materially important to the development of prevention programs that influence determinants connected to gender and the implementation of single-core models of prevention; gender differences must be considered in order to reduce adolescent CS.”

2) Last sentence of the manuscript: “The results of this study may be substantially important for the programs that could influence determinants connected to gender and for building preventive models based on factors that could be more significant for either boys or girls in order to reduce CS among adolescents.”
Reviewer's report (2):

Minor Essential Revisions:

This paper investigates the gender differences in the determinants of tobacco smoking among high school students in São Paulo. The comments on this article are as follows:

(1) The title of this research is “Adolescent gender differences in suspected determinants of tobacco smoking: a cross sectional survey among high school students in São Paulo.” It would be better to rephrase it as “Adolescent gender differences in the determinants of tobacco smoking: a cross sectional survey among high school students in São Paulo”.

We agree. We changed the title of the Manuscript according to the reviewer’s suggestion.

(2) Table 1 shows the prevalence of lifetime, past year and past-month tobacco smoking by gender among students in private high schools. What is the average age of the sampled students? As the average age at the onset of smoking for the sampled students is 14, it is suspected that there would be no significant difference between the tobacco consumptions based on “lifetime use” and “past-year use”. Therefore, it is suggested that the authors report only the prevalence of past-month use in Table 1.

We agree. The average age of the students was 16 years-old and this information was already presented on the third line of the results section.

We deleted the first 2 rows of the table 1 (data for lifetime use and past year use).

(3) Discussion, Paragraph 5, Line 7. The authors wrote “For both gender, having a region increased the olds of CS.” However, according to the results being shown in Table 3 and Table 4, it should be rewritten as: “For both genders, not having a region increased the odds of CS.” The subsequent discussions should also be modified accordingly.

We agree and we have changed the text in 2 pages:

Page 9: For girls, not having a religion and not attending religious youth meetings were significant factors in the model.
For both genders, not having a religion increased the odds of CS.

(4) Discussion, Paragraph 5, Line 8. The authors wrote “One strategy would be encourage parents to have a clear anti-tobacco attitude to pass on to their children from infancy.” It would be better to write this as “One strategy would be to encourage parents to have a clear anti-tobacco attitude to pass on to their children from their adolescence”.

We agree. We changed the sentence as follows:
One strategy would be to encourage parents to have a clear anti-tobacco attitude to pass on to their children from their adolescence.

**Associate Editor's comments:**

Extend discuss of the effect of religious attachment.

We agree. The religiosity discussion was extended and is now presented as follows:

*Regarding religiosity, studies that sought to comprehend the role of religiosity in drug use suggested that there was a distinction among internal factors (religion membership, believing in God and the importance given to religion), as well as external factors (frequency of attendance at religious groups) [32-35]. However, the majority of the studies that sought to assess the role of this external expression of religiosity in drug use have not distinguished attendance frequency at conventional religious activities, such as services and masses, from the attendance frequency at youth religious meetings as we did [32]. In our study, the only religious factor that was associated with CS was the latter, which occurred only among girls. For both genders, not having a religion increased the odds of CS. Yet, among boys none of the internal or external religiosity variables were associated with recent CS. A possible explanation for this finding is the fact that in Brazil it is rare to openly discuss smoking during religious services, and therefore, these interactions would have added little to the adolescents’ decision to smoke cigarette [36]. Nevertheless, the finding among boys is in agreement with results from a longitudinal study of 12-18 year-old British adolescents [13]. Among girls, merely having a religion did not seem to protect them from CS; instead, the network of*
friends in the religious group had a more protective effect because a statistical
significance was found only for the religious factor that represented the public
expression of religiosity in a group. This points to the group role once again as a
mediator for the use or nonuse of tobacco specifically in girls. Perhaps, girls who
attended adolescent religious groups had friends who did not use tobacco and who
disapproved of this behavior [15].

In this context, we should highlight the important role of religion in the
psychosocial development of adolescents, a domain of the developmental process that is
not always included in the health literature [37]. In this developmental perspective,
religiosity, family and friends merge to form a foundation for decision making: to
experiment or not to experiment tobacco. Religion seems to develop as a “social
controller” through its moral standards. This role places drugs, including cigarette
smoking, in a category of reprehensible actions [38], in other words, actions that are
not approved by “God”. Gorsuch [39] posited that the Church prevents drug use by
encouraging parents to supervise their children and establish anti-drug rules in their
home. As in our sample we also found that parents smoking status is associated with
adolescents CS, it suggests that, religiosity and family may simultaneously influence the
decision of not smoking: family religiosity may be influencing adolescent religiosity and
parents’ religiosity may be the reason of parents not smoking. Stylianou [40] proposed
a theory suggesting that the perception of immorality and personal responsibility on
physical self-destruction that religions bring to their members controls these
individuals’ attitudes when faced with opportunities to use drugs, including tobacco.

This protective role of religion was also observed in an investigation that
collected data on the education, religiosity, and moral attitudes of 16,604 individuals in
15 countries [41]. According to the authors, individual behavioral patterns and moral
attitudes were more strongly oriented by religion in countries where religiosity was
generally more important in social life. For example, in a cross-sectional survey among
almost 13,000 adolescents in seven Latin American countries, all mainly Catholic by
history, researchers identified that higher levels of religious practice behaviors were
significantly associated with lower odds of initiation of tobacco smoking and lower
odds of opportunities to use tobacco [12].
**Editorial Requests:**

- Further consideration of your manuscript is conditional on improvement of the English used. Please ensure particular attention is paid to the abstract. You should use a commercial copyediting service. Examples are those provided by the Manuscript Presentation Service (www.biomedes.co.uk), International Science Editing (http://www.internationalscienceediting.com/) and English Manager Science Editing (http://www.sciencemanager.com/). BioMed Central has no first-hand experience of these companies and can take no responsibility for the quality of their service.

The manuscript was previously translated and edited by AJE (American Journal Experts) at www.journalexperts.com. The first edition certificate is attached to this submission. We re-sent the manuscript for edition and now we are presenting a new edited version.

- Please include a 'Competing interests' section between the Conclusions and Authors’ contributions. If there are none to declare, please write 'The authors declare that they have no competing interests'.

We did as follows:

**Competing interests:** The authors declare no competing interests.

- Please include an Authors' contributions section before the Acknowledgements and Reference list.

We did as follows:

**Authors' contributions:** ZMS: wrote the manuscript and did the analyses; SSM: supervised the analysis and the paper writing process; ESO: did the literature revision and data discussion; JSA: critically revised the manuscript for important intellectual content; ARN: conceived of the study, and participated in its coordination. All authors read and approved the final manuscript.
- Please list the source(s) of funding for the study, for each author, and for the manuscript preparation in the acknowledgements section. Authors must describe the role of the funding body, if any, in study design; in the collection, analysis, and interpretation of data; in the writing of the manuscript; and in the decision to submit the manuscript for publication.

We did as follows:

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- In addition, please can you include a copy of the survey as additional file.

We attached the survey questionnaire as an additional file.

**Additional file:** Survey questionnaire.

*Survey_highschool.pdf*

We hope that the article is now acceptable for publication in the BMC Public Health Journal. We remain willing to make further changes in the manuscript if needed.

*Sincerely yours,*

*Zila van der Meer Sanchez*