Author's response to reviews

Title: Young adolescents’ independent mobility, related factors and association with transport to school. A cross-sectional study.

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Author's response to reviews: see over
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Dear Editor,

Thank you for giving us the opportunity to make some last modifications to our manuscript. Changes are marked in the manuscript with ‘track changes’, an outline of which follows.

We hope that in its revised form you will find the article suitable for publication and we look forward to hearing from you.

Yours sincerely,

Klara Johansson

Marie Hasselberg

Lucie Laflamme
Outline of modifications

Reviewer #3

Reviewer's report:

Major concern
What potential impact has the sampling/school participation on their results, and what potential impact has the school clustering (n=40 or so) on their results?

Authors: To clarify this point, we have added the following to the discussion (page 15, line 16 - page 16 line 2):

Though we originally selected a random sample of schools, data collection took place only in those first 44 schools (from an original sample of 70) that accepted to take part in the survey. For the question under study herein, there is no obvious indication that this convenience sample of schools and the classes in each school chosen for participation would differ in any determinant ways from the those not participating. It is therefore reasonable to believe that the results presented herein are accurate at school level.
Respondents were clustered within schools, which could result in some groups of adolescents being oversampled and produce Type I errors if observations within clusters are correlated (Williams). However, the number of schools is relatively high, which decreases the risk of clustering.

Minor issues:
1. Title: Re-consider the title. It is somewhat not clear.

Authors: The title is slightly revised and now reads Young adolescents' independent mobility, related factors and association with transport to school. A cross-sectional study

2. Differences in commuting behavior: How was this tested with what test? Group by group or over all groups, which is to be preferred? Indicate p-values p.12, lines 2 and 4.

Authors: The confidence intervals compiled for each single group are of 95%. By doing so, comparisons can be made between all sets of two proportions. Overlapping confidence intervals indicate there is no significant difference between the groups (as the groups could be considered “from the same population”); non-overlapping ones indicate there is one.

3. p14,l20-21: Is this a significant difference?
Authors: No, this difference is not significant. We have now clarified this in the manuscript in the following way (page 14, lines 17-21):

It is possible that these respondents were not very interested in the survey but they would not differ much from other students in that respect. We verified this by looking at their answers to a question found at the end of the questionnaire (see additional file 1) concerning one’s appreciation of the survey. T, about half of them (54%) answered that they thought it was “less than fun or interesting” to take the survey, which was not significantly different differed from the average for the other classes (42%).

4. p15, l21 to p16,l8: Can be shortened.

Authors
This paragraph has been shortened as illustrated below.

Fear- and coping related questions The questionnaire was constructed for were explorative. They purposes and covered a wide spectrum of several potential sources but none of them topics in depth. As a consequence, several areas and sources of mobility restrictions were touched upon but none of them in depth. This is the case also for fears experienced in the neighbourhood where follow-up questions were asked neither on level of fear nor the time of day and specific places fears were experienced. Many of the questions were inspired by both a literature review and pre-tests but our coverage might still be limited in scope. used were inspired by a literature review but in some occasions, we did not find relevant questions for the dimensions we wanted to address (e.g. strategies to cope with fear in public space). To improve the accuracy of the question posed, a series of pre-tests were conducted on adolescents of similar age. Despite this, there might be aspects which were missed. Open answers suggest for instance that in the open response to the questions on fear and coping, some respondents suggested coping strategies may include talking on a mobile phone or listening to music as a strategy to avoid fear. No additional fears emerged however, suggesting the fixed options covered most adolescent fears.

5. Table 1: The strength of contribution of each factor should be indicated by stars or anything else.

Authors: This is not that easy to do since the factors are not presented in the text, as the focus is on the results of the classification performed on those factors. What we have done however in order to try to accommodate the reviewer is that, in Table 2, we have indicated for each variable considered its cumulated contribution to the first 3 factors of the factor analysis, which is a way of presenting how important they were to the results and thereafter to the formation of the classes. We would also like to
stress that, in the results section, for each class, the categories are presented/introduced in the order of the magnitude of their contribution to the formation of the classes.

6. p7, l20-21: Sentence correct?

Authors: We have re-read the sentence – and had the whole article reviewed by a professional – and feel the sentence is fine.

7. Table 2: Revise legend to make it more readable.

Authors: The legend had been revised as follows:
Cluster-specific proportion of respondents actively commuting (with 95% confidence intervals).

8. Table 2: Indicate why you do not have 95% CI for some proportions.

Authors: As mentioned in the methods section, in two instances the proportions were too small to present 95% CI. We have now added a footnote that specifies this in the table.