

## Peer Review Report

# Review Report on Healthy bus drivers, sustainable public transport: a three-time repeated crosssectional study in Switzerland

Original Article, Int J Public Health

Reviewer: Francesco Gianfagna

Submitted on: 13 Apr 2023

Article DOI: 10.3389/ijph.2023.1605925

### EVALUATION

**Q 1** Please summarize the main findings of the study.

No answer given.

**Q 2** Please highlight the limitations and strengths.

The main limitation is the amount of information reported, the whole text is too long. The second limitation is the statistical plan. the strength is the availability of a large set of useful data in a large population.

**Q 3** Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

The main limitation is the amount of information reported, the whole text is too long. Firstly, the Introduction is too large: I suggest to reduce the text as well as the references, and to delete figure 1, this is the scheme of a review. I suggest to delete the sentence in r43-44. Secondly, the results are too large. The manuscript reports a lot of information. I suggest to use more subparagraphs or to select results needing attention using a more conservative (lower p value) significant threshold. Abstract conclusion is too vague probably for this reason; please reduce the number of results using a more conservative significant threshold, then the selection of final conclusion will be easy. I suggest to decide if SARS-CoV-2 data should be or should not be considered in this manuscript, to reduce results number. A further suggestion for this problem will come when the next point will be solved.

The second limitation is the statistical plan. Firstly, according to DAG, many variables could have an effect, and the list of variables used in the fully adjusted model is too large. This could have lead to dilution of the effects of inter-correlated variables. Moreover, this large list of variables in several models lead to multiple choice bias, independently on previous hypothesis of plausible biological link between dependent and independent variables (R135:"dispensed us", this is questionable, I suggest to delete the whole sentence). I suggest to add a third model with lower variables, selected basing on significant effect in model 1 and/or using a stepwise method to include significant or exclude non-significant covariates. This more limited set of associated variables for each dependent variable will allow to move these main results from supplementary tables to the main text. I suggest to reduce the number of association reported in the text using only the results coming from these last models. Please note that, while the covariate selection could be made using classical significance threshold, discussion of selected results could be limited to those associations at lower p values. The Reader will need more valid, even fewer, results. Finally, the selected strategy of considering only variables at increasing prevalence is not completely justified, a variable at high prevalence could be a priority for public health at the same time. I suggest to consider to include also these secondary aims in the etiologic section. This will lead to a higher number of results. The strategy suggested in the previous point could limit this problem.

As for statistics, some other suggestions follow. r127: “over the last twelve years”, I suggest to change in “among surveys conducted during the last twelve years”. In the first case, the reader will expect an analysis of linear trend, in spite of those effectively used (paired comparisons among surveys). r128: “seniority” is missing (please check table notes). r130: “since 2010” should be changed in “at 2022”, since the Authors used also 2018 vs 2022. r142: a sentence on prevalence of respondents on total workers should be added. R147: these results were not reported in tables. Figure 2 and 3: I suggest to use simply histograms to report data in figure 2b and 3. This distribution of variables does not follow a plausible sorting therefore the length of spikes depends on difference between that variable and the next, randomly distributed, variable. The Reader needs to have an idea of height of each health problem, reported with the three survey bars, close to rapidly show differences among the surveys. In this manner, figure 3 will replace figure 2a. Table 1: please note that in 2022 data, female and male data were inverted, please check them, I am sure that 85.9% are male and not female worker, as I see from the text. Table 2: accident, please note that percentage of accident were never reported, and that the sorting sick leave – accident – unfit to drive is not always reported in the same sorting. Table 3: please specify the measurement unit for working conditions (tediousness scores, I think, OR calculated using the increase in 1 score of the variable). Supplementary file 4: it is not clear if model 2 is the fully adjusted model including all the variables in the column, or each variable plus only the first covariates reported in the first rows and listed in the note for logistic regression)

Minor suggestions. r100: Using a specific apprenticeship to indicate a kind of activity unrelated to driving is not so convenient, it is not clear, I suggest to delete “(e.g. cook)”. Finally, among the keywords, a term is certainly misspelled.

**PLEASE COMMENT**

**Q 4** → Is the title appropriate, concise, attractive?

yes

**Q 5** → Are the keywords appropriate?

yes

**Q 6** → Is the English language of sufficient quality?

yes

**Q 7** → Is the quality of the figures and tables satisfactory?

No.

**Q 8** → Does the reference list cover the relevant literature adequately and in an unbiased manner?)

yes

**QUALITY ASSESSMENT**

**Q 9** → Originality



**Q 10** → Rigor



**Q 11** → Significance to the field



**Q 12** → Interest to a general audience



**Q 13** → Quality of the writing

**Q 14** → Overall scientific quality of the study

**REVISION LEVEL**

**Q 15** → Please make a recommendation based on your comments:

Minor revisions.