Author’s response to reviews

Title: Testing compliance to WHO guidelines for physical activity in Flanders insights from time-use diaries

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Author’s response to reviews:

First of all, we would like to thank the reviewer and editor for considering our paper for publication and for giving comments to our previous version.

We would also like to thank the editor for your patience and postponing our resubmission deadline following my accident.

"This study analyses the compliance with the WHO physical activity guidelines in Flanders. However, this didn't actually appear clearly in the title. So, the title could be more elaborated."

=> Title has been changed to “Testing compliance to WHO guidelines for physical activity in Flanders - insights from time-use diaries”

"Introduction:

In my view, this section is too long. It could be shortened and better structured.

In fact in this section there are some repetitions, e.g. the objectives and this part could be more elaborated and more structured."

=> We restructured the introduction and removed as many repetitions as we could.
"In my view it is essential to provide some information on the association between prevalence of physical activity and sociodemographic characteristics to contextualise the study."

=> We added this information under the header 'Influences on PA'

"I have the impression that some statements/words have been omitted and this makes some passages unclear. E.g. "Time-diary data have a clear advantage over survey data to measure physical activity. For example, Adilson et al. [9] tested compliance with the WHO guideline based on a single item of the European Social Survey: "On how many of the last 7 days did you walk quickly, do sports, or other physical activity for 30 min or longer"

…..And what the authors concluded?"

=> We added a new part that gives an overview on existing research on compliance to WHO PA guidelines in Flanders and Belgium, also giving the conclusions of those papers. This was added under the header 'Research on complying to WHO PA guidelines in Flanders'

"- Which MOTUS data is used in this survey as there are more than one MOTUS surveys mentioned in the reference paper?"

=> The MOTUS data was collected in 2013. There is only one MOTUS data collection. However, there is probably a misunderstanding because the reference paper does mention three modules. One third of the respondents were asked extra questions on transportation, one third of the respondents was asked extra questions on media use and one third did not receive extra questions. However, all respondents also filled in a complete 7-day diary. Since this paper doesn't use any of the extra information gathered in these modules, they are redundant for this paper.

"- What is the sampling frame of this survey?

- "In total, 3260 respondents filled in a 7-day time-use diary" out of how many (denominator)? What about the representativeness of the study population?"

=> We added this information in the methods section

"As indicated in the method, seasonality can impact physical activity patterns. So, it is important to spread out data collection over the whole year as presented here. However, in addition to this precaution, it is also important to consider this seasonal effect when analyzing the data."
We added the month of the year to our multivariate models to account for seasonality.

"Indicators: why did you used educational level and occupation together? Multicollinearity have been assessed?"

=> We tested the VIF and agree that multicollinearity is a problem. We have removed educational level from our multivariate analyses in our revision.

"Details on participants background characteristics could be removed here and presented in a table in the results section."

=> We removed this information from the text and now present it in table 2.

"The tables show the regression coefficients (B), the exponentiation of the B coefficient (exp(B)) or the odds ratio (OR), the standard deviation of those coefficients (S.E.), the Wald chi square test value (Wald) and the according significance level (Sig). The statistics presented here can be summarized otherwise and presented more clearly in the tables, e.g OR and their 95% CI (and/or P-value) rather than beta, exp(beta) , etc."

=> We changed the tables to only show OR, 95% CI and p-values.

"Why Fisher's exact test? Traditionally, this test is used for small sample sizes, although it is valid for all sample sizes."

=> As stated, we don't see a problem with using Fisher's exact test as it is valid for all sample sizes. However, if the reviewer prefers a different test, we are open for suggestions.

"The Nagelkerke r^2 are too low (max 8%). This might indicate that the model didn't fit well the data and needs to be more complex than presented in this paper, or it needs additional nonlinearities and interactions to satisfactorily represent the data.

I would strongly advise to extend the model by including additional relevant covariates (e.g. health status, ...) in order to enhance it."

=> The revisions (controlling for seasonality and self-reported health increased the Nagelkerke r^2)
We would like to thank the reviewers for taking the time and providing constructive feedback.