Reviewer's report

Title: Development of the European Health Interview Survey - Physical Activity Questionnaire (EHIS-PAQ) to monitor physical activity in the European Union

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Reviewer: Marieke Verschuuren

Reviewer's report:

I would like to congratulate the authors with this clear and well-written paper. The EHIS questionnaire will form the basis of some of our most important European health statistics and hence it is of importance that its underlying methodology is well documented. My comments are only minor.

Minor essential revisions:

Page 4: 'EHIS data are used for calculating the European Core Health Indicators (ECHI) -shortlist.' This is really just a minor issue but I think it would be more accurate to state that the data are used for calculating the indicators rather than the shortlist.

Page 4: '... external experts in PA assessment were invited...'. I would be interested to learn a bit more about how these experts were selected and about their backgrounds.

Background section: the timeframe of the study can be deduced from figure 1 but I would recommend mentioning it in the text somewhere as well.

Page 6, methods: Booklets were created for total PA, occupational PA and leisure-time PA. I was wondering why not for transport-related PA? Is this an omission in the text or is there a particular reason for this? In case of the latter, some explanation could be added.

Page 6, methods: why was the search in the HIS/HES database broader than the 3 categories needed for the EHIS questionnaire?

Page 7, instrument review: '...PA instrument proposal was reviewed by PA experts..'. Are these the same experts as the ones mentioned on page 4?

Page 8: in the sentence with the age-group strata there appears to be a '15' too many (after 60+ years).

Page 11, leisure time PA: in this paragraph I was confused by the numbers. Eg:'All 11 German respondents and 6 out of 12 Estonian respondents (74% of all respondents, who...': In the first sentence however it is stated that there are 7 Estonian respondents and not 12 (or 15, but I think the ones engaged in leisure PA are meant here). 74%: 17 out of 23, but I wonder whether this is correct (as this is based on 12 Estonian respondents). Also, later on 7 out of 8 German
respondents are mentioned, but is not clear to me where the number 8 comes from. Also in this sentence again 12 Estonian respondents are mentioned.

Page 14: '... a recent study indicates that self-reported PA is more strongly related to objective information when ...'. I would appreciate a bit more explanation of/elaboration on the term objective information (to me now it is a bit vague).

Page 15: the statement that validation studies will be implemented in 2013 is outdated. I would recommend rephrasing (maybe even refer to some outcomes if already available?). Also, as a reader you wonder why these validation studies were not done prior to implementation of the instrument in EHIS. I can imagine time and budgetary constraints are the main reasons here, but maye it would be worthwhile to explain this.

Page 15: is there any idea about when the EHIS data will become available?

Discussion: the PAQ was tested in a limited number of countries. What are the authors' views on the applicability of the tool in other parts of the EU, e.g. in mediterranean or Balkan countries?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.