Reviewer's report

Title: Clustering of health-related behaviors, health outcomes and demographics in Dutch adolescents: a cross-sectional study.

Version: 5 Date: 25 October 2013

Reviewer: Anette Andersen

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October 2013

Re-review of manuscript: Clustering of health-related behaviors, health outcomes and demographics in Dutch adolescents: a cross-sectional study.

I think this a very well-written and interesting paper. As the paper has been through review, I have only minor comments.

Minor essential revisions:
1. In the ‘Measures’ section, I think there should be a reference to the international HBSC as the items used are developed in the international group.
2. There is not a consistent nomenclature of the variables, e.g. page 6: ‘recent behavior’ is not used again in table 3 and page. 7: ‘excessive use’ is called ‘weekly time …’ in table 3.
3. A more clear description of the cut-off point for health-related behaviors could be useful in the text.
4. More or less the same – not being familiar with CIUS and VAT, I miss a description of the contents of these scales. I noticed that there is an example in table 2, so at least a reference to table 2 is needed.
5. I also need a more thorough description of how the authors use the factors found by PCA to create the clusters by the two step cluster analysis.
6. The four components described at page 10 should have the same numbers in table 3 and 4. Furthermore, are these components the final ones used in table 4?
7. I am not a statistician and can as such not judge the statistical methods used. But I have some questions for the methods used. Can the same items be included in more than one factor? What impact does that have? Items in the same factor with very high loadings might measure the same concept, e.g. weekly time playing videogame and compulsive videogame playing. Is it correct to keep both items in the factor? Or should they rather be combined into a single measure?
8. As far as I know, the validity for SDQ reported by students only is very low, see Goodman et al. (2003). Using the strengths and difficulties questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. I think there need to be a discussion of this.
9. Finally, a suggestion for implication for practice – not only does this paper
point to the fact that interventions should tackle clusters, but these analysis also indicate which groups of young people the interventions should target.

**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.