Reviewer's report

Title: Association between anxiety and aggression in adolescents: a cross-sectional study

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Reviewer: Annabeth Groenman

Reviewer's report:

This paper looks at the relation between anxiety and aggression in a large group of Korean adolescents. Overall this paper looks at an interesting question and the dataset is an impressive size. Generally speaking, this paper has promise, but the execution is bit messy.

Major points:

1. the statistical analyses are not well described and, from what I do understand, are not the best for the number of measures looked at. Groups were made based on the questionnaire data. It is very clear how the groups were made, I would suggest describing the exact way in which this was done. The same stands for the aggression questionnaire. Furthermore, a manova was done in the first step, but in the result is seems like many anova's were done. A backwards approach to model building is described, but I do not seem the point in using ANOVAs first and later finding out that all those tests were not necessary because variation of one variable was explained by another variable. I would suggest asking someone with more statistical knowledge about possibilities for more up to date model building. I could suggest looking into more sophisticated methods like LASSO, that take out the researchers' degrees of freedom. Otherwise, please put some care into describing the analyses that were performed.

2. The measures concerning anxiety and aggression are well described, but a lot of information about the other measures is missing. For example, on page 5 line 44-46 it states: "headache, muscle pain, constipation and asthma, and medication history of consuming painkillers, digestives and sleeping pills within 30 days." But in the Table 1 we find out that other measures (E.g. caffeine use, alcohol use, smoking, muscle pain, scoliosis) were taken. Information should be concise.

3. The language use is bit awkward and I would suggest some attention is paid to this.

4. The combination of aggression (on which the main conclusions are) and medical conditions in relation to anxiety are difficult to glue together for me. I do not see how these would complement each other, and why they are described in one paper.
Minor points:

1. Page 3, line 7/8 suggest that anger and aggression are the same thing. Also, a paragraph should be more than 2 sentences.

2. Page 3 line 29/30: friendships are social relationships.

3. Page 4 line 4. A dot is missing after kim et al.

4. Page 4 line 10-15. The link between stress and anxiety should be described

5. Page 4 study population: Please describe the population a bit better. How many people were approached, how many people included, did participants gave consent, ethical considerations (declaration of Helsinki?), males, females, school levels etc.

6. Page 5 line 13/14: the reference to the Korean measure is missing

7. Page 5 line 31: the reference to the Korean measure is missing

8. Page 5 line 46: what are digestives? I only know them as cookies.

9. Page 6 line 6. AUC is the more commonly used abbreviation

10. Please check the rest of the manuscript for these types of errors.

11. Please rewrite the first paragraph of the discussion. Now it is just a mere summary of the results.

12. I would focus the discussion on the main results and not on the AUC results of the AQ.

13. Why are there so few people in the aggression propensity scores described in the second table?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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