Reviewer's report

Title: Exploring associations between parental and peer variables, personal variables and physical activity among adolescents: a mediation analysis.

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Reviewer: Nicole Ezendam

Reviewer's report:

The paper ‘Exploring associations between parental and peer variables, personal variables and physical activity among adolescents: a mediation analysis.’ is well written and interesting to read. I’ve have only a few comments and questions.

Discretionary revisions

1. The authors state a clear research questions. Adding a simple flowchart with the hypothesized and analyzed associations might help the reader understanding the paper.

2. In the discussion the authors suggest to perform longitudinal research to confirm the findings. However, as PA is often a long term habit and psychosocial determinants are often rather stable longitudinal studies might not clarify the issue of the direction of the associations (causality). In my believe we do need in-depth analyses of trial results to assess causality.

Minor essential revisions

3. Did the authors compare the respondents with the non-respondents? Adding this information to the paper might provide some information on selection of the sample. Can it for instance be that children with a lower self-efficacy for PA dropt out leading to a sample with less variation in self-efficacy causing the non-significant effect for this moderator?

4. Please add to the statistical analysis section that you performed linear regression analyses.

5. Table 1, the four items of parental control have a low Cronbach’s alpha. Did the authors explore if the scale could be optimized?

6. Table 3, please add the unit of MVPA to the title, e.g. hours/day

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