Reviewer’s report

Title: The associations between weight-related anthropometrics during childhood and lung function in late childhood: a retrospective cohort study

Version: 0 Date: 18 Sep 2017

Reviewer: Marianne Lønnebotn

Reviewer’s report:

The paper is well written in good English. The Authors have used the same cohort for several other studies, and I had to read the previous articles to get a good understanding of the background for the data. This study was not primarily designed to answer the current research questions. The participant-rate is very reduced in follow-up 2 (about 50% from baseline), and the previous exposed- and non-exposed groups are mixed together. The Authors have accounted for this by including pre-eclampsia as a potential confounder and it did not confound the results. They give good descriptive data and indicate number of participants with missing data for each variable of interest. The Authors points out strengths and limitations of the study that I agree with, and they have a well written discussion-part and good interpretation. However, a few shortcomings should be addressed before the paper can be published:

- I missed a better overview of the study-participants in the methods part of this article. They do refer to previous articles, but still a schematically overview (flow-chart) of the cohorts should have been presented.

- Table 4.: it is confusing that boys are listed first, when in WC 10.8/11.8 years and WHtR 10.8/11.8 years , it is= Girls/boys (should be Girls and boys in list of predictors)

- It is a strength that they have additional anthropometric measurements to BMI. I guess it will be different to use BMI as a measure in children compared to adults in relation to lung function, could the Authors elaborate upon this in the Discussion section?

- Children are in growth, and to look at the time-window around puberty is very interesting. It would be good to have a paragraph in the Discussion regarding the effect of puberty on the study results, would it be possible also to take into consideration the hormonal aspect on lung function?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Are the conclusions drawn adequately supported by the data shown?
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Yes

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