Reviewer's report

Title: Associations between trimester-specific gestational weight gains and childhood obesity at 5 years of age: results from Shanghai Obesity Cohort

Version: 0 Date: 19 Mar 2019

Reviewer: Sandra Costa Fonseca

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Methods
Participants: As participants have been recruited from a tertiary hospital, it is necessary a definition of their clinical profile. Are these at-risk pregnant women?

Data source: Did authors try to validate self-reported pre-pregnancy weight?

Why some pairs were had not anthropometric measures at 1 and 2 years? What were the reasons for non-participation at each stage?

A flow diagram would be useful.

Bias

Authors must describe characteristics of "excluded" pairs. 31 pairs were excluded because they had missing data. Although they represent less than 6%, it is important to know if this loss was selective.

Study size

I would like to know how the authors arrived a sample of 539 patients. There is no commentary about size sample in methods section.

Discussion

Limitations
Authors affirm that "maternal gestational weight was measured in antenatal clinics and the correlation between estimated and exact measured weight was good."

How good? There are no results that support this affirmative. Pre-pregnancy weight is a crucial variable, as gestational weight gain in first trimester had the strongest associations with outcome.

If there was no validation, authors must discuss possible bias and their directions.
Generalisability - As the setting was a tertiary hospital, are results applicable to general pregnant population?

A substantial percentual (16%) had been underweight at 5-year-old and were excluded from the study. What was the clinical profile of these mothers?

**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.

Yes

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

No

**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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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