Reviewer's report

Title: Breastfeeding and complementary feeding associated with body composition in 18-19 years old adolescents in the 1993 Pelotas Birth Cohort

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Reviewer: Izzuddin Bin Mohd Aris

Reviewer's report:

This study attempts to identify the associations between breastfeeding duration, age of complementary food introduction and body composition in adolescents. Their study findings do not add new knowledge to the current literature given the multitude of studies that have assessed the relationship between breastfeeding and offspring adiposity. Furthermore, recent intervention studies [Martin RM et al. Effects of Promoting Long-term, Exclusive Breastfeeding on Adolescent Adiposity, Blood Pressure, and Growth Trajectories: A Secondary Analysis of a Randomized Clinical Trial. JAMA Pediatr. 2017 Jul 3;171(7)] have shown that there is no effect of breastfeeding duration on adolescent adiposity. Other comments that needs to be addressed are stated below:

The Introduction makes a few false assumptions:

Line 84-85: There is quite a substantial amount of literature relating timing of solid food introduction and subsequent outcomes. These studies should be referenced and reviewed in the Introduction.

Line 89: There is also quite a substantial amount of evidence relating breastfeeding/complementary food introduction with offspring adiposity in longitudinal studies.

Line 95-98: What is the study hypothesis? Do the authors think that shorter/longer breastfeeding duration is related to greater/lower body composition? This needs to be specified.

The Introduction should be reoriented more towards existing studies of breastfeeding and complementary feeding and its relationship to subsequent adiposity, especially surrounding the intervention trials of the effects of breastfeeding promotion (Martin RM et al PMID 28459932;
Methods
Lines 155-157: Is there a significant interaction between breastfeeding/complementary feeding with gender in this study sample?
Line 170-171: Were unweighted analyses carried out as well? And were there any substantive differences in effect estimates between unweighted and weighted analyses?

Results
Line 231: Effect is too strong a word. Suggest replacing with associations.

Discussion
Lines 282-284: The study findings do not suggest that there are greater benefits of introducing complementary foods early. The authors have not demonstrated other perceived "benefits", other than higher FFMI (e.g. reduced risk of obesity, diabetes, other cardiovascular outcomes). This paragraph needs to be rephrased and be more conservative to better reflect the study findings.
Lines 290-292: Much of these studies on the protective effect of breastfeeding duration on adiposity are observational, and therefore prone to residual confounding and reverse causality.
Lines 293-298: It is not very evident how "maturity" leads to higher FFMI. This paragraph needs a more detailed explanation.

This paper also needs to be edited by someone who is a native English Language speaker.

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?
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