Reviewer’s report

Title: Modern dietary pattern is prospectively associated with earlier age at menarche: data from the CHNS 1997-2015

Version: 0 Date: 18 May 2020

Reviewer: Erica Jansen

Reviewer's report:

In this paper, the authors examined adherence to dietary patterns during childhood in relation to age at menarche with a prospective study. The dietary pattern approach has not been previously used in relation to pubertal outcomes in an Asian setting. The analytic approach seems appropriate and the paper is well-written. I just have a few items for the authors to clarify or consider.

What was the average follow-up period for the participants? It seems that there shouldn't be any girls who should be censored since they haven't yet started menarche, but it is not clear in the manuscript. For example, at line 111 it says "many of them have not yet experienced menarche." Does this mean at baseline many had not yet experienced menarche? If for some reason there are participants who haven't yet started menarche by the end of follow-up, then a survival analysis would be the appropriate way to analyze these data. I don't think this is the case since the cohort began in 1989, but it should be written more explicitly in the methods.

For the 3 consecutive 24-hour recalls, were two of them on the weekdays and one on the weekend?

Line 152- What do you mean that the factor scores were calculated by a multiple regression method? Aren't they computed by multiplying the factor loadings by the food intake frequency and then summing?

Line 287- You discuss the importance of thinking about dietary patterns as a whole, but then in your interpretation you insinuate that the findings must be explained by individual food items/micronutrients. Isn't this a bit contradictory?

In the discussion you mention some additional analysis where you examined individual foods in relation to age at menarche. I think this additional analysis needs to be described in both the methods and results rather than appearing for the first time in the discussion.

Small edit

Line 359: "researches are needed" should be changed to "research is needed"

It's interesting that you did not observe any associations with the Animal Food pattern, but I can see that it loads positively with both red meat and with fish/shellfish. It may be possible that these
two types of meat are associated with menarche in opposite ways, as has been reported in other literature.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

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

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.
I agree to the open peer review policy of the journal