Reviewer's report

Title: Inequities in energy-balance related behaviours and family environmental determinants in European children: Baseline results of the prospective EPHE evaluation study.

Version: 2 Date: 18 June 2015

Reviewer: Natalie Pearson

Reviewer's report:

This manuscript examines inequalities in energy-balance related behaviours and family environmental determinants using the Epode for the Promotion of Health Equity (EPHE) evaluation study. While the sample size is a strength of this study, there is a lack of information, structure and clarity which makes the paper (particularly the results and discussion) very difficult to read and interpret. Please see comments below:

Abstract:
1. Repeated word ‘studied’ on line 23.
2. Line 24-26 is a method not part of the background.
3. Sentence on line 31 starting with ‘In every country..’ this reads that every parent in all countries – do you mean that you invited parents of children aged 6-8 years?
4. Line 33. What do you mean by addressed?
5. You are talking about energy-balance related behaviours, why was physical activity not included?
6. Line 37. What two socio-economic groups are you talking about?
7. Line 39. What is ‘relatively high’?

Background
8. Line 51, should be in an effort not ‘the’
9. The first paragraph would benefit from a sentence on the definitions of SES or indicators of SES?
10. Paragraph ending at line 79. Why is more research needed? What will such evidence allow us to do better? More of? Differently?
11. Sentence on line 81 starting ‘we intend..’ is not needed.
12. The following sentence should be in the methods

Methods
13. You need to make it clearer that you are using baseline data only.
14. Also some clarity is needed around the different programs like healthy kids. Are these programme independent to epode or are they part of it? If they are
separate, how is this accounted for?

15. More information on recruitment is needed such as number invited, percentage participating etc.

16. With regards to the questionnaire, a lot more detail is needed. This section would also benefit from subheadings and separate paragraphs for each variable of interest. It would be clearer if you added the references of the questionnaires you cite, next to each of the variables that you have used. Which leads me to the point that you must include details of the determinants that you are studying in the methods section, otherwise the rest of the paper is quite difficult to follow.

17. Line 119, is 8. Every day, more than twice a day – correct?
18. Line 121 – a mistake, you have a likert of 1-7 and you have 8. Every day….
19. Line 124. What questions?

20. Considering SES is the main point of this paper, there is a distinct lack of detail on your measures for this variable

21. Section on data collection should come in the methods section before the questionnaire description.

22. Line 142 – what do you mean by double crossed? And do you mean that you excluded cases if they had missing values?
23. Sentence starting line 143 is unclear?
24. Paragraph starting line 146 should be in the methods section.

Results

25. In general the results section is very difficult to follow because of the lack of detail in the methods section.

26. Paragraph starting line 183 displays conflicting results. You say that the lower educated had higher intakes of fruit juice / soft drinks on line 185 and then line 189 you say that it was higher in the higher educated?

27. Line 196 missing word after ‘of’

28. Section on inequalities in determinants is difficult to follow because of the lack of detail in the methods. Also, there is no structure. Determinants should be presented in the same order for each behaviour of interest

29. The word ‘inclined’ suggest that you asked parents qualitatively (line 234)
30. Lower educated ones… do you mean parents?
31. Last paragraph of the results is unclear.

Discussion

32. In general, the discussion lacks any clear structure, and is missing a lot of the answer to ‘so what’. What do your findings mean? How can we interpret them in public health?

33. What do you mean by ‘in order to evaluate community-based interventions…’ line 343. The epode is an intervention but this study is cross-sectional, so how do these results answer this question. You say that this is the first study to look at
family environmental correlates, but there is a wealth of literature on this topic. How is this different and what does it mean?

34. The discussion again poses the question of whether these programmes are already in place in the countries of interest here. Are all countries starting a new epode programme or do they have existing programmes?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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