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: Date: 27 June 2015

Reviewer: Dorota Zarnowiecki

Reviewer’s report:

This study contributes novel findings to the developing literature base about understanding socioeconomic inequalities in children’s energy balance behaviours, and the determinants of these inequalities. On the whole the manuscript is well written and presented, however the presentation of the results section may be improved (as noted in the minor revisions) to improve the quality of the manuscript. The following points of clarification would strengthen this manuscript.

Minor essential revisions:

Results for determinants of fruit and vegetable consumption are reported, however no information is provided in the methods about which determinants were measured and how these were measured. This information needs to be added to the methods section. Including a table that summarises the measures used / questionnaires and items/scales may be a useful way of providing clarity about the questionnaires used.

Line 130 “the determinants are mainly assessed by one item” – unclear what this refers to (sleep?)? Please provide clarification. Were 4 individual items evaluated alone representing different elements of sleeping?

Line 131 – Refer here to Table 1 which summarises the socio-demographic characteristics measured

Line 142 – how were double-crossed values corrected?

Line 143 – what kind of minor adaptations were made to response categories for total-sample analyses?

Lines 147-148 – provide further clarification about the definition of income position. How was income position determined to be ‘good’ and ‘not good’.

Line 180 – this should be ‘Vegetable consumption’ rather than ‘Vegetables’ consumption’

The manuscript presents a considerable number of results for a number of outcomes, and as a result the description of the results is lengthy and difficult to follow in sections. Some sections are quite wordy, and could be made to be
briefer and more concise. The authors should revise the description of the results, with greater reliance on the tables to present the full results, describing only the key findings in the results section. I would suggest that greater emphasis in describing the results should be given to the description of the socioeconomic differences in determinants, as there is much less literature already published in this area.

Lines 225-227 “In addition, children of highly educated mothers in the Netherlands were more likely to have the habit of eating vegetables daily, rather than their peers of low educated mothers.” – This sentence is unnecessary here, as children’s vegetable intake results are already described earlier.

Lines 287 – 288 “…critical p-value threshold were 4 in Belgium, 2 in Bulgaria, 0 in France, 0 in Greece, 16 in Portugal, 8 in Romania, 6 in14 Netherlands and, 41 in the total sample.” – It is unclear what these numbers refer to, please clarify this statement?

Lines 342-344 – This is not the first study to evaluate socioeconomically related differences in correlates of children’s health behaviours. From the perspective of diet, see work published by Ball et al, Sandvik et al, Bere et al, Zarnowiecki et al etc.

Table 1 – age of mother? What do these numbers represent? Is this the percentage with age 30 years or less /more? Please make this clearer. It may be more meaningful to report the mean age of mothers per country.

Discretionary Revisions:

Line 183 onwards –Items measuring amount and frequency of drink intake were analysed separately, rather than combining these to make 1 variable that quantifies both frequency and amount of soft drink intake, which would provide a measure of total intake. Could the authors comment on the justification for using this approach, rather than a measure of total drink intake? This is particularly relevant as findings for frequency versus amount are conflicting. Amount of intake on its own is not an accurate reflection of intake, without taking frequency of intake into consideration.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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