Reviewer's report

Title: Early life factors and being overweight at 4 years of age among children in Malmo, Sweden

Version: 1 Date: 19 August 2010

Reviewer: Eva Roos

Reviewer's report:

Major Compulsory Revisions

1. The authors should in the introduction part more clearly justify why they include smoking, overweight at birth and breastfeeding as early life factors in this study on being overweight at four years. Why is not low birth weight included as a early life factors in the introduction and in the aims? In the discussion part the authors discuss the low birth weight and later risk for overweight but they have not included low birth weight in the analyses.

2. Data collection and covariates should be described more in detail. What is the response rate for parents answering the questionnaires? Which data was taken from the questionnaire and which from the CHC journals? Is parental overweight based on weighed data or self-reported data from the parents? Who answered the questionnaire, both parents or only one of them? Participation in parental education program was not described in the paragraph of covariates. Passive smoking was not in detail described in the paragraph of early life factors. It was unclear for the reader whether behavioural factors were described for the child or the parent.

3. Analyses were not so easy to follow and interpret. Interaction-analyses would have given a better picture of whether the association between early life factors and being overweight at 4 years differ between children with normal weight children and children with at least one parent overweight. I would recommend that the authors also carry out interaction analyses with logistic regression. What kind of test is carried out in Table 3 for testing whether overweight children differ from normal weight children?

4. I think it would also be interesting to explore whether early life style factors are related to overweight if parents are obese. I suggest that the analyses should also be stratified by parental obesity. Another interesting aspect would be to stratify analyses for both parents being overweight.

5. I don not find anywhere in the text how many of the children had parents with normal weight or overweight.

6. In the discussion part the authors concluded that there was a synergistic effect of early life factors in relation to presence or absence of parental overweight. Do the authors have any suggestions for explanations of why there is a synergistic
effect? It was also concluded that there is an association between smoking during pregnancy and passive smoking and the development of child overweight. The authors should also discuss what could explain these associations. Are they real associations with a logic explanation or are they false associations?

Minor Essential Revisions

1. The last sentence in statistical methods about ethical issues should be moved to the paragraph of study population.
2. Second paragraph in result part. Second sentence the last words should be ...............economic stress compared to children with no overweight.
3. In Table 2 I think the answer alternatives for breastfed should be changed. Now the results show that those who are breastfed are more likely to be obese but in the text the authors conclude the opposite.
4. Many numbers are repeated in the text, that are already shown in the Table 4 and Table 5.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests