Reviewer’s report

Title: Parental income is more important than parental education to children’s health and wellbeing in adulthood: a cross-sectional study from Norway

Version: 2 Date: 19 August 2014

Reviewer: Catherine Chittleborough

Reviewer’s report:

Major Compulsory Revisions

1. I agree with Reviewer 1 that the addition of the estimation of the controlled direct effects of childhood SES on self-rated health is worthwhile, but I am not convinced that these have been estimated or interpreted correctly. It is not clear why or how there are two CDEs of CSES on self-rated health – one for high and one for low respondent’s education. My understanding is that there should only be one CDE for the effect of each CSES variable on self-rated health, which is interpreted as how much self-rated health would change on average if respondent’s education were controlled at level m uniformly in the population, but child SES was changed from level $a^*=0$ to level $a=1$.

2. I don’t think the assumptions required for these analyses hold, particularly that there are no M-Y confounders that are caused by X. The authors provide justification that spouse’s education, presented as an M-Y confounder in the DAG, is caused by X. Age is also likely to influence the other childhood SES variables, which are also M-Y confounders. So the NDE, NIE and CDE are not correctly estimated. The authors report that they have omitted the term ‘causal’ when describing the DAG, but their interpretations of the effects through the results and discussion are written as though the effects are causal. Are there no additional confounders that could be added to the analyses? And is paramed the correct method for this research question, when M-Y confounders are caused by X and/or C? Is there another method (along the lines of marginal structural models/g computation) that would deal more effectively with these confounders, and also the interactions that paramed can deal with?

3. The results in the abstract should clarify whether the effects are NDEs or CDEs.

4. The fifth paragraph of the Discussion contains much speculation relating parents’ education to their occupation that is not supported by data in the results or other evidence. The authors should refer to other research that supports their theory here.

Minor Essential Revisions

5. Abstract, Results, line 38: “…while for women the increased risk by 16%...” should read “…while for women the risk increased by 16%...”.

6. In the Statistical Analysis section, sometimes NIEs are written as NIDs.
7. Results, second paragraph: “Men had a higher risk of being classified as unhealthy on the composite EQ-5D measure...” should read something like “Among men, childhood financial situation had a stronger effect on the composite EQ-5D measure...”. The same correction is also required for women in that paragraph, otherwise it reads as though sex is the exposure instead of childhood SES.

8. The final sentence of the conclusion needs some editing particularly on “… in addition to effect adult SES...”.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests