Author's response to reviews

Title: Are there differences in mean birth weight between neighbourhoods in a Nordic welfare state: a 10 year cohort study

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Below I have listed my responses to the referee’s (Juan Merlo) last comments regarding the manuscript, in order of appearance. I have tried to comply with his comments as much as possible.

I am not sure that I understand what his comment actually refers to? The variable maternal education was excluded from model 6 in table 3. This has no implications for the results or the conclusions drawn in this study.

I suppose the referee refers to a sentence in the result section. In the second paragraph, in the result section, the sentence has been changed:

In model 1, the null model, the observed ICC indicates a very small variation in birth weight between neighbourhoods.

In paragraph 3 in the Result section, ICC is expressed as a percentage.

We have no possibility here to use another measure of income status of the neighbourhood. The use of LH-ratio is motivated as follows (the text added in the Method section; The neighbourhood level):

Thus, in affluent neighbourhoods, where high income earners are more numerous than low income earners, this ratio is far less than 1. Correspondingly, in poor areas with more low income earners the ratio by far exceeds 1.

The rationale for using this ratio is that not only the prevalence of low income earners in an area but also of high income earners plays an important role for the neighbourhood social climate. Having a high income coincides for example with better education and high income household can be assumed to have a strong demand on public and commercial services of good quality, such as schools, primary care etc in their neighbourhood. Accordingly, the presence of high income households constitutes a stabilizing factor within the neighbourhood and as such is beneficial to the whole area.
Further, in order to not be misleading we changed the concept of "deprived" to "disadvantaged" in the introduction. As pointed out by the referee.