Reviewer's report

Title: Effect of social mobility in family financial situation and housing tenure on mental health conditions among South Australian adults: results from a population health surveillance system, 2009 to 2011

Version: 1 Date: 26 March 2015

Reviewer: Petter Kristensen

Reviewer's report:

The study is based upon data gathered in a population based health surveillance system in South Australia, 2009-2011. The objective was to estimate the association between socioeconomic position (SEP) in childhood and adulthood, and mental health in adulthood. The main finding is that adult SEP was associated with mental health regardless of childhood SEP.

The study is described and presented quite clearly. The topic, the importance of SEP in a lifecourse perspective for adult health, has been addressed in a lot of studies with somewhat inconsistent results. It is therefore well worth pursuing this further.

The design has however important weaknesses that should have been addressed more clearly.

Major issues:

1. The most important problem is the study design. The surveillance system is population based with rather high response. It is however cross-sectional of nature. This fact is only briefly mentioned in the conclusion. In my opinion, this should have been made clear in either title or abstract as well as in the Methods section. The limitations should have been outlined and potential bias should have been included and preferably quantified in the Discussion section. Potential selection bias (lines 270-271) and confounding from lack of variables (lines265-268) are discussed but not related to the cross-sectional design. Another important problem could be common method bias (dependent misclassification) because all data were base upon self report.

2. It is stated that surveillance systems like the present one (SAMSS) could be useful in monitoring interventive policies (Conclusion, lines 289-291). In my opinion, this would be true only if the surveillance was organized as a panel study, and not as several cross-sectional surveys. The final conclusion in the Abstract (SEP improvement intervention could reduce mental health problems, lines 50-51) could be true but is not based upon the present study and should therefore be deleted.

3. The study includes participants who are 16 year old at telephone interview. This is rather strange, considering the study objective (adult mental heath) and the fact that several independent variables relate to adulthood (educational
attainment, financial situation).

4. The analysis covers four models, and the authors considers quite reasonable that model 4 should be interpreted differently because it includes potential mediators (variables on the causal pathway between study determinants and outcomes, line 181). This argument could perhaps be relevant for model 3 as well, because adult education could be viewed not as a cause of but rather an effect of childhood SEP. In my opinion, these matters could have been made more clear if a causal path figure had been included.

A minor comment: it is not made clear that numbers in parentheses in Table 1 are confidence intervals.

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

**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