Reviewer's report

Title: Do open youth unemployment and youth programs leave the same mental health scars? - Evidence from a Swedish 27-year cohort study

Version: 2 Date: 28 July 2015

Reviewer: Isabel Aguilar

Reviewer's report:

Major Compulsory Revision

This paper tackles a current trending topic, the influence of youth unemployment on mental health, from a new perspective. That is, how the inclusion of youth people in labour programs can minimize the negative impact of unemployment.

1. Instead of its interest, some methodological aspects should be reviewed, in order to ensure the validity of the results. Specially, the aspects related to youth labour programs long-term effects (at the age of 43) present some difficulties. Potential confounders have been included in the analysis, like education at ages 18-21, IMHS at 16, somatic health problems at 16 or parental social class. These factors could influence mental health at the age of 21, but its utility at the age of 43 is quite unlikely. Other potential confounders closer at time should be considered, as recent diseases, employment status or socioeconomic position. Authors should explain how this problem has been addressed, and if necessary, add new confounders to 43 years old analyses.

2. Also, an important improvement is required in the discussion. This section looks unfinished: study results are not compared with existing bibliography and there is not a critical comment of the results.

Minor Essential Revisions

3. Abstract, line 38: the acronym of Internalized Mental Health Symptoms (IMHS) should be presented.

4. Background section is, in general terms, too long and a little bit messy. I suggest to shorten this section and to focus it in the topic of the paper (the protective effect of youth labour programs on mental health).

5. Background, line 68-70: this sentence should be rewritten in order to make it understandable.

6. Background, line 98-100 and 105-109: these ideas are more suitable for the discussion section.

7. Methods section: probably it is quite obvious for the authors, but a clear definition of what they consider “open unemployment” should be included in the
8. Methods, line 143: it is not clear what is considered as “no exposure”. No exposure to youth unemployment?

9. Methods, line 145: table 2 should be presented after table 1 (please, change table number).

10. Methods, line 146: “Youth unemployment was relatively common in Sweden”. I think this should be changed to “in our sample”. Also, it would be nice to add the national data to compare it. Finally, table 1 looks more suitable to be presented in the results.

11. Methods, line 169-170: this idea should be commented in the discussion section.

12. Methods, confounders section: authors should address the aspects previously commented on the major compulsory revision.

13. Methods: Statistical software used should be included.

14. Discussion: as previously indicated on the major section, this section should be rewritten. Some specific suggestions are:
   a. The comparison with other studies should be included.
   b. Although, as the authors indicate in line 260, an exhaustive explanation may be beyond the objective of this study, the critical review of the results obtained and its possible explanations should be included.
   c. Limitations section: line 274: in which way have these aspects influenced the results?

15. Table 1: I suggest adding n values for “open unemployment for >6months” and “participation in youth programs for >6 months”. Also, points should replace commas and the meaning of SD (standard deviation) should be included as footnote.

16. Table 2 and table 3: both tables could be joined in one single table, in order to make comparisons easier. The meaning of OR and 95%CI should be included as footnotes. It would be interested to add as a footnote which variables are included in each model, in order to understand the table independently of the text. Finally, it should be stated clearly which is the reference category (“no ref.” looks not clear enough).

17. Table 2 appendix: I think this table is interesting enough to be provided as a main table. The same indications made for tables 2 and 3 should be applied.

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

**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 below.