Reviewer’s report

Title: The role of paternal psychosocial work condition on mental health of their children: A case-control study

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Reviewer: Jim van Os

Reviewer’s report:

General

This is a well designed manuscript addressing the impact of early influences on mental health and development from childhood into adulthood with a special focus on effects of paternal psychosocial working conditions. Interesting is the identification of sub-dimensions of these conditions that are most probable to increase the risk for developing psychopathology from childhood into adulthood. However, there are some problems that need to be addressed.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

- 1. Methods:

   a. diagnostic categories for children 14 years old and younger: in contrast to adults, children may not be capable of experiencing or reporting the symptoms thought to be representative of for example major depressive disorder. Hence, the pattern of manifested symptoms is likely to vary according to age and stage of development of the child and young adolescent. This is probably related to concept and language development. As a consequence, children who are diagnosed as having a depression at one point of time can be diagnosed as psychotic at another point of time; the psychotic disorder being the persistence of the depression. Therefore, there will be some overlap between the onset and persistence of a disorder. Furthermore, in some cases a it is not possible to give a psychiatric diagnosis at all or the diagnosis has to be postponed. There is also the complexity of comorbidity. The authors should make the inclusion criteria of the diagnostic categories more explicit. Also, some of the above mentioned topics have to be addressed in the discussion of the paper.

   b. There is no diagnostic category “hyperactivity”. Why is that? This is the main diagnosis in children and omitting these cases may explain the findings.

   c. Age categories: it is unclear to the reader why the authors chose for the present age categories.

   d. Independent variables: please describe more explicitly in the methods what kind of independent variables are used in the statistical analyses and present these also in the tables (see also point 2). How did you (re)code the variables?
What was the reference category?. What categorical variables were recoded into dummies?

e. Statistical analysis: A number of statistical comparisons is presented in the paper, but these are not related to any stated hypothesis. Please provide a framework of a priori hypotheses within which statistics can be used properly. Please give a description of the models.

f. First paragraph under the heading “mental health outcomes of the children’s cohort”: what kind of mental health services are available through the BCLHDB? Please describe these services more explicitly.

g. How representative is the sample? (minority culture).

2. Results:

a. I recommend restructuring the tables, presenting significant as well as non-significant results and including p-values. Possibly, the authors performed stepwise regression analyses (although this was not described in the methods). In that case the authors should redo the analyses, deciding themselves based on their hypothesis, what variables should be included, rather than letting the computer decide for them. Possibly, ethnicity is a categorical variable entered in the analyses using dummies (although this is not described in the methods). Deleting one of the dummies from the model and leaving another one in the analysis is not correct.

c. It is sometimes unclear to the reader what conclusions can be drawn from the tables. For example, “paternal work stress” (=duration of employment?) was significantly associated with depression among adolescents but not among children, young adults, and adults” (line 15, page 12). “Work stress was more strongly associated with psychotic disorders and alcohol and drug related disorders in adulthood than it was in adolescence and childhood” (abstract): to my knowledge there is no diagnostic category ‘psychosis’ in the population of children in the present paper.

d. The presentation of the results has to be complemented. Line 5, page 12: Chinese origin also functioned as a protective factor for neurotic disorders in young adults and adults.

3. Discussion

a. Please give some clinical implications.

b. Please mention that most of the ratings were made years before the child, adolescent and adult were referred to health services.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The authors should also present odds ratios, confidence intervals and p-values throughout the results section.

The first paragraph under “paternal psychosocial work conditions, mental health and socio-demographics” can better be placed in the background section.

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests