Reviewer’s report

Title: Manuscript Do negative childhood conditions increase the risk of somatic symptoms in adolescence? – A prospective cohort study

Version: 0 Date: 06 Dec 2018

Reviewer: Priscilla Martinez

Reviewer's report:

This paper aims to identify predictors of somatic symptoms among adolescents using cohort data. While I think this is an important topic and the dataset large and appropriate, there are several shortcomings with the manuscript as written and the analysis that make me unable to recommend this paper for publication as currently presented. In particular, the description of the methods and the statistical analysis employed was difficult to understand, and therefore made it difficult to interpret and gauge the veracity of the results and conclusions. Further, it seems the authors did not take advantage of the longitudinal nature of the data and do longitudinal modeling, which lessens the contribution of this paper to the literature.

Introduction

1. The introduction does well to review some of the literature that has identified the predictors of interest as related to somatic symptoms, but generally lacks an argument for why somatic symptoms among adolescents is a pressing problem, beyond it's frequency. Is it associated with health disorders later in life? Mental health problems? Lower school performance? A more developed argument for why somatic symptoms in adolescence is an important topic to study would help engage the reader.

2. I was also missing some background on what is known about the relationships between family functioning, parental somatic symptoms, negative childhood experiences and adolescent somatic symptoms in Denmark. Much of the background seems to come from studies in other countries, and I wonder if these relationships have a) been studied in a Danish context, b) if so, what the findings were, and c) if they are the same or different than what is found in other settings.

3. Some explicit statements about how the new information this study will produce can be used to prevent or reduce somatic symptoms among adolescence would also help the reader understand the utility of this work.

Methods
1. The "Design and Population" section could use a few lines describing the sampling procedures of the West Jutland Cohort Study. How were participants selected? What was the response rate? Eligibility criteria?

2. The last sentence on page 4, lines 47-50, was confusing to me. In particular, I do not understand the "and/or" statement about information on somatic symptoms. If one of the innovations of this work is that somatic symptoms are measured at two time points, then why is it "or"?

3. For the outcome and exposure measures, I was confused by the dichotomization. Why at the 75th percentile for all of them? Are the cut-offs standard cut-offs and validated in this setting?

4. I am less familiar with negative life events measures, so I wonder if it is normal practice to dichotomize the number of negative life events into "0-1" and "2+"? Why not "0", "1-2", and "3+". Why not keep it continuous? Was any sensitivity analysis done using different cut-offs?

5. For the covariates used, I am concerned that some important confounders were not included that could influence the results. In particular, health status. The presence of any chronic illness could both certainly impact reporting somatic symptoms and also have a negative influence on family functioning. Is this data available?

6. It would be helpful to know what proportion of the sample came from divorced households (Line 1 page 10).

7. The first sentence under "Statistical Analysis" should be unpacked more because it is confusing. From the methods, it seems like you were creating dichotomous outcome variables based on the 75th percentiles, so it was unexpected to read that somatic symptoms were in the models as continuous variables. Further, what changes in cut-off points were made? What were these cut-offs? Why was this done?

8. The uncertainty of the type of outcome variable also made it confusing to understand what models were employed and why. Log link function in GLM models are often used for outcomes that are count variables, and the identity link is for outcomes with a Gaussian distribution. Neither of these fit what seem to be dichotomous outcomes. Why wasn't a logistic regression (logit link function) used?

9. The sampling method also comes into play in the analysis because if complex sampling was used (stratified, cluster), then weights would need to be included in these models. This should be clarified.

10. As mentioned above, it seems like two cross-sectional models were run, one with the outcome of somatic symptoms at age 15, and one with the outcome at age 18. Why not use a longitudinal model? Was symptoms at age 15 controlled for in the model for symptoms at age 18?

Results
1. I would put the first paragraph of the "Results" section (lines 3-9, page 11) in the methods section. I was indeed wondering about interaction terms, and to know that this was part of planned analysis would be clearer in the Methods.

2. Line 25, page 11: Was the difference in the prevalence of somatic symptoms between boys and girls statistically significant? Does "but no strong gender differences" mean none were statistically significant?

Discussion

1. The authors present a good discussion of the results, but given my concerns about the analysis, it is difficult to make any concrete statements about how the results are discussed.

2. Similar to the introduction, discussing the findings in the Danish context would be helpful.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

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