Reviewer’s report

Title: Trends in childhood and adolescent internalizing symptoms: results from Swedish population based twin cohorts

Version: 0 Date: 15 Feb 2019

Reviewer: Nora Trompeter

Reviewer's report:

This manuscript addresses an important and interesting topic by investigating time-trends in internalising symptoms for boys and girls. The manuscript is quite strong, including a large, representative sample and a straightforward analytic plan. However, there are some minor issues warranting attention, as detailed below (by section).

Abstract: Clear description of the study, however, it would be helpful to state how many birth cohorts were examined and the time frame in which data were collected (i.e., which birth cohorts were included)

Introduction:

In the discussion regarding gender differences it would be helpful to include a discussion on why these discrepancies might be relevant and what this could mean in a clinical/policy setting. Furthermore, when discussing previous literature it would be appropriate to mention the international studies, which are referred to in the discussion, and integrating the discussion on findings from both Swedish research and international research in this section.

Page 3, lines 17-22: Could you please clarify what is being compared. Are boys more likely to exhibit externalising compared to internalising or are they more likely to exhibit externalising compared to girls? Same applies to the following statement regarding girls.

Method: The authors make it clear in their description of the sample, that this sample has been reported on in previous publications. However, it would be nice to get a brief overview of the sample characteristics and/or be provided with a reference for another paper where the sample is described in more detail. It would also be helpful to discuss what implications the use of a twin sample has on generalisability.
Were there any participants who were captured at 9yo and 15yo? And if so, what are the ramifications for having captured participants twice?

A minor point: sMFQ has three Cronbach's alphas reported for boys and girls. Could you please clarify which alpha is the one for boys and which one is for girls?

The internal consistencies for the SDQ are quite low, how does this compare to other studies? Is this a common issue or specific to this sample?

Statistical analyses: Statistical analyses appear well-suited and are described well.

However, there was no mention of assumption tests. Could you please elaborate on whether the assumptions for regressions were met?

Furthermore, if both sets of twins were used, what were the repercussions on the assumption of independence?

There appears to be high variability in scale completion, it would be good to comment on any differences between participants who completed vs not completed measures.

Results:

Clear and concisely written.

However, in your description of the results could you elaborate on regression analyses in terms of the direction of the relationship?

Discussion

Well written.

It would be helpful to elaborate on difference between parent-reported and child-reported symptoms, as this appears to be an interesting finding in the current study. This might be especially interesting since results from the 9yo group were based solely on parent-report measures.

It would also be beneficial to link results back to studies discussed in the introduction, especially those conducted in Sweden.
Small point: please ensure to not use gender and sex interchangeably, as they are different constructs

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

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

Unable to assess

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

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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