Reviewer’s report

Title: Challenges in Defining the Rates of ADHD Diagnosis and Treatment: Trends over the Last Decade

Version: 0 Date: 03 May 2017

Reviewer: Pieter Hoekstra

Reviewer's report:

This is an interesting report. Please see my recommendations below

Abstract:

1. please define abbreviations such as ADHD at first use.

2. What is meant by "tight definitions"?

3. Rather than ADHD prevalence it would be better to say "the prevalence of ADHD diagnoses".

4. It is not common practice to formulate a hypothesis in a conclusion section. Please reformulate.

5. What is meant by possible environmental effects? This paper did not address environmental factors so I suggest to remove this from the conclusion.

Background: no comments

Method: please explain the abbreviation HMO. I suggest to delete the sentence "This section is dedicated to the challenges of ascertainment of ADHD diagnosis based on the different available key parameters." As it is redundant. Also I suggest a more neutral title for section 2.3 "Case ascertainment" ("the challenge of" can be removed). Why is a definitive diagnosis warranted when there was medication purchase? Please explain the rationale. Cannot there be undue prescription of ADHD medication? Later it is written that a definitive diagnosis is also warranted when there was no prescription. Please provide a clearer definition. Later the authors speak of yet another category "leading diagnosis" This all is not very clear. Please clean it up and provide clear definitions for the various categories. Also acknowledge that there may be cases prescribed
ADHD medication without presence of an ADHD diagnosis. The section 2.6 does not provide a statistical analysis section but rather a power size calculation. Please correct.

Results: no comments

Discussion

Would remove the subheadings. The first sentence "This discussion will focus on challenges in understanding the recent increase in ADHD prevalence" is redundant and can be removed.

What is meant by positive DSM IV criteria? How is it different from ADHD?

Why is over-diagnosis less likely? Isn't this a straightforward explanation? A prevalence rate which is double that of the worldwide prevalence published recently certainly makes over-diagnosis very likely! Conclusion: I think it is less likely that there is an increase in ADHD prevalence but would rather speak of an increase in the number of ADHD diagnoses.

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.

Yes

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 am able to assess the statistics
Quality of written English
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Acceptable

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