Reviewer’s report

Title: The Autism-Tics, ADHD and other Comorbidities inventory (A-TAC): Previous and Predictive Validity

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Reviewer: Robert Rieske

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The purpose of the study, The Autism-Tics, ADHD and other Comorbidities inventory (A-TAC): Concurrent and Predictive Validity, was to expand the findings of validity for the A-TAC by including more conditions and a larger sample size. Given the topic and the work provided by the authors, there are several concerns and the following suggestions for revision are offered:

The following suggestions for revision are offered:

1) The two groups are listed as concurrent and predictive; however these do not seem to be appropriate labels and can be deceiving to the reader. Consider revising (possibly previous and predictive)

2) As noted, sensitivity and specificity for the concurrent group is greatly confounded by the fact that parents knew the diagnosis and likely received psychoeducation about the disorder they were responding to. Therefore, is this information even useful? Discuss this further.

3) Discuss if ATAC results were used (or available) to clinicians making the diagnosis for the predictive group. If so, this serves as a major confound and should be discussed further

4) Some of the overall claims made by the authors do not seem in line with the results presented (e.g., sensitivity/specificity of the predictive group which is the group of interest as the measure is meant to be predictive). Consider revising the discussion to further explain the limitations of these results.

5) Change instances of "mental retardation" to "intellectual disability"

6) The ATAC is based on DSM-IV criteria. Why is this tool still useful if not being updated to DSM-5 criteria? Discuss.
7) Discuss how the sensitivity/specificity and other psychometric properties compare to other tools that measure some of the same categories.

8) Verify findings to allow readers to understand what they are reading. Often it is unclear when mentioning certain abbreviations and makes it hard to read. Providing the reader with abbreviations is okay at some times but it becomes confusing when there are so many and the real word is only used a few times.

9) Clarify that the results are unbiased. The results seem to be biased in many ways making it deceiving for the reader. Make sure the reader is able to understand that the information presented is easy to read and unbiased for further comprehension.

10) Look over paper for clarity reasons as there are many grammatical mistakes. Consider revising discussion section for clarity and to address other points mentioned above. Wording is also a major issue and makes it difficult to understand the paper in general. Making a clear and cohesive paper with appropriate grammar can drastically improve this paper. Additionally, several statements throughout the paper should be revised. Some examples are as follows; however, there are several others throughout the manuscript:

   a. Background- not all NDD's are unstable within a diagnostic category over time. Clarify.

   b. Background- 2nd para, state the ATAC encompasses common NDDs like autism. Etc. Rephrase. Sounds as if ASD and these other disorders are common and then in the next paragraph discusses how they are rare.

   c. Background- page 5, last para reads "why the ecological validity of the ATAC is uncertain." Revise for clarity.

11) Were there reported sensitivity/specificity values in previous studies of the ATAC? If so please report in the background.

12) When presenting tables, do not describe them in depth. Instead, when mentioning a table, refer to what is relevant.

13) Make sure that information is valid and is relevant to what is being discussed.

14) Cite sources when presenting statistical information and uncommon knowledge that was obtained from another source (e.g., page 4, 1st sentence).

15) It may be helpful to distinguish eating disorders (commonly discussed in the literature as anorexia/bulimia) and feeding disorders (restricted diets, food refusals, over-consumption).

16) Consider removing the list of ICD codes on page 9. Not useful to the discussion.
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?
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No

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