Reviewer's report

Title: Discriminant and Concurrent Validity of a Simplified DSM-Based Structured Diagnostic Instrument for the Assessment of Autism Spectrum Disorders in Youth and Young Adults

Version: 1 Date: 20 September 2011

Reviewer: Melissa A Nishawala

Reviewer's report:

The authors present an interesting report on the concurrent and discriminant validity of a brief DSM-based structured diagnostic interview for referred individuals with autism spectrum disorders (ASD's). It is certainly true that the only currently available structured interview to diagnose autism spectrum disorder, the ADI-R, is lengthy the and requires special training in order to administer.

I would argue that the most accurate autism spectrum disorder diagnosis is made through the use of the ADI-R in combination with the autism diagnostic observation schedule combined with expert clinical opinion. This is the true gold standard.

In order to accept the article for publication, several major compulsory revisions are required:

1. In the background section, the limitations of the ADI-R are overstated. The interview is described as "highly guarded in terms of who can administer it." This statement is unclear. Perhaps the intention is to state that specialized training is required in order to administer it? The word "extremely" with expert respect to the cost is also overstated. It is more accurate to state that the ADI-R requires 1.5 to 2.5 hours to administer including scoring. (it is scored during the administration and requires approximately 10 min. to complete the algorithms)

2. Within the methods section, the participants are described as consecutively referred youths to a specialized program for the treatment of ASD is at a university affiliated hospital. Later, 123 individuals are noted however the authors do not say whether these were 123 consecutive patients or if some of the referrals did not result in an autism spectrum disorder diagnosis. This information should be included either with in the description of the methods or the results.

3. The authors provide a tabular format of the structured questions and how they correspond to both DSM-III-R and DSM-IV criteria. They do not, however, describe how the interviewers administering the questions determined if the question was positive indicating that the criteria was met. Was this simply a yes/no response? Were the interviewers allowed to probe? And if they were how was that information used?
4. There is no mention of DSM-5. The authors have already highlighted the difficulty with a DSM-based structured interview. The DSM has been and is changing over time. Therefore, they must describe the inherent difficulties in a DSM-based structured interview. How would these questions be revised for DSM-5?

5. The limitations of the SRS are not stated and should be described.

6. In the results section, false positives for the SRS are not stated. This information must be included.

7. In the discussion section, the statement “these results indicate that a DSM-based structured diagnostic interview for ASD can be a useful and cost-effective standardized assessment instrument for reliably identifying ASD in clinical and research settings” is overstated as the authors did not make a clear case for use of this interview as opposed to the SRS which by their report was equally sensitive designating cases.

Discretionary revisions:

1. A shortened version of the autism diagnostic interview is under development. The planned diversion would take 20 min. to administer and will give a classification of ASD though it would not give the domain scores. It would be helpful to include this information.

2. The authors describe the SRS as a pencil and paper instrument to be completed by parents or teachers. It would be helpful to contrast the use of the Social Communication Questionnaire (SCQ) as this instrument is in frequent use.

**Level of interest**: An article whose findings are important to those with closely related research interests

**Quality of written English**: Acceptable

**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