Reviewer's report

Title: Broad autism phenotype status of parents of children with autism in China and its correlation with severity of social impairment in probands

Version: 2
Date: 27 February 2015
Reviewer: Karen R Dobkins

Reviewer's report:

This study shows that like studies conducted in the west, in China, parents of children with autism show more BAP than parents of children without autism.

Major Comments

1) In my opinion one of the most interesting differences between the Western and Eastern data is the fact that in the Eastern data there's a much larger influence from the mother than the father, and I would like to see this aspect of data be expanded on if possible. This results is especially surprising since Maxwell reported that the effects were greater for the father than the mother.

One question that immediately arises is whether it was the case that the mothers always filled out the questionnaires about the fathers. This is implied but not explicitly said in the manuscript. If so, this raises the question of whether mothers can reliably and objectively fill out this information about the fathers. Why did the authors choose to collect data in this manner?

What is also surprising is the fact that even though BAP two scores are elevated in fathers of children with autism compared to fathers of children without autism, there is no correlation between fathers BAP Q scores and the children’s SRS scores. I realize this is possible statistically but it still leaves the reader wondering.

Smaller comments are as follows:

1) Line 12: when reporting the range, e.g., 9.7%-34.7%, the authors should use the word "range". And then make it clear that the range refers to different categories within the BAP Q.

2) Page 6, lines, 27 – 29. It seems odd to say that typically developing children with autistic diagnosis were excluded. Wouldn’t these children then be in the autism group?

3) Page 7, line 4: why were data missing?

4) Page 7, line 7: For the typically developing children that were excluded because they had high SRS scores how do we know that those children did not themselves have autism?
5) Page 8, lines 17 through 18: with her multiple comparisons and do the authors correct for this statistically?

6) Page 9, line 20: One is not really supposed to use ANCOVA to control for known differences in variables between groups. For any variables for which the two groups differed it would be safer to show that that variable did not vary with the dependent measure, separately but in each group. That way you will lay any concerns that those group differences are underlying effects.

7) In the discussion the office should be clear about which studies are western studies.

8) Why were the children with ASD not tested with standard research tests like the ADOS?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests