Reviewer’s report

Title: The impact of study design and diagnostic approach in a large multi-centre ADHD study: Part 2: Dimensional measures of psychopathology and intelligence.

Version: 3 Date: 14 January 2011

Reviewer: conor dolan

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This is the revision of part 2 of this two part account of results in a multi-centre ADHD study. This two part account provides important information concerning the various effects on the measures and diagnoses. My evaluation of part 1 applies to part 2. I am satisfied that the authors have acted on most of my previous comments. As in Part 1, the authors’ stance on multiple testing is very hard to defend. "Due to the descriptive character of the present contribution", corrections for multiple testing are not applied. Yet this paper, like part 1, is replete with statements concerning statistical significance, which are not required in a "descriptive" study. In a descriptive study one describes, but in the present study, statistical inferences play a large role. This is inconsistent.

Like Part 1, part 2 could do with careful English language editing. Formulations are often lacking in precision. Here are some examples just to make this point clear. Page 5 line 8-9 rephrase for clarity. Page 5 line 18: Investigating causes....needs samples. Rephase. page 6. line 8 from bottom....expect the questionnaire for one that assessed..."for one"? Next line: The IQ was assessed on short form. What is short form IQ? Page 5 line 2 from bottom: THe present paper aims to describing and analysing... rephrase. Page 7 middle: Intelligence ...and hase been proposed as a possible endophenotype of ADHD. hase: applied spelling checker throughout (e.g., page 29 bottom: suppresion-> suppression), also decide to use UK or US spelling (behaviour is UK; summarize p. 10, is US). BTW: If IQ is an endophenotype then it is a very bad idea to consider it as a possible covariate in statistical analyses. A endophenotype is supposed to be a phenotype that mediates between genetic effect and the phenotype of interest (ADHD), if IQ is truely an endophenotype (which I seriously doubt), then adding it as a covariate in a genetic study of ADHD will greatly diminish any chance of detecting genetic effects. Page 7 line 4 from bottom: This score is together with the SCQ does ...is...does? rephrase. page 12 line 5: robust to deviations from ...and variance. What does deviation from variance mean? Rephrase. etc. etc. I could go on like this. This paper requires careful editing by a native speaker.

Otherwise this two part ms contains important information concerning the data in this large scale multi-centre ADHD study, which certainly should be published, i.e., available to all who will analyze these data.