Reviewer’s report

Title: Prospective cohort study of the relationship between neuro-cognition, social cognition and violence in forensic patients with schizophrenia and schizoaffective disorder

Version: 5  Date: 5 June 2015

Reviewer: Benjamin Buck

Reviewer’s report:

I am pleased with the responses to many of the points I raised in my previous review, however, I still have some concerns about the writing and organization of the paper, as well as the excessive number of analyses that are not justified by research.

MAJOR COMPULSORY REVISIONS

- My largest continued concern about this paper is the continued use of gratuitous numbers of correlations, models, and analyses overall. In particular, I find the number of mediation analyses conducted unjustified by the literature cited in the paper's introduction. The paper focuses on the indirect influence of neurocognition on violence via social cognition, symptoms, and functioning. This makes sense and is justified by previous work. Why then, include analyses (for example) in which the influence of violence proneness is mediated by neurocognition, or where functioning is mediated by symptoms? These aren't intelligible or interpretable models, and thus the authors confuse presentation of the main findings, and also inflate the number of analyses. My recommendation is to more carefully define a hypothesized set of models (even a few - based on your nice summary of previous work) and then test those, rather than testing all possible combinations at the same time.

- I appreciate that the authors have added Bonferroni correction to the group differences analyses. These, however, do not appear to be applied to the correlational analyses, which are conducted on a large number of variables. Further, the paper's interpretations are based more broadly on significance in general, and not on the corrected significance determinations. These should still be more centrally integrated into the paper.

- The ROC curve analyses are a great fit for a binary outcome variable of violence. These should be more centrally featured in the discussion. Further, I am unclear on the purpose of the non-parametric correlations alongside the ROC curve analyses (which are better suited for the prediction of a binary outcome).

- Line 236 - I appreciate the added information about the community bed for those "discharged subject to conditions." Could we hear a bit more about these conditions?

- I have a question about the mediation analyses of MATRICS on violence - am I correct in assuming this is the MATRICS subscale excluding the social cognition
measure? (particularly important in light of the fact that social cognition is one of the mediators)

- I find the discussion a bit hard to follow, especially as a big portion of the discussion is devoted to re-explaining the results. I think it would strengthen the paper to significantly shorten the discussion, and focus specifically on developments added by this paper in particular to the literature. Also, N.B. that new findings are presented in the discussion - this is odd and confusing (line 579 through 582). Please revise.

MINOR ESSENTIAL REVISIONS

- Line 72 - transitions are a bit odd at the start of the paper - the term "however" is used twice in a few opening sentences
- Lines 154 - the claims here about empathy should be carefully constructed and cited - empathy is a complicated and debated construct
- Proofreading once more for minor errors and typos would benefit the paper as well (e.g. line 152, "Metalisation")
- Lines 173-177 - I previously commented on this comment about the change in "man's capacity to reason," but even after editing, I don't feel this to be a relevant or useful sentence to build the argument

DISCRETIONARY REVISIONS

- More needs to be explained (in text, not in supplements) about the serial mediation models, and also why they are necessitated specifically by previous research.
- page 19 - the mean values of these measures do not need to be reported in the text and the table both - this would be a useful spot to cut words

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests: I declare that I have no competing interests.