Reviewer's report

Title: Personality dimensions of schizophrenia patients compared to control subjects by gender and the relationship with illness severity

Version: Date: 3 December 2013

Reviewer: Lindy-Lou N Boyette

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Review of ‘Personality dimensions of schizophrenia patients compared to control subjects by gender and the relationship with illness severity.

This manuscript addresses two interesting subjects: personality and gender in schizophrenia. Both subjects, and their combination, merit greater attention in schizophrenia research. However, I have some concerns and questions, mainly regarding the choice of analyses and the support of the current data to the conclusions.

Major Compulsory Revisions:

- The authors declare that male and female schizophrenia patients may have specific personality profiles. If I understand correctly, they base this on their findings that differences with controls ‘were more significant’ for HA for males and for RD for females. This is confusing because of several reasons. 1) How does this fit with the authors’ conclusion that no differences in personality dimensions were found between males and females within the patient group? 2) Did the authors test their finding that differences in HA and RD are ‘more significant’? If so, in what manner? I assume that the authors are aware that simply saying that a p level is more or less significant than another p level in another group cannot lead to any conclusions regarding differences between the groups. For instance, simply different number of subjects might influence a p level. 3) If tested, -based on Figure 1- why did they conclude this for HA and RD, but not for C? 4) Finally, whether or not the authors acknowledge statistical significance of differences in HA for males and RD for females remains unclear. First, they declare (correctly since they set alpha level at 0.05, see Statistics paragraph) that for both genders differences in HA and RD between patients and controls are statistically significant (HA females p=0.015 and RD males p=0.011, Table 2). They then, summarizing, state that males have high scores for HA and ST and low scores for SD and C, whereas females have high scores for ST and low scores for RD, SD and C, by which I assume they actually mean higher/lower scores compared to the control counterparts, and by which the authors suddenly seem to suggest that male patients do not have different scores for RD and female patients do not have different scores for HA compared to their control counterparts, since these scales are not mentioned. This, however, does not match with their earlier statements and with the results presented in Table 2. Please explain.

- The authors should elaborate in the Background paragraph on what they see as
the advantages of independent analyses for gender compared to treating gender as a covariate. It’s not clear to me what the advantages could be; and, also, it seems to me that some of the conclusions from the present study are more fitting for analyses in which gender is entered as a covariate. F.e. the conclusion that ‘the relation between personality dimensions and illness severity depends on gender’ would be more robust if the authors had conducted, depending on their hypothesis, mediation analyses or moderation analyses. The latter would also be more in concurrence with the meta-analysis reference, cited in the Discussion, which found gender to be a moderator of HA (reference number 7).

- No information was given on the psychometric properties of the TCI-R in schizophrenia patients. F.e. are the reliability and factor structure of the TCI-R in schizophrenia patients comparable to healthy controls? Are the TCI-R scales stable over time, despite fluctuations in psychotic symptom severity?

- Was psychotic symptom severity (positive symptoms, negative symptoms and cognitive deficits/disorganization) assessed in patients? The authors state in the Background paragraph that ‘… males consistently have more negative symptoms and cognitive deficits …’. In the Participants paragraph they state the patients to be ‘clinically stable’. Does that mean that all participating patients have no positive or negative symptoms and no cognitive deficits? This is relevant, since symptom severity may influence the relation between gender and clinical outcome- and also perhaps the TCI-R scores.

- What would be the clinical relevance of assessing the TCI-R in patients who are (already) frequently admitted to a psychiatric hospital and male patients who attempt suicide?

- No limitations of the current study are mentioned.

Minor Essential Revisions:

- In general, more specifics in the text regarding who is being compared to who would help greatly in readability.

- Clinical outcome in this study is age of disease onset, number of suicide attempts and number of admissions to a psychiatric hospital. What period of time was set for the assessment of the latter two variables? Previous year, lifetime?

Discretionary Revisions:

- The TCI-R was administered by clinical psychologists to the patients and was self-administered for controls. What was the exact involvement of the clinical psychologists?

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

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.