Neuropsychological performance and affective temperaments in euthymic patients with bipolar disorder type II

Romero et al.

Suggestion: accept with minor revisions

Overall, the authors investigated the link between affective temperaments and neurocognitive functioning in bipolar patients. The authors found significant correlations between affective temperaments and cognitive deficits including hyperthymia and verbal memory and premorbid IQ, cyclothymia and attention, irritability and attention and verbal fluency. The strongest mediating factors between temperament and cognitive function were the residual manic and depressive symptoms among euthymic bipolar patients.

I commend the authors for addressing this topic in such a novel way. Indeed despite the well known connection between affective disorders and cognition little is known about the link between temperament and cognition in mood disorders. I think this paper deserves to be published in JAD. I would like to recommend few minor changes that I think should be easily addressed by the authors.

1. Abstract: please provide age/gender for the populations. Explain acronyms such as TEMPS, MINI etc. Also please formulate more explicitly why studying the link between temperament and cognition in BD is important.
2. I would consider reworking the rationale for studying temperament, cognition in bipolar disorder. For instance: the authors could highlight the fact that 1. studies that focus on the relationship between personality and/or temperament and neuropsychological test performance are scant. 2. Provide information on the psychobiological theory of personality/temperament: for instance temperament variability among individuals has been associated with neurophysiological variations in brain functioning (Henderson & Wachs, 2007; Whittle, Allen, Lubman & Yücel,2006), brain perfusion, neurotransmission etc. (all this could be linked to similar changes observed in mood disorders). 3. Add findings from studies showing significant influences of temperament dimensions on antidepressant treatment outcomes (this type of statements would show the clinical relevance of the current study; Tome, Cloninger, Watson & Issac, 1997). 4. many cognitive function (flexibility, response inhibition, problem solving and set

Shifting) and temperament/character dimensions may share common underlying neural bases (Bergvall, Nilsson and Hansen, 2003).

1. I wonder if the authors explored the option of comparing temperament as a trait vs state between patients and HC. Please address this topic in the conclusions.
2. What is the name of the neuropsychological battery used in this study? What are the psychometric properties of this battery?
3. Please state how clinical euthymia was defined in this study.
4. Page 8: one cannot compare the strength of two coefficient correlations simply based on the actual coefficients of correlation/p values (I am referring to the authors’ statement “…stronger inverse correlation between hyperthymia and premorbid IQ…Pearson r r=-.077 vs -.0.542). One usually performs bootstrap analyses to do this. Could the authors address this?
5. Also could the authors provide (in a table and in the text (especially if the table is included in supplementary material) additional information on the regression analyses by providing both betas, R square, effect sizes for all the predictors.
6. Also in table 1 could the authors provide standardized scores for the cognitive scores? Or provide an idea of the possible range of min and max scores. For instance, is the max score for memory 100? I am questioning whether the neuropsychological battery was sensitive enough to distinguish between BD and HC, and if there could be a potential ceiling effect on some dimensions.
7. Page 9: how did the authors choose to compare the first and fourth quartile f depression? Why quartiles?
8. Why did the authors choose BD-II instead of a more heterogeneous population?
9. Please proofread this manuscript again before resubmission