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Cognition and functioning bipolar depression by Kapczinski et al.

Overall: the authors explore the relationship between cognitive functioning, global functioning and bipolar depression. The topic is of primary relevance for the development of interventions in this clinical population and deserves to be published. The following revisions are recommended:

Abstract: please provide 1-2 sentences of background besides the main objective of the study. Please mention that both the forward/backward digit span was administered and include which instrument was used to assess the severity of depressive symptoms. Basic demographics such as age and N of males (for instance) should also be reported. I would recommend using "global functioning" rather than just "functioning" when referring to FAST scores. Also the authors talk about "working memory" in the results section, but readers who are less familiar with models of cognition may struggle to understand which test measured this cognitive ability. In the conclusion, a sentence referring to clinical implications/relevance would be helpful.

Introduction: I would recommend that the authors add 1-2 sentences addressing their expectations or working hypotheses. For instance why would they expect patients with severe depression to show worse cognitive impairment and functioning compared to those with moderate depression? It may sound intuitive why they expect so but the fact they previously mentioned that such cognitive deficits persist across mood phases may make this expectation less straightforward. Further, would hypothesis apply to bipolar disorder only or also major depression? Somewhere in the manuscript the authors should explain their reasons for choosing to administer only the digit spans and WCST. I noticed that they are all of visuo-spatial nature and no declarative memory test, impulse control (e.g. Cambridge Gambling task) and (sustained) attention tests are included. Research in this field shows differences specifically in these fields though.

Methods: please provide the age range of the participants they recruited. Please replace the term "mental retardation" (stigmatizing!) with intellectual disability. Please provide the IQ cut-off score they used to define participants with intellectual disability. The term "intelligence quotient result" can be replaced with "estimates of intellectual functioning". In terms of assessment I would recommend that the authors provide information on the psychometric validity of the FAST, 1-2 references for the WAIS, explanation of why only the digit span subscores were selected. Mention of the clinical questionnaires used to measure depression would be helpful. As part of the methodology it would be good to mention which other covariates the authors considered including. For instance what about IQ and education levels? Did the authors look at the correlations between premorbid IQ with cognitive scores? What were the findings?

Results: Although the demographics are mentioned in table 1 it would worth mentioning age/N of males for each group when they describe the sample included in the study (Methods/page 4). Also why was the median score of the MADRS used as a cutoff score between individuals with moderate and severe depression? Would a score of 1 been considered to be moderate? Please clarify.

Discussion: first sentence should be a reminder of what the study aimed to achieve. It is a bit hard to understand what the authors' claim when they report Bonnin et al.'s findings. Please reformulate or clarify. Similarly confusing is sentence 9 on page 8 (reference 31). What did the authors want to say? I would encourage the authors to discuss the limitations of the instruments they used. Is the FAST a valid instrument to evaluate functioning? E.g. limited number of questions, rated by the clinician, no clear criteria to provide an objective answer... As previously mentioned, this study did not include measures of declarative memory, attention etc, please comment on this. I also wonder whether the cognitive assessment included in this study is thorough to be associated with psychosocial functioning? And what about the psychometric validity of the cognitive tools? Another important variable is mood and how this may have affected vigilance and engagement during the cognitive assessment. Please address. Are there neurochemical changes that may occur during the depressive phases and may affect negatively cognitive functioning? The authors could discuss this too.

Language: Thorough proofreading and editing is recommended to correct grammar mistakes in English, e.g. first sentence on page 4: "that may might be consider a limitation".