Wisconsin card sorting test performance impairment in schizophrenia: Flaws in a report

Sir,

Singh et al.\(^1\) administered the Wisconsin Card Sorting Test (WCST) to patients with positive and negative symptom schizophrenia, classified based on their composite Positive and Negative Syndrome Scale score. They reported distinct WCST measure deficits in positive and negative schizophrenia patients. However, there are reasons to reconsider the conclusions that the authors have drawn from their study.

Assuming that the authors recruited 50 consecutive patients (as they should have if they followed good sampling procedures), the data that the authors presented in Table 1 in their paper look too good to be true. There were exactly 25 patients in
each group, and the groups were almost perfectly matched on not one but three continuous variables, all of which showed a distinct leptokurtic distribution. Furthermore, the age at illness onset plus duration of illness should yield present age, and this was not so in the data shown in Table 1, again strongly suggesting that the data are suspect.

In addition, in Table 1, for example, the \( F \) values for the age of onset and duration of illness are both wrong. \( F \) values are wrong in other tables, too. As can be inferred from Table 2 in their paper, the composite score for positive symptom patients is wrongly calculated. In Table 3, the degrees of freedom are stated as 2.7 for all variables; this makes no sense at all for a one-way analysis of variance. In Table 3, there could be an error in the data for total number of errors and percent errors; these values are not in parallel, as in the case of the other related variables.

There are other shortcomings in the study and in the results presented. It is not clear whether Institutional Ethics Committee approval for the study was obtained. A final curiosity is that none of the authors report an affiliation with the site at which the study was conducted. The authors of the study should make available their raw data for scrutiny and submit appropriate corrections to this paper before the results, and its implications can be considered.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

**REFERENCE**

1. Singh S, Aich TK, Bhattarai R. Wisconsin card sorting test performance impairment in schizophrenia: An Indian study report. Indian J Psychiatry 2017;59:88-93.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.