Reviewer’s report

Title: The Relationship, Structure and Profiles of Schizophrenia Measurements: A Post-hoc Analysis of the Baseline Measures from a Randomized Clinical Trial

Version: 1 Date: 29 July 2011

Reviewer: Vyv Huddy

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The manuscript reports data on symptoms, cognition, quality of life, subjective well being and functioning in a sample of people with schizophrenia who were moderately ill. This is of interest because many similar studies report data from remitted samples. Other strengths are the comprehensive assessment and sample size that allows for sophisticated statistics.

Major Compulsory Revisions

The aims of the paper are not clearly described. In a couple of places it is stated that “a more parsimonious set of variables is required” but no criteria are given for what such a set measures would need to achieve are specified. It is stated that reducing overall testing time and complexity would be useful but there are other considerations, such as validity, sensitivity to change and reliability. There has been some important work by the MATRIC consensus that addressed similar the methodological and conceptual issues and it should be cited (e.g. Green et al. American Journal of Psychiatry 2008 Feb; 165(2):221–8).

The approach of the study is to firstly “characterise the relationships between the measures” and then provide the “a more parsimonious set of measures that minimise conceptual overlap”. Can the authors explain why they chose to complete the path analysis followed by the factor analysis? These type of analyses usually overlap. In particular the path models that use the factors identified by the authors may be of interest. I found it rather difficult to grasp the overall thrust of the analyses and link them back to the aims of the paper.

In the path analyses the PANSS total score is used rather than symptom subscales. There is a strong argument for separating symptom domains because negative and positive symptoms are very likely to show different relationships with functional outcomes (see Ventura 2009 schiz res) so the model may demonstrate better fit if they were entered separately. There is some evidence for this as the functioning factor loads on negative but not positive symptoms.

A single cognitive variable - symbol coding - is reported from the BACS. It is not explicit why digit symbol coding alone was chosen. Could there be a bit more detail on this? In the discussion the authors note the Dwight Dickinson meta analysis that shows the largest effect size difference compared to comparison samples. It may not, however, necessarily follow that this would make it the best candidate test for probing associations between cognition and outcome (though
work by Bowie et al. BIOL PSYCHIATRY 2008;63:505–511) suggests that the authors may be somewhat justified in this as processing speed was associated with every domain of functioning in their study. A bit more explanation would be helpful.

Minor Essential Revisions

There are a few typos

Pg 7 line “indexcalulated”
Pg 7 para 2 “. He linear relationships”
Pg 15 para 2 missing period “this likely restricted the possible range of baseline scores on the PANSS Second”.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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