Reviewer’s report

Title: Item response analysis of the Positive and Negative Syndrome Scale

Version: 1 Date: 16 August 2007

Reviewer: Rolf R. R Engel

Reviewer’s report:

General
This is a methodological paper applying a nonparametric method of item response analysis to the items of the PANSS measured in a very large sample of patients starting treatment (N=9205). The authors report the option characteristic curves for all the items in the appendix. Within the text, they report a sample of individual item results, give a summary table and report on the performance of items in the various subscales. They also comment on the relative difficulty of the items and the problems that may pose when various items are used with the same cut-off in an index of improvement.

This is a nice paper that gives very valuable information to all users of the PANSS. It is methodologically sound and it is based on a very large and appropriate sample of patients. It should be published.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The legends of the figures do not describe the elements of the figure, i.e., the axes, the elements shown and the constructional details, as a legend is supposed to do. Instead, they repeat some claims made in the paper and as such assume that the reader knows already what is shown in the figure. A legend is not a place to put claims in. In case the real description of the figure is somewhat lengthy and is therefore given in the text, as e.g. in figure 1, it would be enough to give a title (“Option characteristic curves for an ideal item”) and add the remark: “see text”.

In figure 6 the legend should explain, which line type belongs to which scale or subscale. It is not given, neither in the legend nor the text and in the figure it is not really readable. The abbreviations used should also be explained in the legend.

The reference given in the first sentence is misleading: it gives the reference of the PANSS, but does not back up the main statement of the sentence, i.e. the
assertion that the PANSS is the most widely used measure of symptom severity in schizophrenia.

Symptom severity is given in two lines in the figures: above the frame in terms of the expected total score and within the frame in terms of expected score of the subscale the item belongs to. This should be explained in the text when figure 1 is introduced. There are some misprints or errors with the numbers: (a) The numbers for total score in figure 1 differ from those in the other figures. (b) On page 14, line 4, 103 should refer to the total score and 36.1 to the positive symptom subscale. (c) In my version of the appendix, numbers for positive subscale expected scores were not readable in the first 9 figures (DP1 to DP29).

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

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.