Reviewer's report

Title: A new mobile assessment technology for psychosis.

Version: 2 Date: 15 June 2012

Reviewer: Bryan McCormick

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- Major Compulsory Revisions

1. The authors noted that two (sub)sets of questions from the PANSS and CDS were created and alternately presented to participants. A presentation of how the sets were created and if they were intended to be parallel or complementary is necessary.

2. Based on the description in the statistics section, it appears that individual items were summed across the two sets of response items to create scores. If I understand this correctly there would appear to be some methodological concerns about summing items that are not referencing the same time period. For example, as there are 4 anxiety items what bias is introduced if items 1 & 2 reference time period 1 in day 1 and items 3 & 4 reference time period 2 in day 1? As with clarification of instrumentation in #1 above, clarification of statistical procedures is necessary as well.

3. In addition, one of the hypotheses related to the internal consistency (alpha) of the self-report items; however, no findings from a reliability analysis were reported or discussed.

- Minor Essential Revisions

1. Source(s) for accessing participants needs to be clarified. Were they drawn from a health service, etc?

2. There is some confusion in the reporting of findings as to whether a 67% compliance rate was used or if a 33% compliance rate was used. The authors cite a 67% rate of compliance, but then list a minimum of 14 entries among the acute group. Given a stated 6 signals/day over 7 days, 14 entries corresponds to a 33% rate of compliance.

3. I believe that the authors need to provide a greater acknowledgement of the challenges of this data collection procedure in accessing psychiatric symptoms. For example, they do not adequately address the drop out rate in the acute group. They also do not discuss the issue of adequacy of responses. Are 14 data points (the minimum identified) enough for accurate identification of psychiatric symptoms?

- Discretionary Revisions

1. I don't know that the title accurately reflects the substance of the work. While
this is clearly related to mobile assessment technology, it is more directly related to psychiatric symptoms, as opposed to the generic "psychosis."

2. Indication of the distribution across groups of the 12 cases used to establish inter-rater reliability on the PANSS would be helpful to the reader.

3. Although I believe that the authors have adequately discussed the issue of sensitivity, they might also consider that their technique may have contributed to findings. At least some research has shown that people with schizophrenia fail to maintain an emotional response (Kring et al. 2011). As the technique required the aggregation of experience over 2 hours (on average) a loss of emotional response may have occurred.

4. Table 3 represents figures that are a mean of means (across all participants). As such, they would have their own indicators of variability that should be reported.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests