Author’s response to reviews

Title: Psychometric evaluation of the Bahasa Malay Version of the Montgomery-Asberg Depression Rating Scale (MADRS-BM)

Authors:

Anne HA Yee (annyee17@um.edu.my)
Abdul R Yassim (rahimy@um.edu.my)
Huai Seng Loh (loh.huai-seng@newcastle.edu.my)
Chong Guan Ng (chong_guan@um.edu.my)
Siew Mooi Ching (sm_ching@upm.edu.my)

Version: 6
Date: 15 July 2015

Author’s response to reviews:

Dear Editor,

We are pleased to have given the opportunity to revise our manuscript. We would like to express our gratitude to your constructive feedback to the manuscript. We take your concerns seriously and have addressed them to the best of abilities. Herein, we explain how we revised the paper based on reviewers’ comments and recommendations. We hope you will find this revision acceptable.

Editor:

1/ We ask that you also include a statement in the methods section of your revised manuscript that a copy of the permissions obtained was made available to the editor of the journal.

As suggested, we have included two short statements addressing the issue of permissions, please see page 5, line 19.

Reviewer #1:

1/ Have the authors checked if the number of individuals (150) has been sufficient for a reliable validation? Please, answer this question in the methodology or discussion part.

A rule of thumb in determining sample size, as noted by Costello and Osborne (2005), is based on subject to items of 5:1. The MADRS-BM has nine items. Hence it is statistical appropriate to include 45 individuals with depression and 90 individuals without depression. These changes can be found on page 6, line 1.


2/ Table 2 and Table 4 - please, translate into English!

We have now corrected Table 2 and Table 4 in terms of language.
Table 3 - Spearman's correlation - instead of Pearson's correlation - would be more suitable for ordinal data (however, probably without impact on the results). As suggested, we used Spearman's test to examine correlations between the MADRS-BM and other measures (BDI-II-M, GHQ-12, and SHAPS-M). Results were consistent.

Reviewer 2:
1/ The authors should have to explain how did they diagnosed depression and who did the diagnoses.

The first author who is a trained clinical psychiatrist performed the diagnoses using the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR). Please see page 6, line 16.

Editor:
1/ I strongly recommend cooperation with a psychometrician as the revision of the psychometric methods and analyses will be essential.

We have included Tan Kit-Aun, PhD as co-author. In this revision, we have carefully reviewed and corrected our manuscript, from Background to Conclusion, with Tan’s research expertise on psychometrics and developmental psychopathology.

2/ This is not a diagnostic validation study (not following STARD criteria), but a psychometric evaluation of internal consistency, parallel-test and test-retest reliability, and factor structure. This should be made clear in the title and the manuscript.

As suggested, our title now reads “Psychometric evaluation of the Malay version of the Montgomery-Åsberg Depression Rating Scale (MADRS-BM)”.

3/ Much more details on the “multi-factorial ANOVA” are needed with regard to the detailed analysis method and the results presentation: Why was the ANOVA done two-sided, although you had a directional hypothesis (higher scores in the depression group)? Which post-hoc tests were performed? What do you mean by “adjust variable”? Which were the covariates and which were the factors (with which categories)? Why was the ANOVA not additionally adjusted for religion?

To establish concurrent validity, we examine whether individuals with and without depression would differ significantly in terms of the MADRS-BM scores, while controlling for age, gender, ethnicity, marital status, and educational level. Using demographic information as a proxy measure of clinical features, we expect that the MADRS-BM would differentiate as to whether an individual was or was not suffering from depression. In this regard, we performed analysis of covariance (ANCOVA). We used scores from the MADRS-BM as dependent variable and individuals with depression versus individuals without depression as independent variable. Demographic information such as age, gender, ethnicity, marital status,
and educational level served as covariates. P level was set at 0.025 (one tailed test). We did not perform post hoc test.

In Malaysia, most, if not all Malays, are Muslim. This would mirror the information on ethnicity. To avoid redundancy, we used ethnicity as covariate but not religion.

4/ You mentioned a “screen plot” (I guess you mean “scree plot”).
The term was corrected, as suggested.

5/ You calculated predictive values. This makes no sense, as they strongly depend on prevalence which is abnormally high in your sample. Please omit.
Corrections were made as suggested.

6/ You write “Findings from the study indicate that the MADRS-BM is a reliable and valid instrument for screening depression amongst the Malay speaking population.“ and “it is applicable to all depressed patients in Malaysia for the assessment of depression.“ This cannot be concluded from your study and goes much too far! Please reduce your discussion on the psychometric properties of the scale! (Again: This is not a study on diagnostic accuracy!) Before you can recommend the clinical use of your instrument, at least you have to examine validity in a random sample with a prevalence rate that resembles the real prevalence and demographic structure in the targeted population and setting (e.g. whole population, general practice, gerontopsychiatry etc.). A thorough diagnostic study following STARD criteria would be needed.

We have now carefully concluded our findings. Changes were made as suggested. These changes could be found on page 12, line 4.

7/ Please discuss the limitations of your recruitment strategy and especially the drawbacks of the healthy control group being very different from your patient group. What impact on the results can be expected?
Individuals with depression significantly reported higher MADRS-BM scores than did individuals without depression. Thus, concurrent validity of the MADRS-BM was established. As far as recruitment strategy is concerned, some clinical features such as the severity of depression and the types of antidepressants being used by the patients were not documented in the current study. The presence of such clinical features could affect the MADRS-BM scores as reported by participants. We acknowledged this as one limitation. Please see page 11, line 23.

8/ Post review editing. We recommend that you copyedit the paper to improve the style of written English.
To improve the style of writing, we sought professional service from Editage.com. Our new co-author also extensively corrected the manuscript in terms of language and organization.

Editor:
The manuscript does not seem to be reviewed by a psychometrician. This has to be done. Changing the title is not sufficient. For example, the terms regarding
validity (construct, concurrent) are not used correctly. Please specify the name and affiliation of a psychometrician who has reviewed and corrected the manuscript.

? The abstract has to be revised with regard to the psychometric focus (instead of validation).

We have now revised our previous abstract. We hope this new abstract meets your approval.

? Point 7 has not been addressed sufficiently. The differences in depression scores are not pivotal. Again, please obtain advise from a psychometrician.

"7/Please discuss the limitations of your recruitment strategy and especially the drawbacks of the healthy control group being very different from your patient group. What impact on the results can be expected?"

We have now addressed Point #7. Individuals with depression significantly reported higher MADRS-BM scores than did individuals without depression. Thus, concurrent validity of the MADRS-BM was established. As far as recruitment strategy is concerned, some clinical features such as the severity of depression and the types of antidepressants being used by the patients were not documented in the current study. The presence of such clinical features could affect the MADRS-BM scores as reported by participants.

? The abstract has to be revised with regard to the new psychometric focus (instead of validation).

We have presented a new abstract. We hope this new abstract meets your approval.