Reviewer’s report

Title: Validation of Addenbrooke’s Cognitive Examination III for detecting mild cognitive impairment and dementia in Japan

Version: 0 Date: 18 Jan 2019

Reviewer: Tom Dening

Reviewer's report:

The paper is generally sound and achieves what it sets out to do. The Japanese version of the ACE III seems to be fit for purpose.

On page 5, the authors explain why the ACE III was created to follow on from the ACE-R, its predecessor. It is true that there are some psychometric reasons for this but the main reason was because of the copyright issues around the use of the MMSE, which was embedded in the ACE-R. Therefore the ACE III had to remove the MMSE items and introduced alternatives. I think this needs to be mentioned.

It is not specifically a problem of this paper but I do worry that there is potential circularity in this method of evaluating the properties of instruments of this kind. Ideally the clinical diagnostic assessment should be independent of the cognitive tests that are being evaluated, but this is probably not realistic in practice and I suspect it has not occurred in this study. Instead, it is more likely that the data from the cognitive tests have contributed towards the diagnostic decisions as to which patients were normal or had MCI or dementia. If this is so, then surely we would expect there to be differences on ACE III (and MMSE and HDS-R) scores between the 3 groups. It’s a general problem of this type of study, I think. I think a comment on this issue would be helpful.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal