Reviewer’s report

Title: Activities of daily living in dementia: Revalidation of the E-ADL Test and suggestions for further development

Version: 1 Date: 10 August 2012

Reviewer: Josep Garre-Olmo

Reviewer’s report:

This manuscript reports the results of a revalidation study of the Erlangen Test for Activities of Daily Living (E-ADL-Test) in a large convenience sample of 139 nursing home residents with dementia that participated in a randomized controlled trial (the MAKS project). The introduction section is concise and informative. The objectives of the study are well described. The sample and methods are well characterized. The research question is clearly defined and overall design of the study is appropriate to answer it. The authors should consider the following points:

Major Compulsory Revisions

1. Because the study was performed with the 139 data sets of the first recording of the residents enrolled in the MAKS Project, it would be appropriate to inform about the statistical power related to the concrete study objectives.

2. The hypotheses related to the concurrent criterion validity are correct. However, I’m not confident about the statistical approach. The level of care is an ordinal variable with 3 categories and the E-ADL-Test score is a continuous variable with a range between 0-30 points. Although the eta value is appropriate, it would be more informative to compare the E-ADL Test scores by using the Kruskall-Wallis test, and comparing the mean scores between the levels of care. The ANOVA used for the E_ADL-Test according the MMSE severity should be replaced by the Kruskall-Wallis test.

3. Which correlation coefficients where used for the construct validity, Pearson or Spearman? Taking into account the skewness of the E-ADL-Test, the figure 3 suggest a non normal distribution of the test score. Non-parametric procedures maybe more appropriate. The t-test for the mean comparison in the hypothesis 2 is not appropriate (consider the Man-Whitney test).

4. Please, discuss in more detail the ceiling effect of the individual E-ADL-Test items according to the dementia severity. For example, the item 4 has a low discrimination power, and only items 3 and 5 increases according the severity of the dementia. What implication has this information for the development of new items?

Minor Essential Revisions

1. Include the sum score ranges for all the instruments (in the current form, this
information is missing for the E-ADL-Test and the NOSGER).

2. The statistical approach should be described in more detail in the methods section.

3. Please, include the standard deviation for the mean scores provided for the E-ADL-Test (pag. 12).

4. In the Figure 1 the number of cases that were randomized should be 146 (646 assessed and 500 excluded).

5. Please, indicate that, according to the table 1 values, there were 8 cases with missing information related to the education level.

Discretionary revisions
None

**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'