

Addenbrooke's Cognitive Examination III: A useful neuropsychological test for screening and obtaining cognitive profiles[☆]



Addenbrooke's Cognitive Examination III: un test neuropsicológico útil para el cribado y la obtención de perfiles cognitivos

Dear Editor:

We are grateful to Dr Domínguez-Lara for his comments on our validation study of the Spanish-language version of Addenbrooke's Cognitive Examination III (ACE-III).¹ ACE-III is a cognitive screening test originally developed as an improved extension of the Mini-Mental State Examination.² This test was conceived as a screening and follow-up instrument for patients with frontotemporal dementia and primary progressive aphasia.³

Although the information provided by screening tests is dichotomous, and they are not intended as diagnostic tools, the ACE-III has been proposed as a tool for differentiating Alzheimer disease from frontotemporal dementia.² This test provides specific scores for 5 different cognitive domains: attention, memory, fluency, language, and visuospatial skills.

One of the strengths of ACE-III is that it is useful for obtaining cognitive profiles. Following the recommendations made by Dr Domínguez-Lara, we have calculated the reliability coefficients for each of the ACE-III subtests using normative data from a recently published multicentre study conducted by our research group.⁴ The reliability coefficients are as follows: memory-attention 0.649; fluency-attention 0.615; fluency-memory 0.710; language-attention 0.536; language-memory 0.727; language-fluency 0.646; visuospatial-attention 0.328; visuospatial-memory 0.692; visuospatial-fluency 0.610; and visuospatial-language 0.600. These values are higher than those estimated by Dr Domínguez-Lara, and represent weak or acceptable reliability, depending on the subtest. We should mention that one of the main factors influencing and limiting the calculation of the reliability level is the number of items in a test; the number of items in each subtest or ACE-III domain is low.

It may therefore be more beneficial to evaluate the concurrent validity of each domain using other measures that assess specific cognitive functions. To address this, we recently studied the correlation between each ACE-III cognitive domain and standardised cognitive tests which have

been validated in our setting for the assessment of different cognitive functions.⁵ For example, ACE-III domains memory and language showed a strong correlation ($r=0.806$ and $r=0.744$) with the Free and Cued Selective Reminding Test and the Boston Naming Test, respectively.

In conclusion, the studies conducted to date with the ACE-III in the Spanish population confirm the validity of this test as a screening tool for dementia and mild cognitive impairment. Furthermore, its reliability and especially its concurrent validity with other tests specifically designed to assess particular cognitive functions support the usefulness of ACE-III as a tool for determining patients' cognitive profiles.⁶

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