

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	FMC – Speech Pathology
JC Facilitator	Pamela Hewavasam
JC Discipline	Speech Pathology
CAT completed by:	MC

Question

Not included

Review Question/PICO/PACO

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Article/Paper

Demeyere, N., Riddoch, M.J., Slavkova, E.D., Jones, K., Reckless, I., Mathieson, P. and Humphreys, G.W., 2016. Domain-specific versus generalized cognitive screening in acute stroke. *Journal of neurology*, 263(2), pp.306-315.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).

Article Methodology:

Diagnostic cohort study

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Ques No.	Yes	Can't Tell	No	Comments
1		✓		<p>Was there a clear question for the study to address?</p> <p>This study compared the use of the MoCA and the OCS in acute stroke with respect to symptom specificity and aspects of clinical utility.</p> <p><i>The research focus did not specifically identify what outcomes they were interested in. E.g. what symptoms? What measures of clinical utility?</i></p>
2			✓	<p>Was there a comparison with an appropriate reference standard?</p> <p>We note that a 'standard of truth' does not exist for assessments of cognition. Here, we simply assess the sensitivity of the OCS relative to a current gold standard of clinical practice, the MOCA.</p> <p><i>The authors do not make it clear if the MoCA is being treated as the reference standard (i.e. the gold standard) for all the outcomes they are interested in (e.g. symptom specificity and clinical utility).</i></p> <p>Is it worth continuing?</p> <p>Yes.</p>
3	✓			<p>Did all patients get the diagnostic test and reference standard?</p> <p>Once informed consent was given, participants completed the two cognitive screens with a trained researcher, using a randomised ordering of the tests.</p> <p><i>Note: all participants received both tests but neither test was the gold standard test (reference standard).</i></p>
4	✓			<p>Could the results of the test have been influenced by the results of the reference standard (e.g. the second test to be performed)?</p> <p>There was a maximum of 5 days between assessments, with 90 % of patients assessed on both screens within 24 h (average 1 days, SD = 1.3).</p> <p><i>Yes, the authors did not identify if the researcher who administered the test was blinded to the results. Therefore the researcher could have unwittingly biased the results.</i></p>
5	✓			<p>Is the disease status of the tested population clearly described?</p> <p><i>Yes. Tables 1 and 2 report on patient characteristics and their abilities.</i></p>

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6		✓	<p>Were the methods for performing the test described in detail?</p> <p>Once informed consent was given, participants completed the two cognitive screens with a trained researcher, using a randomised ordering of the tests. There was a maximum of 5 days between assessments, with 90 % of patients assessed on both screens within 24 h (average 1 days, SD = 1.3). Two patients were excluded from the analysis as they had a further serious medical event before the second cognitive assessment could be completed.</p> <p><i>The authors did not report on the need (if there was) for the researcher to provide support for participants who struggled answering the test. This introduces a confounder.</i></p>
7			<p>What are the results?</p> <p>In the mild aphasic patients, this led to higher pass rates for the OCS orientation test compared to the equivalent subtest in the MoCA (42 vs 65 % impaired, one-tailed Fisher's exact probability, p 0.026). Comparisons of the OCS trail making test (which uses non-verbal shapes) with the MoCA equivalent (which uses letters and numbers) again reveal a significantly better performance in the OCS (51 vs 78 % impaired, one-tailed Fisher's exact p = 0.038). no differences in performance on the two comparable orientation tasks were found (2 % impaired in both OCS and MoCA), nor were any difference in impairment rates on the OCS vs MoCA trail making subtests noted (Fisher's exact p = 0.22). In sum, the performance on equivalent trail making and orientation tasks indicates that mild language impairments are more likely to impact on these similar tests in the MoCA than the OCS, confirming the successful attempt by the OCS to maximise the inclusion of patients with language impairments through reducing language demands on the cognitive domain subtests not assessing language. The results also further highlight the confounding effects of language impairments on the MoCA tasks and its return of a single overall score. We conclude that failures on the putative non-language tests in the MoCA can reflect impaired language rather than a true deficit in these other domains.</p> <p>The data showed that, overall, the OCS had higher sensitivity than the MoCA in detecting cognitive impairments (88 vs 78 %). The OCS also detected significant numbers of patients with deficits in neglect, apraxia, reading, writing and number processing that went undetected using the MoCA.</p> <p>In conclusion, the results indicate the OCS is a practical and sensitive tool for detecting and reporting important domain-specific cognitive problems after stroke. It maximises inclusion by being designed to reduce effects of aphasia and neglect. In these aspects, the OCS goes beyond measures derived from short dementia screens.</p> <p><i>The authors did not report on clinical utility. The authors did not clearly identify which cognitive impairments (e.g. language, memory, number etc) the OCS performed better than the MoCA.</i></p>
8			<p>How sure are we about the results? (consequences and cost of alternatives performed?)</p> <p><i>The authors' used Fisher's exact (a measure of significance similar to statistical significance) to report on the significance of the results. No mention of cost-benefit or other alternatives. No discussion of the consequence of using the OCS.</i></p>

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9		Do you believe the results?
10	Journal Club to discuss	<p>Can the results be applied to the local population? Choose relevant context issues. The following are only suggestions to prompt discussion.</p> <p>CONTEXT ASSESSMENT</p> <ul style="list-style-type: none"> - Infrastructure - Available workforce (? Need for substitute workforce?) - Patient characteristics - Training and upskilling, accreditation, recognition - Ready access to information sources - Legislative, financial & systems support - Health service system, referral processes and decision-makers - Communication - Best ways of presenting information to different end-users - Availability of relevant equipment - Cultural acceptability of recommendations - Others
11		<p>Were all outcomes important to the individual or population considered?</p> <p>What would be the impact of using this test on your patients/population?</p>
12		Are the benefits worth the harms and costs?
13		What do the study findings mean to practice (i.e. clinical practice, systems or processes)?
14		<p>What are your next steps?</p> <p>ADOPT, CONTEXTUALISE, ADAPT</p> <p>And then (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)</p>
15		What is required to implement these next steps?