International Centre for Allied Health Evidence

University of South Australia

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iCAHE

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*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	Flinders Medical Centre
JC Facilitator	Pamela Hewavasam
JC Discipline	Speech Pathology
CAT completed by:	Matt Ransom

Question

How does the Oxford Cognitive screen compare to the Mini-mental state examination in detecting cognitive symptoms after stroke?

Review Question/PICO/PACO

P Patients with cognitive impairments post stroke

I Oxford Cognitive Screen

C Mini-mental state examination

O Ability to detect cognitive symptoms post stroke

Article/Paper

Mancuso, M., Demeyere, N., Abbruzzese, L., Damora, A., Varalta, V., Pirrotta, F., Antonucci, G., Matano, A., Caputo, M., Caruso, M.G. and Pontiggia, G.T., 2018. Using the Oxford cognitive screen to Detect cognitive impairment in stroke Patients: a comparison with the Mini-Mental state examination. Frontiers in neurology, 9, p.101.

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

Click here to access critical appraisal tool

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Was there a clear question for the study to address?** Study aimed to compare the Oxford Cognitive Screen (OCS) with the Mini-mental state examination (MMSE) in detecting cognitive symptoms after stroke, thereby providing further data on the sensitivity and specificity of the OCS in the identification of cognitive deficits in a relatively large sample of first stroke patients.
2	✓			**Was there a comparison with an appropriate reference standard?** MMSE, Bamford classification and NIHSS **Is it worth continuing?** Yes
3			✓	**Did all patients get the diagnostic test and reference standard?** 325 first stroke patients were consecutively enrolled For three patients (0.9%) the OCS could not be given at all. In a few cases, some tests could not be administered (see Table 2). The MMSE could not be administered to six patients.
4	✓			**Could the results of the test have been influenced by the results of the reference standard?** Yes there is a possibility and the authors have tried to negate this, however, they did not use randomisation - The OCS and MMSE were presented on the same day; order of presentation of the two tests was counterbalanced on an ABAB basis for each rehabilitation centre.

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5			✓	**Is the disease status of the tested population clearly described?** More detail could have been provided **TABLE 1** | Characteristics of the sample. Gender: Male 178 (54.7); Female 147 (45.2) Etiology: Ischemic 278 (85.5); Hemorrhagic 44 (13.5) Lesion lateralization: Unilateral left hemisphere 122 (37.5); Unilateral right hemisphere 184 (56.6); Bilateral/cerebellar 19 (5.8) Vascular territory affected for ischemic patients: Bamford classification (n = 274): TACI 58 (17.8); LACI 76 (23.3); PACI 91 (28); POCI 54 (16.6) Stroke severity: NIHSS: Minor 171 (52.6); Moderate 136 (41.8); Moderate to severe 13 (4); Severe 4 (1.2)
6	✓			**Were the methods for performing the test described in detail?** See Cognitive screening tests under materials and methods The OCS and MMSE were presented on the same day; order of presentation of the two tests was counterbalanced on an ABAB basis for each rehabilitation centre. Tests were administered in a quiet and comfortable setting. More detailed in paper

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7		**What are the results?** About a third of patients (35.3%) had a performance lower than the cutoff (<22) on the MMSE, whereas 91.6% were impaired in at least one OCS domain, indicating higher incidences of impairment for the OCS. More than 80% of patients showed an impairment in two or more cognitive domains of the OCS. Using the MMSE as a standard of clinical practice, the comparative sensitivity of OCS was 100%. Out of the 208 patients with normal MMSE performance 180 showed impaired performance in at least one domain of the OCS. The discrepancy between OCS and MMSE was particularly strong for patients with milder strokes. As for subtypes of cerebral infarction, fewer patients demonstrated widespread impairments in the OCS in the Posterior Circulation Infarcts category than in the other categories. Overall, the results showed a much higher incidence of cognitive impairment with the OCS than with the MMSE and demonstrated no false negatives for OCS vs MMSE. The authors concluded that OCS is a sensitive screen tool for cognitive deficits after stroke. In particular, the OCS detects high incidences of stroke-specific cognitive impairments, not detected by the MMSE, demonstrating the importance of cognitive profiling.
8	Journal Club to discuss	**How sure are we about the results? (consequences and cost of alternatives performed?)** Could discuss how results may be affected by inclusion/exclusion criteria, may limit generalizability to those patients with comorbidities and difficulties with concentrating. - Exclusion criteria stated: Patients with the presence of premorbid psychiatric or neurological disease; patients unable to give informed consent; patients without ability to concentrate for <20 min (as judged by the care team).
9		**Do you believe the results?**

10		**Can the results be applied to the local population? Choose relevant context issues. The following are only suggestions to prompt discussion.** **CONTEXT ASSESSMENT** – *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		**Were all outcomes important to the individual or population considered?** **What would be the impact of using this test on your patients/population?**
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		**What are your next steps?** ***ADOPT, CONTEXTUALISE, ADAPT*** **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.)**
15		**What is required to implement these next steps?**

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