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	Modbury Hospital
JC Facilitator	Alyce Berry
JC Discipline	Occupational Therapy

Question

N/A

Review Question/PICO/PACO

P N/A

I N/A

C N/A

O N/A

Article/Paper

Carey, L, Macdonell, R, Matyas, TA 2011, 'SENSe: Study of the Effectiveness of Neurorehabilitation on Sensation: A Randomized Controlled Trial', Neurorehabilitation and Neural Repair, vol. 25, no. 4, pp. 304–313.

Article Methodology

Randomized Controlled Trial

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Did the trial address a clearly focused issue?** Yes. "The study aimed to compare the effectiveness of a perceptual-learning based sensory discrimination program versus non-specific exposure to sensory stimuli via passive movements and grasping of common objects".
2	✓			**Was the assignment of patients to treatments randomised?** Yes. "Randomization within this study was computer generated, with proportional sampling to control for side of lesion (and gender). Allocation to intervention was concealed from recruiting therapists. Independent assignment was managed centrally by a researcher who did not have any contact with stroke survivors and had only remote contact with treating therapists to inform them of allocation via sealed opaque envelopes or electronic mail just prior to commencement of intervention, thus the sequence of allocation was concealed from recruiting and treating therapists. Consecutive assignment occurred by randomly allocating the first arriving right-sided lesion subject to the experimental or control group, with the next right-sided lesion subject (of the same gender) going to the other group. The process was repeated for each consecutive pair of right-sided or left sided lesion subjects, the first member always being allocated at random. The person assigning subjects was different to the executors of the assignment".
3	✓			**Were all of the patients who entered the trial properly accounted for at its conclusion?** Yes. "Both intervention and control groups were analysed within the groups to which they were randomized at the beginning of the study. The study did not encounter any issues and therefore all participants that were initially recruited had participated and been accounted for in the results, which is represented in Table1, Table 2 and Figure's 2, 3". **Is it worth continuing?** Yes.

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4				**Were patients, health workers and study personnel 'blind' to treatment?** Yes. "Subjects, clinical assessors and data analysts were all blinded to treatment within the study".
5	✓			**Were the groups similar at the start of the trial?** Yes. "Participants were stroke survivors with impaired texture discrimination, limb position sense, and/or tactile object recognition, identified clinically and by standardized tests below, were recruited at least 6 weeks poststroke. They were eligible to participate if they were medically stable, had adequate comprehension of instructions18 and perceptual ability for assessment, and were able to commit time to participate in the rehabilitation program".
6		✓		**Aside from the experimental intervention, were the groups treated equally?** Not sure. "Not discussed within the article".
7	**What are the results?** *"Between-group comparisons revealed a significantly greater improvement in sensory capacity following sensory discrimination training, t (47) = 2.75, P = .004, 1-tailed; mean between-group change = 11.1 SSD; confidence interval 3.0 to 19.2. Improvements were maintained at 6 weeks and 6 months".* **How large was the treatment effect?** Effect size was not discussed within the article, however based on what is observed through table 2, the experimental group, overall had higher mean difference and variance scores, compared to the control group at change of phase and at follow-up. Although this provides a level of significance in relation to change between the two groups, it does not indicate statistical significance.			
8	**How precise was the estimate of the treatment effect?** Final follow-up for the immediate intervention group was 29.2 SSD (confidence interval: 18.6 to 39.9; $t = 5.56$, $P < .001$) and for the delayed intervention group, when adjusted for phase 1 change, was 25.7 SSD (confidence interval: 17.3 to 34.1; $t = 6.37$; $P < .001$). The delayed intervention group also showed improvement following sensory training but did not quite reach accepted standards of statistical significance relative to the control intervention			

9	Journal Club to discuss	**Can the results be applied to the local population?** **CONTEXT ASSESSMENT (please refer to attached document)** – *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*
10		**Were all important outcomes considered?**
11		**Are the benefits worth the harms and costs?**
12		**What do the study findings mean to practice (i.e. clinical practice, systems or processes)?**
13		**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.)**
14		**What is required to implement these next steps?**

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