International Centre for Allied Health Evidence

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*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club	Western Therapy Service
JC Facilitator	Lorien Coff
JC Discipline	Occupational Therapy

Review Question/PICO/PECO

P stroke patients

E mental imagery

C nil

O improved function

Article/Paper

Kumar K, Chakrapani M 2011 'Integrated mental practice training improves functional mobility in chronic stroke: a pilot study', *International Journal of Neurology and Neurosurgery*, vol. 3, no. 2, pp. 15-20.

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:	Quasi-experimental study
Journal Club Meeting on:	30th July 2013

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			***Was the purpose stated clearly?*** The objective of the study was to investigate the effects of combining mental practice with physical practice on functional mobility of patients with chronic stroke.
2	✓			***Was relevant background literature reviewed?*** The authors have cited previous studies which examined the effect of mental practice on stroke patients. They argued that these studies focused on upper extremity function and that literature on lower extremity was sparse; hence the need for the current study. **Is it worth continuing?** Yes
3	✓			***Was the design appropriate for the study question?*** The study utilised a pre-post quasi experimental design (with a pilot group), which can be considered appropriate given the objectives of the current study. A randomised controlled trial would have been an ideal design to provide evidence of effectiveness, however as this study was the first to examine mental imagery for lower extremity function it was appropriate to trial it first with a small pilot sample. A pilot study was undertaken to obtain preliminary information about the intervention, which could then be used to design a larger, multi-centre randomised controlled trial. A pilot study is a small scale investigation designed *to test the feasibility of methods and procedures for later use on a large scale or to search for possible effects and associations that may be worth following up in a subsequent larger study* (Everitt B: Medical Statistics from A to Z: A Guide for Clinicians and Medical Students Cambridge University Press: Cambridge, 2006)
4	✓ ✓		✓	***Was the sample described in detail?*** Table 1 shows the characteristics of the participants who entered the trial. ***Was sample size justified?*** Twelve subjects were included in the study, which is a small sample size. As this was a pilot study, a small number of participants is acceptable; however, results of the study should be interpreted with caution. ***Was informed consent obtained?*** Ethics approval was obtained from the ethics committee board of Kasturba Medical College, Mangalore. A written informed consent was obtained prior to participation.
5	✓			***Were the outcome measures valid and reliable?*** The Functional Gait Assessment and Timed Up and Go test are known to have strong psychometric properties (i.e. validity and reliability).

6	✓ ✓			***Results were reported in terms of statistical significance?*** Results were reported in median/mean and p-values (to show if there is significant difference between pre and post values). ***Was the analysis method appropriate?*** Mann Whitney U test and t-test were used to determine if a significant difference exists between pre and post treatment scores. **Mann Whitney U test is used to determine if a difference exists between two sets of values (e.g. pre and post test scores). It is a non-parametric test, and is therefore used when the distribution of scores is not normal. The t-test, on the other hand, has a similar function to the Mann Whitney U test, except that it is used for comparing values with normal distribution.* ***Clinical importance was reported?*** Journal club to answer
7	✓			***Drop outs were reported?*** All 12 participants were included in the analysis---there were no drop-outs in the study.
8	✓			***Conclusions were appropriate given study methods and results?*** Bottom line results: There is emerging evidence that mental imagery provides additional benefits to physiotherapy in improving functional mobility in patients with chronic stroke.

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