

CAHE JC Critically Appraised Article Summary

Journal Club criteria

Date of submission	Pilot 2007
Journal Club location	Southern Cross Care
JC Facilitator	Jane Campbell

Clinical Scenario

Is group exercise more effective than hands on physiotherapy in reducing low back pain

Review Question/PICO/PACO

- P** People who have had a chronic low back pain (non specific, non acute) for a period longer than 2 years
- I** Group exercise program / walking program
- C** Individual hands on physiotherapy treatment
- O** SF36 / QOL / VAS / representation to GP or PT / reliance on medication

Article/Paper

Mannion, A F. Comparison of three active therapies for chronic low back pain: results of a randomized clinical trial with one-year follow-up. *Rheumatology* (Oxford, England). 2001;40(7):772

Article Methodology:	Randomised Controlled Trial
Returned JC on:	17 August 2007
By CAHE staff member:	Matt Sutton

research
Centre for Allied Health Evidence
news



University of
South Australia

CAHE

Centre for Allied
Health Evidence

a collaborating centre of



THE JOANNA BRIGGS INSTITUTE

The Centre for Allied Health Evidence (CAHE)

Tel 08 8302 2769 Fax 08 8302 2766 Email karen.grimmer@unisa.edu.au
University of South Australia GPO Box 2471 Adelaide SA 5001 Australia
To receive CAHE updates register online at www.unisa.edu.au/cahe

Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Population</p> <ul style="list-style-type: none"> • <65 years old • LBP > 3/12 (average length approx 9 – 13 years) +/- radicular symptoms • Recruited by advertising in local media (Switzerland) <p>Intervention</p> <ul style="list-style-type: none"> • Physiotherapy-half hour sessions focusing on improved functional capacity • Devices-1 hour sessions in groups of 2-3 for muscle reconditioning in devices/machines, 4 different exercises applying isoinertial(?) forces to the trunk with 5-10 min warm up and cool down (cardio and stretches) • Aerobics-low impact aerobics for 1 hour 12per group, 10-20 warm up, 20-30 mins trunk and leg muscle exercises, 15 min cool down • It is not stated how frequently patients were given each intervention. Treatment duration was 3 months. <p>Outcomes</p> <ul style="list-style-type: none"> • Pain • Disability • Psychological parameters • Duration of treatment effect •
2	✓			The study was comparing different treatment techniques for a uniform population, thus making an RCT the most appropriate study design. Is it worth continuing? YES
3	✓			A random table was used and groups were stratified according to age (< or > than 40) and sex to ensure equal numbers of men and women and those aged above or below 40 were in each group.
4			✓	Blinding of participants and therapists is unrealistic, however, assessors could have been. This is less likely to be an issue as the outcome measures are all patient reported, or subjective measures.
5			✓	There was an 86% follow up at the final end point. The data was treated with an intention to treat analysis.
6	✓			All patients were given the questionnaires on initiation of intervention, immediately post intervention (3 months), and at 6 and 12 month period follow ups.
7			✓	A power calculation was carried out stating 54 participants per group were required, however, there were only 49-50. However, this still represents a significant sample size.

Ques No.	Yes	Can't Tell	No	Comments
8				<p>Results were presented as difference between pre and post intervention for each intervention, and differences between interventions pre and post. Results were presented as statistical significance with p values and clinically significant differences.</p> <p>Pain and Pain frequency -all groups showed statistically significant improvements in pain scores, with no statistically significant differences between groups. This was maintained for 12 months. 36.2% of participants showed clinically significant improvements in pain with no differences between groups.</p> <p>Disability All groups showed statistically significant reduction in disability, however reductions were greater for the aerobics and devices group. 33.9% showed statistically significant reductions in disability.</p> <p>Duration of Treatment Effect No significant differences, however the effects were larger for both the devices and aerobics than the physiotherapy group.</p> <p>Psychological parameters Fear avoidance regarding physical activity and work was significantly reduced for all groups. It is worth noting that fear avoidance scores actually increased after physiotherapy intervention was ceased, followed by a decrease, whereas, the other 2 groups showed a continuous decrease.</p>
9				<p>Only p values have been reported, with values<0.05 considered significant as is the norm. As stated there were no statistically significant differences between groups, however, all groups showed significant improvements, and these improvements had a greater trend for the aerobics and device group.</p>
10		✓		<p>It should be noted that 39% of participants were receiving alternative treatments for their LBP during the study period. Although it has been stated that all groups were statistically even in this regard, it is a strong potentially confounding variable that has not been included in the analysis.</p>