

iCAHE JC Critical Appraisal Summary

Journal Club Details

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|------------------------------|---------------|
| Journal Club location | DomCare |
| JC Facilitator | Amanda Burdon |
| JC Discipline | Physiotherapy |

Clinical Scenario

What is the effective dose (time and frequency) for a supervised home based exercise program?

Review Question/PICO/PACO

- P Older patients over 65, community dwelling
- E Supervised home-based exercise program
- C n/a
- O ability to remain at home, independence in ADLs

Article/Paper

Matsuda PN, Shumway-Cook A, Ciol MA (2010) The effects of a home-based exercise program on physical function in frail older adults, *Journal of Geriatric Physical Therapy*, 33: 78-84.

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: Pre-post study

Returned JC on: 23 March 2010



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| Ques No. | Yes | Can't Tell | No | Comments |
|----------|-----|------------|----|--|
| 1 | ✓ | | | Was the purpose stated clearly? The purpose of the study was to describe the effects of a 6-week home-based exercise program on the physical functioning of frail older adults, including its impact on their exercise-related beliefs, self-efficacy and outcomes expectations. |
| 2 | ✓ | | | Was relevant background literature reviewed? The study provided background literature about the effects of exercise on older adults. Previous researches have used different formats and intensity of exercise, level of supervision and have included older people with different degrees of frailty. |
| 3 | | | | What is the study design? This paper reports a pre and post study (before and after design) which included 72 frail older adults. A pre-post study investigates whether participants improve or deteriorate during the course of an intervention, and then attributes such effects to the intervention. Without reference to a control group, findings from this type of study may lead to erroneous conclusions about the effectiveness of an intervention. A pre-post study cannot answer whether the participants' improvement or deterioration would have occurred anyway, even without the intervention. Whilst it may be useful for hypothesis-generation, it cannot be relied upon to inform policy decisions. |
| 4 | ✓ | | ✓ | Was the sample described in detail? Participants were 55 years and older, having two or more chronic conditions; have the ability to ambulate independently (with or without assistive device); with functional vision; not currently receiving physical or occupational therapy. Was sample size justified? The sample size was not justified. |
| 5 | | ✓ | | Were the outcome measures valid and reliable? The authors did not provide any information about the reliability and validity of the outcome measures used. |

| | | | |
|---|---|---|---|
| 6 | ✓ | | <p>Results were reported in statistical significance? Were the analysis methods appropriate?</p> <p>Findings were presented using mean change in scores for the different outcome measures. Paired t-test was used to determine whether the difference between post-test scores and baseline measures is significant.</p> <p>Clinical importance reported?</p> <p>This study suggests that participation in a supervised home-based exercise program is safe and could lead to improvements in physical and exercise-related belief outcomes in frail older adults.</p> |
| 7 | | ✓ | <p>Drop-outs were reported?</p> <p>Whilst this study reported that not all subjects were measured at baseline and post-intervention, the authors did not provide any information as to why this is the case.</p> |
| 8 | ✓ | | <p>Conclusions were appropriate given study methods and results?</p> <p><u>Conclusion:</u></p> <p>Whilst the results of the exercise program seemed promising, a randomised controlled trial is required to provide more conclusive findings. Information on specific types, modes, dose and duration of exercise that maximise benefits are needed.</p> |

Summary of Journal Club Discussion

- Cohort study identified as not strong evidence for any changes to practice. The results are not readily transferrable to different client groups and no control group was used to eliminate the degree of chance.
- Much discussion about the effects of degree and the varying definitions of frailty, especially in relation to the concept of the obese frail older adult
- Key points for success seem to be an individualised, progressive, supervised in the home exercise program.
- Does offer some support for our model of care (home based supervised exercise programs)
- When deciding between a home and clinic based program the individual and their circumstances need to be considered.

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