

# CAHE JC Critically Appraised Article Summary

## Journal Club criteria

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<b>Date of submission</b>	Pilot 2007
<b>Journal Club location</b>	Southern Cross Care
<b>JC Facilitator</b>	Jane Campbell

### **Clinical Scenario**

Is exercise effective in improving QOL compared with medication in people over 60 with clinically diagnosed depression?

### **Review Question/PICO/PACO**

- P** People over 60 years old, clinically diagnosed with depression
- I** Educational Lifestyle Group incorporating an exercise component
- C** Medication management for Depression
- O** HADS / QOL

### **Article/Paper**

G. A. Brenes, J. D. Williamson, S. P. Messier, W. J. Rejeski, M. Pahor, E. I, & B. W. J. H. Penninx. Treatment of minor depression in older adults: A pilot study comparing sertraline and exercise. *Aging & Mental Health*, 2007; 11(1): 61–68

<b>Article Methodology:</b>	Randomised Controlled Trial
<b>Returned JC on:</b>	Pilot 2007
<b>By CAHE staff member:</b>	Matt Sutton



Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p><b>Population:</b></p> <ul style="list-style-type: none"> <li>Adults &gt;65 with 2-4 depressive symptoms</li> <li>MMSE&gt;22</li> <li>Excluded anti depressant use, comrbidities contraindicating exercise, current alcohol or substance abuse, bipolar disorder, and other severe psychiatric diagnoses.</li> <li>Participants volunteered for the study (this is obviously not a typical clinical situation)</li> </ul> <p><b>Intervention</b></p> <ol style="list-style-type: none"> <li>Medication           <ul style="list-style-type: none"> <li>Sertraline, dosage as per physicians directions. Monitored regularly</li> </ul> </li> <li>Exercise           <ul style="list-style-type: none"> <li>exercise three days per week for 16 weeks</li> <li>sessions 60 minutes</li> <li>aerobic and resistance training.</li> <li>5 minute warm up, 15-minute aerobic phase, 20-minute resistance training phase, 15-minute aerobic phase, and five minute cool-down period.</li> <li>Exercises carried out in group format</li> </ul> </li> </ol> <p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>Emotional functioning (Hamilton Depression Rating Scale, 15-item Geriatric Depression Scale and the mental health scale of the SF-36)</li> <li>Physical functioning (23-item questionnaire of physical disability from the FAST</li> <li>study, the Epidemiologic Studies of the Elderly Short Physical Performance</li> <li>Battery and the physical health scale of the SF-36</li> </ul>
2	✓			The study question is appropriately addressed using a RCT design. Is it worth continuing? <b>YES</b>
3	✓			Randomisation was carried out using a computer-generated random allocation list. No further details are given re randomisation. Given the level of depression on the HRDS for the usual care group was significantly lower than the other 2 groups, it could be argued that further randomisation should have taken place (stratification), especially as this was the main dependent variable. This is a critical statistic which should not be overlooked.
4			✓	The assessors were blinded to the allocation of the participants. This is the most important group to be blinded to minimise observer bias. It is unrealistic to blind the participants or the interveners.

Ques No.	Yes	Can't Tell	No	Comments
5	✓			It is stated an intention-to-treat analysis was carried out, meaning all participants were evaluated in the groups they were allocated to initially, regardless if they changed groups, or dropped out of the study. It would have been preferable to have this backed up with exact numbers, via tables in the results section. It is stated 80% of the exercise group participants and 91% of the medication group completed the study. We must therefore assume an intention to treat analysis was carried out on those that didn't complete the study.
6	✓			All data was collected at baseline and 4 months, for all groups.
7			✓	While a RCT, this study was still a pilot, thus meaning the sample numbers were too small to be certain of the effect sizes and type II error.
8				<p>Results were presented statistically in the form of p values and effect sizes.</p> <p>Both exercise and medication was statistically significantly more likely to improve mental health compared with usual care when assessed with the mental health component of the SF 36, and approaches significance for both with the HDRS. Exercise was non statistically significantly better than usual care at reducing physical disability. Medication was worse than usual care (non stat sig) in reducing physical disability. This seems a rather odd finding with no explanation offered.</p> <p>There are a couple of issues worth noting:</p> <ul style="list-style-type: none"> <li>Quality of Life Assessments such as the SF 36 incorporate multiple domains, eg mental and physical health. Some studies will analyse each domain to make even further comparisons, which is what has been done for this paper. Others may only report on the overall SF36 score, which will be less meaningful.</li> <li>The usual care group had a significantly lower rating on the HRDS score at baseline, thus making further improvements more difficult (as well as putting in doubt the uniformity of the entire sample at baseline)</li> </ul> <p>The bottom line appears to be that exercise for people with mild depression may be better than usual care at reducing depression and may be better than both usual care and sertraline at improving aspects of physical ability.</p>
9				The results are presented as p values, with statistical significance for exercise versus usual care only for the mental health component of the SF36. Many other domains showed greater improvements for the exercise group, however, most were non statistically significant.
10		✓		Whilst basic demographic characteristics of the sample (age, gender etc) are presented, it should be noted that the sample was recruited from a wide variety of sources, and thus other potentially important confounding variables relating to demographic information (eg community dwelling?) are not well presented. It is unclear if the sample correlates with either the general community or specific sub-populations of the community.