Reviewer's report

Title: Effects of two exercise protocols in postural balance of elderly women: a randomised controlled trial

Version: 1  Date: 4 February 2015

Reviewer: Kate Bolam

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The study set out to examine the effects of 2 different exercise modalities on the balance of older women. Significant effects were found as a result of both exercise interventions. The study has been well conducted and the results are promising however the clarity and detail of the study reporting requires considerable attention before publication. In particular I would like to raise the following concerns:

- Major Compulsory Revisions

Introduction

1. It's not overly clear in the introduction or paragraph detailing the aim, that the 2 different methods of exercise will be trialed separately with the 2 groups trialing one method each. Please reword to clarify this.

2. Our ultimate goal is to identify the best method of preventing falls and promoting 97 health through functional independence.

This statement is not in line with the aim of the study. Please revise. To find the best method, all possible methods would have to be trialed, but in this study only 2 are examined. I would suggest deleting or re-wording this sentence

Study participants

3. The recruitment process could be much clearer. What is meant by “personally invited”? How were these women contacted?

4. Who determined if the participants were in sufficient health to execute all study tasks? Were participants activity patterns monitored before recruitment?

5. Do the authors mean that the participants should have been sedentary (and healthy) or are they defining sedentary behavior as being unhealthy?

6. Why were participants excluded if they missed 2 sessions?

7. This description of the participants and recruitment process and criteria would benefit from being clearer and in greater detail.

8. Is the age range 60-80 a study inclusion criterion? Please make this clearer.

9. Were the participants trained (exercising) prior to entry into the study? Was this measured? If not, please add this to the limitations section.

10. While it is important to have inclusion and exclusion criteria when designing
studies, these must be considered when transferring the results to other populations. Please make mention of this in the discussion/limitations section.

Study design
11. Who conducted the initial evaluation and what did it entail? Please include this in this section.

Outcome measures
14. The platform was demarcated in the first trial of each individual as support base, and repeated in the other trials to ensure the same basis in all tests, as suggested by Teixeira et al [16].

Please re-word this sentence to improve its clarity.

Proprioceptive Neuromuscular Facilitation intervention
15. The description of this modality in the first paragraph of this section would benefit from some re-wording, and work on sentence structure and grammar to add clarity to the explanation of the intervention. For example- please better explain what is mean by “soon after”.

Data analysis
16. Were there differences between the groups for the main outcome variables? And if so- were they accounted for statistically?
17. Were equivalent non-parametric tests needed for between groups analysis?
18. Were sample size calculations performed prior to recruitment, please add them to this section. If not, please add this to the limitations section.

Results
19. While the within groups results are of interest, it is most important to report the between groups differences as the first results written (suggest changing the order so that all between groups comparisons results are written before within groups comparisons results). Table 5 should also be before tables 3 and 4.
20. It should be made clearer throughout the results section about which analyses the authors are referring to in the results section- between OR within groups analyses. Additionally, between and within comparisons are commonly understood terminology and it’s not necessary to explain them (eg. before and after differences means). This should also be clearer in the discussion.
21. Was attendance to the sessions and adherence to the program monitored and measured? If so, please detail this in the methods and results section. If not, please add this as a limitation in the discussion.

Discussion
22. Please work on sentence construction, grammar and editing throughout. In its current state, these issues compromise the readability of this section.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests