Author’s response to reviews

Title: Effects of two exercise protocols on postural balance of elderly women: a randomized controlled trial

Authors:

Laiana S A Mesquita (laianasepulveda@hotmail.com)
Fabiana T Carvalho (fabianatcarvalho@hotmail.com)
Lara S A Freire (larasepulveda@hotmail.com)
Osmar P Neto (osmarpintoneto@hotmail.com)
Renato A Zângaro (razangaro@gmail.com)

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Author’s response to reviews: see over
Dear Editor,

We have revised our manuscript in accordance with your suggestions. Modifications are shown in green highlighted text. If any further modifications are required before our paper is published in *BMC Geriatrics*, please do not hesitate to contact me.

1. Please provide a sample size calculation. Ideally, a sample size calculation is done before recruitment starts, to estimate the number of people required for a sufficiently powered trial. Just because you were able to access this church group, doesn’t mean a sample size calculation is not required. It would be good to reflect in the discussion on whether the current sample size was adequate for the study aims.

Response:
- A sample size calculation has been done (lines 134-136).

2. It is unusual to list 2 absences from the sessions as an exclusion criterion (line 113), as you won’t know this until the end of the study. Also, listing this as an exclusion criterion means that you are overestimating the attendance rates of the exercise and testing sessions (lines 241-243). So rather than a recruitment exclusion criteria, it would be more appropriate to describe this as a reason for exclusion from the analyses. Not including these women in the analyses also means that you are doing a per protocol analyses only, which should be specified in the data analyses paragraph. It would however be better to also include an intention-to-treat analyses (in fact, this should ideally be your primary model), which you could do using mixed modelling to account for the missing data at follow-up. If you decide to present per protocol analyses only (as you do now), then please explain why and describe this as a limitation in the discussion.

Response
- We have specified this is a per protocol analysis (lines 227-230) and added a paragraph in the discussion session describing it as a limitation (lines 401-403). We have also removed the absences from the exclusion criteria’s list.

3. Lines 228 and 231: please replace normality standard with normal distribution.
4. Lines 239-240: These two sentences are contradicting and therefore confusing. I suggest revising as No differences in age, weight, height and body mass index were found between the three groups (Table 2). Also, it would be good to describe the sample size and average age and numbers per group in the opening sentence of the results section.

5. Line 252: GP should be PG, I assume.
6. The abundance of abbreviations used in the paragraph on stabilometric data (page 12), make this paragraph difficult to read. Perhaps you could rephrase this as The between-group comparisons showed that the PNF group had
greater reductions in four of the seven sway measures than the control group (Table 3). No significant differences were found between the Pilates and control groups in any of the sway measures. And something similar for the last sentence of this paragraph.

7. Table 3: The table looks good, but the following clarifications would be helpful:
   a. Line 539: please provide the cut-off for significance used for the post-hoc test, e.g. p<0.05.
   b. Line 538: please add presented as mean ± standard deviation of the pre- to post-test differences calculated as post minus pre so that positive means indicate an increase over time.

8. Second paragraph on page 14 (lines 302-307): This paragraph is repeating the results and doesn't really seem to add anything. Also, the many abbreviations make this paragraph very difficult to read. Do you really need this paragraph? If so, please describe in words rather than with abbreviations and reflect on what it means that some, but not all measured showed significant differences.

9. Conclusion (page 18): Please avoid using abbreviations in the conclusion. Also, specify which two groups you are referring to in line 408."

Response
• We have made all the changes suggested above.

Yours sincerely,

Laiana Sepúlveda de Andrade Mesquita