Reviewer’s report

Title: Title App-Based Supplemental Exercise During Inpatient Orthopaedic Rehabilitation Increases Activity Levels: A Pilot Randomised Control Trial

Version: 1 Date: 30 Jan 2019

Reviewer: Claire Cameron

Reviewer's report:

Thank you for the opportunity to re-examine this manuscript. I have only read the responses to my own remarks (Reviewer 1). Many of my concerns were addressed adequately by the authors. There are 3 that I feel were misinterpreted and still need some attention:

Comment 2:

At the end of the intervention section you say "the blinded assessor was not a treating clinician or a principal investigator on the study and was a researcher based at Macquarie University". What is the purpose of that blinding? What does that researcher have to do with the study?

AUTHOR'S RESPONSE: Thank you for pointing this out - we agree that it is unclear. The blinded assessor was involved in completing functional outcome measures at baseline and discharge as mentioned in the 'Outcome Measures' section of the manuscript. As it is already mentioned in this section, we have now removed the comment on the blinded assessor in the 'Intervention' section.

It is still not clear to me what the purpose of the blinding is or where the blinded assessor fits into the design of the study. Can you please clarify this point?

Comment 5.

In table 2 you have reported confidence intervals for the difference in the totals when the difference in the means would seem more relevant and what you describe reporting in the Data Analysis section.

AUTHOR'S RESPONSE: As per your comment, the confidence intervals have been removed from Table 2. The mean difference has been kept as suggested.

The authors have misinterpreted my comment. I was not advocating taking out confidence intervals. And I didn't suggest keeping the mean differences.
I think the most important thing to report, generally, is the effect size and the confidence intervals. If anything should be taken out it should be the p-values. The problem remains that the difference that you are reporting is the difference in totals (694.2-145.5=548.7). It is not customary to report these differences, but to report differences in the means which allow an easy calculation of confidence intervals and is more relevant to what you are reporting. Your adapted table labels these differences in the totals 'MD' which usually is read as 'mean difference' which is not what is reported here. Your column heading is 'Difference between groups' which also does not clearly describe what you are reporting here. I recommend reporting the difference in the means for the two groups with the corresponding confidence interval.

Comment 8:

In paragraph 1 of the Discussion you discuss the quantitative results - including a very marginal 0.049 p-value. I don't think that these inferences should be made here as it is a pilot study. If these results are credible, then there would be no need for a larger study. I would regard as purely indicative at the piloting stage.

AUTHOR'S RESPONSE: We agree with your comment and have made changes to the text to reflect this, including removing the marginal p-value. The text now reads: "The results are promising and indicate an increase in the number of repetitions (MD 548.7, 95% CI 95.3-1002.1, p=0.020). However, the results point to the need for a larger, higher-powered study to further examine effects."

Again, I think my comment was misinterpreted. I certainly was not advocating removing the marginal p-value. I was trying to make the point that pilot studies should not be used for making inference (reporting and interpreting p-values) because it is a pilot study. If we could do this it wouldn't be a pilot and we wouldn't need a larger study. I would recommend taking out the paragraph where you make this inference and focus on tying your conclusions more closely to your research questions (see comment 9).

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