Author’s response to reviews

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

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Author’s response to reviews:

Thank you for taking the time to review our submission. We have revised the manuscript and included a point-by-point response to the comments.

Response to Reviewer Comments of PAFS-D-18-00197

Reviewer 1

2. 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?

OUR RESPONSE: We have provided a statement which clarifies the purpose of blinding for this assessor. The text now reads – ‘A blinded assessor conducted physical measures at baseline and discharge, including 10MWT, 6MWT, TUG and FIM. The blinded assessor was a physiotherapist who is a faculty member with Macquarie University. Blinding was important in order to remove any possibility of actual or perceived bias.’
5. 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.

OUR RESPONSE: Thank you for this comment. We acknowledge the labelling of the tables may have caused confusion and been misleading. We have reviewed both tables 2 and 3, reporting the difference in the means for the two groups with the corresponding confidence interval. Please refer to the main manuscript for these changes.

8. 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).

OUR RESPONSE: We acknowledge that pilot studies should not be used to make inferences. We have removed any misleading comments and have stated that a ‘larger, adequately powered study’ is called for. The text now reads - ‘This novel study has demonstrated the feasibility of using an App-based supplemental exercise program to increase activity levels in an inpatient rehabilitation setting. Despite its promise, this result is derived from a pilot study of twenty participants and will require a larger, adequately powered study in order to reach a definitive conclusion as to its clinical utility.’