Author's response to reviews

Title: On Your Feet: Protocol for a Randomized Controlled Trial to compare the effects of pole walking and regular walking on physical and psychosocial health in older adults

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Author's response to reviews: see over
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Author's response to reviews: see over
Dear Dr Pafitis,

Following further comments from referee 1, we are pleased to submit a revised version of our manuscript entitled: On Your Feet: Protocol for a Randomised Controlled Trial to compare the effects of pole walking and regular walking on physical and psychosocial health in older adults. We have addressed the reviewer’s comments, and a detailed point-by-point response to each is given below. Changes in the revised manuscript are indicated using green highlighter.

The authors have read and agreed to the content of the revised manuscript. There is no conflict of interest. Thank you for considering our revised manuscript; we are looking forward to your response.

Yours sincerely, on behalf of all authors,

Juliette Fritschi
Reviewer(s)' Comments to Author:

Changes in response to referee comments are highlighted in the manuscript in green.

Referee 1:

I thank the authors for their responses. The manuscript is well written and most things are fine. However, I do have some minor essential revisions and comments.

Thank you very much for your review, helpful comments and suggestions. We have addressed the revisions as follows.

Randomization - you are not guaranteed to get 30 participants in each group using a random number generator. I suggest you add the word "approximately".

Thank you for pointing this out. We have clarified this information to the methods section on p 8:

Thus, the total number will be approximately 30 participants in the PW group and 30 in the RW group.

Statistical tests of baseline imbalance and adjustment for covariates - if the randomisation process is secure then it doesn't make sense to assess for baseline imbalances in characteristics/demographics. If there was a difference, then this would be due to chance. I do appreciate that many people run such tests, so it's your call on whether to amend this or not.

We agree that any baseline differences in a secure randomisation process will be due to chance, and if that is the case, then testing for group differences should not be necessary. However, as this is a clinical study in real world conditions, we would like to test in order to confirm that randomisation was successful.

However, you go on to say that the ANCOVA will be adjusted for significant between-group differences in baseline variables. This needs to change as it is best practice to outline your covariates a priori.

We will adjust the ANCOVA for variables that are associated with both the explanatory and outcome measures; based on previous publications, these may include, age, sex and number of medical conditions. We have added the following to the Data analysis section on p 14:

Between group differences in study outcomes will be examined using repeated measures of covariance (ANCOVA), adjusted for variables that are associated with both the explanatory and outcome measures; based on previous publications, these may include factors such as age, sex and number of medical conditions.

Comments:
1. It's an unfortunate limitation that there won't be any record of exercise Intensity.
We agree that it is unfortunate that we will not be able to accurately record the RPE of every session. We will add this to the limitations section of the study outcome paper, in conjunction with discussion of the issues arising from measuring exercise intensity in frail elderly populations.

2. I'm really struggling with this statement: "Sample size estimates were therefore based on the premise that the PW group would achieve changes at least 20% greater than those observed in the RW group, in selected measures of the Seniors Fitness Test (30-second chair-stand test, 30-second arm-curl test, timed up and go test, and a 6-minute walk test) [55]." Maybe I'm wrong, but I think it will be highly unlikely that there will be any appreciable differences between groups in these outcomes, because the volume and intensity of exercise will be pretty much the same in both groups. Thus, I think the study is underpowered to detect the likely differences between groups (i.e. in my eyes much less than 20%).

We thank the reviewer for this comment. Currently, this is the best information we can find from previous studies comparing the effects of pole walking and walking on functional outcomes in frail elderly populations (Figuerido, 2012). If we are not able to show any significant between group differences in this RCT, we will also add this point as a potential explanation in the discussion section of the intervention paper.