Author's response to reviews

Title: A pilot randomised controlled trial of physical activity facilitation for older adults: feasibility study findings

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Author responses to reviewers’ comments

Reviewer #1

1) An extremely well written report.

We thank the reviewer for this positive comment on the manuscript.

Reviewer #2

1) This is a well described study. A previous protocol of this study is available and sets this piece of work as part of a larger body of work. The feasibility criteria are pre-specified with relevant and achievable markers of success. The authors identify several features of the study (like recruitment) that did not work out as planned. This highlights the need for studies such as this before embarking on a larger trial.

We thank the reviewer for these positive comments on the manuscript.

2) With only a 27% eligibility rate for people returning information from the mail out, I wonder if this recruitment target group needs further consideration. It seems a lot of work (from 1227 respondents to get 51 people). Would the authors like to comment on this? If the goal is to recruit for a larger trial, what pool people may be required?
We agree with the reviewer that the current recruitment approach would not be feasible for a definitive RCT as the pool of potential participants required would be very large. In the manuscript we have included a paragraph highlighting how the efficiency of recruitment would need to be increased. We have included an additional paragraph to the discussion section to emphasise that alternative recruitment approach would be required for a definitive trial:

“Recruitment to this pilot trial by postal invitation involved 1884 invitations were sent to recruit 48 participants, an overall recruitment rate of 3%. Our sample size calculation suggests that a final sample of between 128 and 469 participants would be required for a definitive trial. Employing the same recruitment approach as in this pilot study would therefore require postal invitations to be sent to between 4,267 and 15,633 people and between 533 and 1,954 people to be clinically screened in order to meet the sample requirement. As this is an inefficient approach to recruitment, an alternative approach will be required.”

3) I have some reservations about the use of the SPPB as a measure of future disability, however the authors provide good evidence to support its predictive value. I do query that 0.03m/s is a meaningful clinically important difference is gait speed. Please provide some evidence to justify this.

The value of 0.03m/s is taken from a paper reporting the findings of a study by Kwon et al which aimed to establish the minimal clinically important difference (MCID) in walking speed for older adults. The study used distribution-based and anchor-based methods to establish MCID from a population of older adults who self-reported meaningful change in their walking speed. The paper is cited in the manuscript (reference 29) and concludes that “best estimates for minimally (or small) meaningful change appeared to be…0.03–0.05m/s for 4m gait speed…For substantial change, estimates were in the range of…0.08m/s for 4 m gait speed…” (ref: Kwon S, Perera S, Pahor M, Katula J, King A, Groessl E, et al. What is a meaningful change in physical performance? Findings from a clinical trial in older adults (the LIFE-P study). JNHA-The Journal of Nutrition, Health and Aging. 2009;13(6):538-44.)

4) Publication of studies such as this help other researchers in planning their pre-specified data collection and demonstrate the value of feasibility trials.

We agree in the value of publishing such studies and thank the reviewer for this comment.