Author's response to reviews

Title: Feasibility of a laboratory-based accelerometer calibration protocol for children with intellectual disabilities.

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Author's response to reviews: see over
Dear Dr. Samaan

Thank you for your reviewers report outlining the information and clarification required for further consideration for publication within Pilot and Feasibility Studies. We have revised our manuscript and submitted a list of changes.

We believe that the comments from reviewers have significantly improved this paper and we would like to thank them for their time.

We have listed each revision point and our response below. These changes have been highlighted in the revised manuscript.

Reviewer 1 revision points

1. **It would have been important to better understand the reasons for some of the poor enrolment and completion, but little is known regarding the reasons for declining participation in the study**

   We agree that this type of information would have been beneficial but unfortunately the collection of in-depth data relating to these points was not within the design of this study.

   However, we did collect data relating to declining participation, where possible. We received feedback from the parents who initially returned consent forms but subsequently withdrew from the study, which we reported in our results (section 3.2, pg. 9) and expanded upon in our discussion section (section 4.1, pg. 12).

2. **Little discussion on whether the aetiology of ID or its severity could have been associated with recruitment and/or completion rates.**

   All children who participated in this study attended schools specifically for children with mild to moderate intellectual disabilities. We did not collect additional information regarding the
Reviewer 2 revision points

3. **Participation is low (only 6 % participation rate ), which raises the question on the extent to which the sample reflects the general population of individuals with developmental disabilities**

   We agree that this is a low participation rate but feel that the recruitment difficulties identified are an important aspect of the study findings.

   We have added in additional information in section 4.1 (pg. 12) which clarifies that a small sample size and an overrepresentation of boys are common limitations of research involving children with intellectual disabilities.

4. **Descriptive statistics(age, weight, height) are significantly different in the two populations studied; sample is compromised mainly of boys;**

   In section 4.1 (pg. 12), we have discussed the over representation of boys and suggested possible reasons for this, specifically the higher number of boys who have ID and the activity-focussed protocol which may have been of more interest to boys. We highlighted the need to increase our understanding of why recruitment of girls with ID low, and suggested the development of targeted recruitment strategies.

5. **There is limited information on the level of function (intellectual capacity of individuals involved in the study; furthermore, there is an absence of information on their language(receptive and expressive), Social, Motor and other objective measures up functional ability.**

   As described in response to revision point 2, we have noted this as a study limitation.

6. **While this study demonstrates the lack of feasibility for these subjects participating in a pilot study of an accelerometer calibration protocol for children with intellectual disabilities, which is its main conclusion, it does not provide helpful information for planning a similar study in the future.**

   We have clarified the findings of this study in our final conclusions (section 5; pg, 16) and have provided clear recommendations for the design of future studies, and future research which needs to be conducted.
Additionally, we have made the requested formatting changes and included acknowledgements and author’s contributions sections.

We are grateful for your consideration of this paper for publication within Pilot and Feasibility Studies.

Yours sincerely

Arlene McGarty