Reviewer's report

Title: Validity, reliability and feasibility of commercially available activity trackers in physical therapy for people with a chronic disease: a study protocol of a mixed methods research

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Reviewer: Milica Blagojevic-Bucknall

Reviewer's report:

This paper on assessment of validity and reliability of commercially available activity trackers in physical therapy among those with chronic disease seems relevant.

My specific comments are:

- it is unclear what stage this study is at; All three (past, present and future) tenses are used in relation to different parts of the study. eg line 131: "nine activity trackers were selected"; line 190: "The statistical software Statistical Package for the Social Sciences (SPSS) (version 23) is used" declarations: "Written informed consent WAS obtained from participants." yet line 147: "All participants WILL provide written informed consent"

- line 83: rewrite five% as 5%

- line 120: 1. "cost" not "costs"

- line 124-131: can this part please be written more clearly and transparently. e.g. what is the number in the pool from which trackers were selected?

- line 152: beta=0.9. This means that power is 0.1 (??) In these settings, Beta denotes type 2 error and power is calculated as 1 minus beta.

- line 153: "...to detect differences between trackers" can you please be more specific what you mean by differences?

- how will participants be identified for therapists to approach them? Through the clinics they attend for their chronic condition? If so details on how this will be done are needed.
All detail that is given is in Line 302: "Each therapist will select five-six patients with a chronic disease to participate in the study" However detail needed on how these physical therapists will access these patients in the first place. Further it states that each therapist will select 5-6 patients, how will they select them - randomly?

- at what exact point will informed consent be given? A flowchart of the study would be very helpful

- where will the tests be done?

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