Author's response to reviews

Title: Assessment of fall-related self-efficacy and activity avoidance in people with Parkinson's disease

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Author's response to reviews: see over
Dear Editor,

Please find enclosed the revised version of our manuscript with the title “Assessment of fall-related self-efficacy and activity avoidance in people with Parkinson's disease”

We thank the Reviewers for their additional clarifications and suggestions, which we have dealt with accordingly. Below follows our responses and an outline of the modifications made in the revised manuscript. All changes and additions are highlighted in yellow within the manuscript.

In addition to responses to the Reviewers’ comments, we have made minor revisions throughout the text regarding wording, style and clarity. These are also highlighted in yellow in the revised manuscript.

We hope that the revisions and responses will be sufficient for our manuscript to be accepted for publication in BMC Geriatrics.

All authors have approved the submitted manuscript. We have no conflicts of interest (also stated at the end of the manuscript).

We would also like to clarify that one of the co-authors has changed her last name from Holmbäck to Drake.

Yours sincerely,

Maria H Nilsson, Anna-Maria Drake and Peter Hagell

Editorial requests:
- We have conducted the minor revisions as suggested by the reviewers.
- Paragraph 3 (introduction section) is shortened and the method section is instead extended (highlighted in yellow).

Reviewer 1: Dr Kim Delbaere

1. Reviewer's report 1. The introduction has improved but I still feel that paragraph 3 would be better suited as part of the methods section.

Authors’ reply
In accordance with the requests from the reviewer and the editor, we have shortened paragraph 3 in the introduction section. This information is now inserted into the method section instead (end of page 6 and on page 7).
2. It is a shame that 20% of your sample filled in the questionnaires while they were in the off-phase. This has now been addressed throughout the paper and included as a limitation.

**Authors’ reply:** As the referee states in the comment above, we have already addressed this issue within the manuscript.

3. The normal distribution is an important / crucial assumption in a variety of statistical applications. Skewness and kurtosis is one way to give information about the distribution. One possible cause (and most likely in your study) of a skewed data distribution is floor/ceiling effects. I would still like to see a measure of distribution presented in your paper as this would be relevant for many readers of your paper.

**Authors’ reply**  
We have now added information about skewness and kurtosis in Tables 2 and 3.

4. For all statistical suggestions that I made in my previous review as well as possible differences between different assessment methods of the questionnaires, I would like to refer the authors to Yardley L, Beyer N, Hauer K, Kempen G, Piot-Ziegler C, Todd C. Development and initial validation of the Falls Efficacy Scale-International (FES-I). Age Ageing 2005; 34: 614?9. The study population are healthy community-dwelling older people but will provide the necessary information to put suggestions of both reviewers in the right context.

**Authors’ reply**  
Our analyses correspond to those by Yardley et al with a few exceptions:  
(a) We use nonparametric statistics instead of the parametric methods employed by Yardley et al. (t-tests, ANOVA, ES). This is in accordance with recommendations in the literature (Svensson E. Guidelines to statistical evaluation of data from rating scales and questionnaires. J Rehabil Med 2001;33(1):47-8) and because parametric assumptions were not met by data.

(b) We have not conducted a factor analysis (FA). This is for the same reason as stated above, and also (perhaps more importantly) because our current sample size does not meet requirements for this type of analysis (i.e., 10 subjects without any missing data for each variable). Furthermore, the data that we do present (particularly corrected item-total correlations) strongly suggest that the scales represent one major latent variable each.

(c) In our former version of this manuscript, we did not report the inter-item correlations. This information is now added and the results are presented on page 10.
Referee 2: A Nieuwboer

1. The authors may wish to clarify that patients responded while feeling that their mobility was good, good but hyperkinetic or bad, but we are unsure whether this equals ?on? or ?off?. Therefore, I would not add ?(i.e. on)? or ?(i.e. off)?, possibly adding a sentence that this remains uncertain.

Authors’ reply
This has now been changed (see page 7).

When completing the questionnaires, the participants also rated their present mobility as either “good”, “good but hyperkinetic” or “bad”.

Within the discussion (page 15) it is clarified that the ratings of mobility are subjective: It is also conceivable that responses may be influenced by whether respondents with PD are “on” or “off” while completing questionnaires, which could not be controlled for here since data collection was conducted by postal surveys.

2. Background, page 5
This revised paragraph gives a general description of validity. But which aspects were addressed by this study? No clear link is made with the objectives of the current study.

Authors’ reply
We have now added a few sentences to this paragraph (on page 5) in order to link the described validity tests to the analyses in the current paper.

Construct validity relates to the extent an instrument produces scores that are representative of the variable it is intended to represent. It includes convergent validity and divergent validity, which can be assessed by examining the pattern of correlations with other variables. In terms of FOF, scores exhibiting relatively strong associations with related aspects (e.g. physical functioning and mobility), but weaker associations with aspects less strongly associated with FOF (e.g. demographic variables) could thus be interpreted as supportive of convergent and divergent validity, respectively. Construct validity also includes whether scores distinguish between groups that are expected to differ in relation to the investigated construct [29], e.g. fallers and non-fallers.