Reviewer’s report

**Title:** Physical Therapy and Deep Brain Stimulation in Parkinson Disease: Protocol for a Pilot Randomized Controlled Trial

**Version:** 0  **Date:** 12 Nov 2017

**Reviewer:** Geetha Gopalan

**Reviewer’s report:**

This manuscript describes the protocol for pilot study examining the safety, feasibility, and efficacy of an 8-week physical therapy intervention compared to standard of care for individuals with Parkinson's Disease receiving Subthalar nucleus deep brain stimulation (STN-DBS) . Overall, the manuscript is well-written and focuses on an important area of study. However, there are a number of issues that, if addressed, would greatly strengthen this manuscript:

* Page 4, line 16-17 - there appears to be some words missing from this sentence "Postural and may be detrimental to overall function…" 

* On page 6, authors indicate "Furthermore, the standard of care for STN-DBS does not include PT". What is the evidence of this? Where is the citation for this statement?

* The methods and design section is very thin on recruitment and randomization procedures. Authors are advised to consult the Consort Extension checklist for pilot and feasibility studies (http://www.equator-network.org/reporting-guidelines/consort-2010-statement-extension-to-randomised-pilot-and-feasibility-trials/) to ensure sufficient details for this pilot study are reported.

* It is not clear if Intervention participants will receive the Standard of care plus the Physical therapy intervention or just the physical therapy intervention. I’m assuming the former, and if so, authors should be explicit about this.

* It is not clear how authors will determine from this pilot study whether there is sufficient evidence to move forward with a larger scale trial in terms of safety and feasibility outcomes. What is the specific % of sessions/exercises that should be completed across intervention participants which would indicate sufficient feasibility to move forward with a larger scale RCT? How many adverse events will determine that the intervention is sufficiently safe to move forward, given that there is not enough power to determine statistical significance for adverse events?

* What statistic are authors using for effect size? What effect size calculations — please provide more detail regarding how this was determined.

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Please indicate how interesting you found the manuscript:
An article of importance in its field

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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