Reviewer's report

Title: Improvement of walking speed and gait symmetry in older patients after hip arthroplasty: a prospective cohort study

Version: 2 Date: 4 June 2015

Reviewer: Joe Zeni

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Major Compulsory Revisions

The authors have addressed the majority of concerns raised in the initial review. However, the statistical analysis remains a concern and unclear and I recommend that the authors consult with statistician for the analysis and interpretation if that has not already been done.

In the statistical analysis section, the authors first state that they use a two-way ANOVA (sex x time), where I am taking this to mean a mixed-model with a within subject of time and between subject of sex. This does not account for groups so I am not sure how this analysis achieves that aims if this study.

In the analysis, it is not clear what interactions were tested. Were groups considered in the interaction analysis? In the event that there was no interaction, the authors should report main effects. This would mean in the presence of a significant main effect of time, the groups are collapsed into one and are evaluated as a whole at different time points (men and women are collapsed into a single group). In the presence of a main effect of sex, the time points are collapsed. That does not appear to be the case in this analysis.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests