Author’s response to reviews

Title: Disability perceived by primary care patients with posterior canal benign paroxysmal positional vertigo

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Author’s response to reviews:

Maria Elisabeth Johanna Zalm, Ph.D.,
Barcelona, September 20th, 2019
Dear Dra Maria Elisabeth Johanna Zalm,

We submit a revised version of the manuscript "Disability perceived by primary care patients with posterior canal benign paroxysmal positional vertigo" (FAMP-D-18-00272). This revised version incorporates the suggestions made by the reviewers. At the end of page you will find a point-by-point response letter.

We are grateful to the reviewers for their comments, which have undoubtedly contributed to this improved version of the manuscript.

All authors have read the revised version of the manuscript, agree on that the work is ready for submission and accept responsibility for its contents.

Thank you for considering this revised version. We look forward to hearing from you.

Sincerely, on behalf of the co-authors,

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Answers to reviewers:
Editor Comments:

In addition to the reviewers' comments below, please address the following Editorial concerns:

1. Trial registration

Please include the date of registration to your trial registration information at the end of the abstract.

ANSWER: Thank you for your comment. We have added the date of registration to our trial registration in page 5, line 85.

2. Tables

Please remove all shading from your tables as this may interfere with the production process.

ANSWER: Thank you for noting that point; we have accordingly removed all shading from our tables.

3. Clean version

At this stage, please also include a clean version of your manuscript, without any tracked changes or otherwise highlighted text as this may interfere with the production process.

ANSWER: We have removed all tracked changes or otherwise highlighted text, and we thank you for that reminder.

BMC Family Practice operates a policy of open peer review, which means that you will be able to see the names of the reviewers who provided the reports via the online peer review system. We encourage you to also view the reports there, via the action links on the left-hand side of the page, to see the names of the reviewers.

Reviewer reports:

Bryan Ward (Reviewer 1): Thank you for addressing the concerns.
Reviewer 3 (Reviewer 3): PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?

Probably - with minor revisions

ANSWER: Thank you very much for your comments.
GENERAL COMMENTS: The authors investigated perceived disability among patients diagnosed with posterior semicircular canal BPPV in a primary care clinic. This was a cross-sectional observational study conducted at 2 urban primary care centers. The primary outcome measure was the Dizziness Handicap Inventory-Screening version. This was a sub-study of a randomized controlled trial for primary care management of BPPV patients using the Epley maneuver. The authors concluded that BPPV had a negative impact on the quality of life of patients, particularly women, and patients with subjective BPPV (vertigo without nystagmus). The study design is good and relevant data are presented clearly. In my opinion, the authors have satisfactorily responded to the first reviewer's comments. In particular, I sought additional consultation from a statistician colleague and the author's rationale for their statistical analyses appear justified. I do have a concern pertaining to the accuracy of the author's medical diagnostic validity of Subjective-BPPV as well as other minor suggested edits. With additional revision, I think the study should be considered for publication.

ADDITIONAL REQUESTS/SUGGESTIONS:

1. The author's state that the GP's received 2 hours of training from an otolaryngologist in the adequate management of patients with vertigo and the correct application and interpretation of the DH test. Given the complexity of interpreting nystagmus during the Dix-Hallpike test, the training received seems minimal. This should be added as a limitation of the study or the author's should state their case as to why 2 hours was adequate for diagnostic accuracy.

ANSWER: We absolutely agree on that point, so following the reviewer’s recommendation, we have added the following sentence in the discussion section: Line 309-312:

Given the complexity of interpreting nystagmus during the Dix-Hallpike test, the training received may have been too short. A longer workshop could improve the diagnostic and therapeutic accuracy of GPs, especially to detect and interpret nystagmus correctly in DHT.

We really thank that valuable consideration.

2. In reading the author's published protocol (Ballve Moreno JL, Carrillo Muñoz R, Villar Balboa I, Rando Matos Y, Arias Agudelo OL, Vasudeva A, et al. Effectiveness of the Epley's maneuver performed in primary care to treat posterior canal benign paroxysmal positional vertigo: study protocol for a randomized controlled trial. Trials [Internet]. 2014;15(1):179.), the author's state that the Dix-Hallpike test was performed in room light without the use of Frenzel lenses or any other technology, such as infrared goggles. The authors rationale for their decision was to create a more realistic primary care diagnostic environment. This brings into question the
validity of their results. In mild cases, nystagmus can be difficult to observe, especially given the vertical nystagmus component suppression that can occur in room light. Therefore, the author's results of greater perceived disability in patients with Subjective-BPPV can be challenged. This should be added as a limitation of the study.

ANSWER: Thank you for your comment. Following the reviewer’s recommendation, we have added the following sentence in the discussion section: Line 304-309:

The proportion of patients with subjective BPPV in our series was also higher than that reported in the literature, possibly because neither Frenzel goggles nor videonystagmography were used to detect nystagmus in the DH test to create a more realistic primary care diagnostic environment. However, in mild cases, nystagmus can be difficult to observe, especially given the vertical nystagmus component suppression that can occur in room light. Therefore, the study's results of greater perceived disability in patients with Subjective-BPPV can be challenged.