Reviewer’s report

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

**Version:** 1  **Date:** 22 Aug 2019

**Reviewer:** Reviewer 3

**Reviewer's report:**

**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

PEER REVIEWER 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.

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.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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

Needs some language corrections before being published

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

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