**Reviewer’s report**

**Title:** Factors associated with Developing a Fear of Falling in Subjects with Primary Open-angle Glaucoma

**Version:** 0  **Date:** 07 Sep 2017

**Reviewer:** Joanne Wood

**Reviewer’s report:**

The aim of this study was to examine the relationship between visual risk factors for prospective fear of falling in patients with POAG.

While this is an important topic, the method used to assess the primary outcome measure - fear of falling - consists of one question "Are you afraid of falling?" with non-standardized response options of: "Not at all", "Not much", "Afraid" or "Very Afraid". There are many well-validated measures that are standard methods adopted to measure fear of falling. The use of the most severe response for fear of falling at the subsequent visits which was then dichotomised into (-) and (+) needs better justification.

Other issues are outlined below:

Abstract: Inclusion of regression models, eg. "The optimal regression model for patients' baseline fear of falling (+) = -7.0 + 0.062 x age + 0.58 x female - 0.088 x mTDIP + 0.87 x number of previous fall" in the abstract results are hard to interpret - the results should be expressed in a way that has meaning even to a reader who has not read the whole paper.

Methods: The fear of falling measure is quite simplistic as outlined above - there are much more appropriate measures available. Similarly, the measure of falls asks "How many times did you fall in the last year?" and "Have you experienced any injurious falls in the last year?" There is no definition of what constitutes a fall and the use of a single question to determine the number of falls is not considered the standard (as outlined by Hauer et al (2006) in their systematic review of definitions of falls)

Why weren't falls rates and visual function measures also collected at the subsequent visits along with the fear of falling question - it seems unlikely that visual fields would not have been tested at the follow-up visits.

Results: Why did 50 patients drop out from the study over the 3 year follow-up?

It would be good to get ranges as well as mean values for the various parameters described at baseline.
The falls rates at baseline seems very low - general population studies of older adults are around 30%, whereas for this group it is only 6%.

The statistical analysis is unclear - there is a lot of complex modelling for predicting the outcome of fear of falling which is based on one simple question.

How was the optimal model determined from the 2 raised to the power 13 combinations?

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

No

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

Unable to assess

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

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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