Reviewer’s report

Title: Poor balance and lower gray matter volume predict falls in older adults with mild cognitive impairment

Version: 2 Date: 19 July 2013

Reviewer: James E Galvin

Reviewer’s report:

The authors have addressed most of my concerns satisfactorily. However, a few issues still remain to be tackled.

1. The methods section should describe how ‘history of falling’ was ascertained in the study. In addition on page 4, the sentence ‘Impaired physical function, particularly muscle weakness and problems with gait and balance, are the most important contributors to the risk of falling [5]’ should be modified to add history of falling as an important risk factor for falling therefore providing some explanation as to why history of falling has been controlled for in the data analysis.

2. Although authors state that the BMI results were deleted from the manuscript, BMI is still mentioned in the abstract and the text as having been used as a covariate in the data analysis. The decision to control for its effects should be justified in the methods section.

3. Suggest deleting the last sentence of the results section, as this information is provided with some discussion later in the discussion section.

4. Given the new finding related to the superior frontal gyrus, it would be expected that some discussion is provided regarding its potential role in movement/physical function/falls. As it stands, the discussion is focused exclusively on the role of the middle frontal gyrus in these processes.

5. The last sentence of the conclusions section as well as the abstract should read ‘Maintaining physical function, especially balance, and preventing/reducing brain structural changes…..’.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.