Reviewer's report

Title: Disparate voxel based morphometry (VBM) results between SPM and FSL softwares in ALS patients with frontotemporal dementia: Which VBM results to Consider?

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Reviewer: Ali Khan

Reviewer's report:

1. The authors additionally performed the analysis in FSL with the TFCE option disabled, as suggested, and they found drastically fewer significant voxels. This is a major change to the paper, since now, when FSL and SPM are on even ground (same voxel-wise significant testing), they both perform poorly, that is, neither of them showing many significant voxels. Thus, the main premise of the paper (disparity between SPM and FSL) seems compromised to me. However, the authors have only made negligible changes to the manuscript to reflect this major change -- e.g. the abstract does not mention TFCE. I think a more objective reporting and interpretation of the results is required for this work.

2. The comparison between FSL and SPM is still unfair, because TFCE was only used with FSL. Do you get similar results if you use TFCE with the pre-processed output from SPM?

3. The authors use the Dice similarity metric to compare significance maps, however, for the instances where the maps are very sparse (such as when TFCE is not used) this is not a useful measure since it will be very close to zero. It may be more informative to report what brain regions contained significant voxels instead.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests