Reviewer’s report

Title: The effect of cognitive-motor dual-task training on cognitive function and plasma amyloid beta peptide 42/40 ratio in healthy elderly persons: a randomized controlled trial

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Reviewer: Susan E Kurrle

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This paper reports a small study of 27 older people without dementia participating in a 12 week randomised controlled trial of single task training versus dual task training. The outcomes were cognitive function and serum amyloid levels.

As would be expected from other studies, the results showed an improvement in cognitive function in both groups, with the dual training group performing slightly better in several domains. There appeared to be no relationship between improvements in cognition and changes in the serum amyloid 42/40 ratio with the authors concluding that improvements in cognition are not related to changes in serum amyloid levels.

The study appears to have been well conducted although single blinding may have been difficult to maintain. Adherence in participants was very good and similar in both groups. Participant numbers were small over a short length of time, and this may have influenced outcomes.

The discussion and conclusions are logical and appropriate, and limitations are addressed by the authors.

Minor revisions
The abstract mentions 30 participants, although 27 started the study and 25 completed the study.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests