Reviewer’s report

Title: The Role of Gender in the Association between Personality and Task Priority in Older Adults' Dual-Tasking While Walking

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Reviewer: Michele Callisaya

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The Role of Gender in the Association between Personality and Task Priority in Older Adults' Dual-Tasking While Walking

This study examined the associations of personality with dual-task walking, as well as whether sex modified these associations. In a sample of 73 generally healthy participants there were no associations between personality and dual-task performance. However when examining sex differences, extraversion was negatively associated with DTC-motor for men and conscientiousness was positively associated with DTC-cognition for women.

This study is reasonably clearly written. It provides an adequate argument in the introduction for the aims of the study and interprets the results appropriately in the discussion. Strengths of the study also include the measurement of dual-task cost for both the motor and cognitive tasks. It is of interest to readers of BMC Geriatrics.

I have the following comments:

Introduction

1. The introduction appears quite long - but this might be ok for this journal?

2. Page 6 line 2 : Perhaps tone down the comment "the potential is clear" - or justify further.

3. Page 6 line 4-5 the author's state "….represents the relationship between personality and DT walking has yet to occur." Ref 25 also addresses this question?

Methods

4. Were the ST subtraction and ST subtraction whilst walking tasks performed for 1 minute as well?

5. Coding: please specify how gender was coded (1=?) so that Table 1 can be interpreted. The same for the personality variables eg did higher scores equal higher levels of extraversion

6. How were participants selected for the study?
7. Were participants asked to prioritize either task or were no instruction given.

8. Statistical analysis page 8. First sentence needs to be clearer. I would suggest dividing into 2 sentences.

9. Please provide more information on how you determined if a variable was a mediator in your models.

Results

10. Were personality traits in the same or separate models?

11. Page 9 line 60 - please provide results (beta coefficient, SE or 95% CI) for each personality trait with dual task performance (or just those that had effect modification by sex).

12. Were there any sex differences in characteristics - eg age, MOCA. Is there any other information to characterize the sample eg. Diabetes, OA etc. It would also be useful to show (in a table) values for the personality and dual task variables by sex.

13. Line 11, 17 - was there evidence of these women diverting more attention to the walking task?

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

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