

# PEER-REVIEW REPORT

Name of journal: World Journal of Psychiatry

Manuscript NO: 87779

Title: Performance of the Walking Trail Making Test in Older Adults with White Matter

Hyperintensities

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05291028

**Position:** Peer Reviewer

Academic degree: MD, PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Spain

Author's Country/Territory: China

Manuscript submission date: 2023-08-26

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-08-27 06:09

Reviewer performed review: 2023-08-27 19:18

Review time: 13 Hours

	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C:
Scientific quality	Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair
this manuscript	[ ] Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	<ul> <li>[ ] Accept (High priority)</li> <li>[ ] Accept (General priority)</li> <li>[ Y] Minor revision</li> <li>[ ] Major revision</li> <li>[ ] Rejection</li> </ul>
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No

### SPECIFIC COMMENTS TO AUTHORS

The authors present the results of a single center observational clinical study aimed to explore the performance in the walking trail making test (WTMT) performance in older people with white matter hyperintensities (WMH). The authors found that older adults with WMH showed poorer WTMT performance. WTMT could be a potential indicator for the cognitive and motor deficits in WMH patients. For a better presentation of the data, the following issues need to be clarified: 1. The authors should mention in the Introduction that signs of small vessel disease in conventional MRI include: recent subcortical lacunar infarcts (clinically symptomatic), white matter magnetic resonance hyperintensities, lacunes (clinically silent), prominent perivascular spaces, cerebral microbleeds and atrophy (Int J Mol Sci 2022; 23, 1497). See and include this supporting reference. 2. Because cognitive impairment is an essential clinical feature of Binswanger's disease, I would suggest expanding the text in relation to the cognitive profile of white matter hyperintensities and neuropsychological features of subcortical vascular dementia (Expert Rev Neurother 2009; 9: 1201-1217). I suggest including it in 3. The authors should clearly point out in the text the relevance of the Discussion.



clinically silent lacunes (as a major neuroimaging feature of cerebral small vessel disease) on cognitive performance. In a clinical study, more than half of the patients with a first-ever lacunar stroke had minor neuropsychological alterations. These minor alterations were mainly related to the presence of clinically silent lacunar infarcts on neuroimaging at this early stage of cerebral small vessel disease (see and add this reference BMC Neurol 2013; 13: 203). Did the authors consider in their study protocol the relevance of silent lacunes on cognitive performance? 4. A brief concluding comment on other possible lines of future research on the presented topic would be appreciated.



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Reviewer's code: 01344350

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Germany

Author's Country/Territory: China

Manuscript submission date: 2023-08-26

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-09-24 12:32

Reviewer performed review: 2023-09-26 07:21

Review time: 1 Day and 18 Hours

	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C:
Scientific quality	Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair
	[ ] Grade D: No novelty
Creativity or innovation of	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair
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Conclusion	<ul> <li>[ ] Accept (High priority)</li> <li>[ ] Accept (General priority)</li> <li>[ Y] Minor revision</li> <li>[ ] Major revision</li> <li>[ ] Rejection</li> </ul>
Re-review	[ ]Yes [Y]No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No

### SPECIFIC COMMENTS TO AUTHORS

This is a well written paper presenting convincing results. In essence it is shown that patients with confirmed white matter hyperdensities perform significantly worse in the choice reaction test, verbal fluency test and digit symbol substitution test ( $16.00 \pm 2.75$ vs 18.40  $\pm$  3.27, P = 0.010) in comparison with the control group. In addition it was revealed that the WMH group required significantly more time to complete WTMT-A. The rsults seem to be of considerable diagnostic value. Just a note regarding spelling: Please separate from each other the follwing words: adultsover; thatcam; dualgait and (possibly) others.