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Enhancing Assessment Practices: A Validation Study of a Novel Phonological Short-Term Memory Task

Saturday, September 13, 2025 3:50 PM (15 minutes)

The development of new neuropsychological tools reflects the need to update traditional assessment methods by incorporating screening of sensory requirements, consistent computer-based procedures and open access practices. These advancements are examined through the Italian standardization and validation of a new task designed to measure phonological working memory abilities, which play a crucial role in neuropsychological assessment. The most widely used tests present limitations, which may be addressed by adopting a new version of the Digit Span Test and the first version of the Bisyllabic Nonword Span Test. We aimed to provide a preliminary validation of these two newly developed tools, hypothesizing lower performance on the Bisyllabic Nonword Span Test, forward and backward tasks, compared to the Digit Span Test, and reduced scores in MCI patients versus those with subjective cognitive complaints. We collected data from a prodromic sample (MMSE ≥ 18). All participants underwent an anamnestic interview and comprehensive neuropsychological assessment including the Cognitive Reserve Questionnaire. Participants who were unable to repeat the spoken number or nonword correctly in the preliminary phases of the two tests were excluded. All statistical analyses were conducted through JASP version 0.19.3.0. Our analysis revealed significant differences between tests: performances on the Bisyllabic Nonword Span Test were lower than on the Digit Span Test, suggesting that the former might be more sensitive in identifying working memory impairments.These findings show that standardized procedures enable more reliable measurements and support the clinical potential of this new task, highlighting the importance of integrating computer-based procedures into neuropsychological assessment.

If you're submitting a symposium talk, what's the symposium title?

Rethinking the Future of Cognitive Testing: When Tradition Meets Innovation, Technology, and Open Science

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

Yes

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