

How Cognitive Assessment Results of Older Adults Relates to Their Fall Risk

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ABSTRACT

One third of older adults ≥ 65 fall annually, resulting in injury and impaired quality of life. Older adults who fall repeatedly are at risk for cognitive decline and reduced balance and strength, which further increases their risk of falling. Determining fall risks in older adults has come to limited conclusions due to the uncertainty of what assessments to use. We therefore aimed to evaluate the efficacy of a battery of cognitive assessments in discriminating between fallers and non-fallers to refine the fall-risk screening protocol for physicians. $n = 18$ community-dwelling and assisted-living older adults ≥ 65 with self-reported decline in physical stability were grouped into fallers ($n = 11$; age: 79.64 years, Montreal Cognitive Assessment (MOCA)=23.18 points, 45.45% Female, 36.4% Community-dwelling) and non-fallers ($n = 7$, age: 78.86 years, MOCA=22.86 points, 14.29% Female, 42.9% Community-dwelling), where fallers were participants who had recorded a fall in the past 12 months. The cognitive assessment scores were gathered during a one-time in-person testing session. The assessment tools used include: the MOCA, the Rey Auditory Verbal Learning Test (RVLT), timed trail-making tasks (TMT), and the Digit Symbol Substitution Test (DSST). Repeated measures analysis of variance was conducted using SPSS. There was no interaction of group and cognition ($F_{(1,01,15.16)} = 0.269$, $p = 0.614$, $\eta_p^2 = 0.018$) and there was also no significant main effect of group for cognition ($F_{(5,11)} = 1.039$, $p = 0.442$, $\eta_p^2 = 0.321$). Our results showed that the cognitive assessments could not differentiate between fallers and non-fallers, however the results should be interpreted with caution due to the small sample size as testing is currently ongoing.

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