

Test-retest reliability of five times sit to stand test (Ftsst) in adults: A systematic review and meta-analysis

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Abstract

Functional independence in adults is conditioned by lower limb muscle strength. Thus, it seems important to assess lower limb strength using reliable and easy to reproduce measurements. The purpose of this study was to conduct a systematic review and meta-analysis to collect studies that examined the test-retest reliability of the Five Times Sit to Stand Test (FTSST) in adults. The search was conducted in PubMed, Web of Science, and Scopus databases, including all studies published up to 28 December 2020. To be included, studies had to include relative reliability scores (ICC) and maximum torque or standard error of measurements (SEM) of FTSST. A total of 693 studies were initially identified, but only 8 met the eligibility criteria and were included in the meta-analysis, covering a total of 14 groups with 400 participants. Relative inter-rater reliability results (ICC = 0.937, $p < 0.001$, $n = 400$) revealed excellent reliability of FTSST to assess sitting and standing performance, lower limbs strength and balance control. Conclusion: The Five Times Sit to Stand Test is a highly reliable tool for assessing lower limbs strength, balance control, and mobility in both healthy adults and those with pathologies. © 2021 by the authors. Licensee MDPI, Basel, Switzerland.

Author keywords

Balance; Chronic diseases; Lower limbs; Muscle strength; Reliability