

Reliability of 30-s chair stand test with and without cognitive task in people with type-2 diabetes mellitus

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Background: Reliability refers to the precision of an assessment, so it is a critical topic to take the right decisions related to health management. People usually perform several tasks at the same time in their daily life. The aim of this study was to examine the reliability of the 30-s chair stand test in people with type 2 Diabetes Mellitus (T2DM) with test-retest, with and without dual-task (motor + cognitive task). Methods: Twenty-six subjects with T2DM and 30 subjects without T2DM performed the 30-s Chair Stand Test (30sCST) in which they must sit and stand as many times as possible in 30 s. They performed the test in the usual way (30sCST) and also with an additional cognitive task (30sCST-DT). A retest was conducted 7-14 days later. Results: Relative reliability was excellent in both groups (intraclass correlation coefficient > 0.9). In 30sCST-DT, relative reliability was high in the T2DM group (intraclass correlation coefficient > 0.7) and excellent in subjects without T2DM (intraclass correlation coefficient > 0.9). Conclusions: The 30sCST and the 30sCST-DT tests are reliable tools for people with T2DM to measure changes after an intervention. The smallest real difference was 15% and 20% upper in the T2DM group in the 30sCST and 30sCST-DT tests, respectively. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

Dual-task

Intraclass correlation coefficient

Physical function

Standard error of measurement

cognition

correlation

diabetes

health care

health services

public health

30 second chair stand test

adult

aged

Article

clinical article

clinical evaluation

cognition

cognitive function test

controlled study

diabetes control

diabetic neuropathy

dual-task performance (test)

female

health program

human

male

non insulin dependent diabetes mellitus

outcome assessment

physical performance

risk assessment

risk management

test retest reliability