





The Reliability of the QTUG measured over 5 consecutive days

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Background

Timed Up and Go-TUG

commonly used measure of falls risk in older adults

Ceiling effect







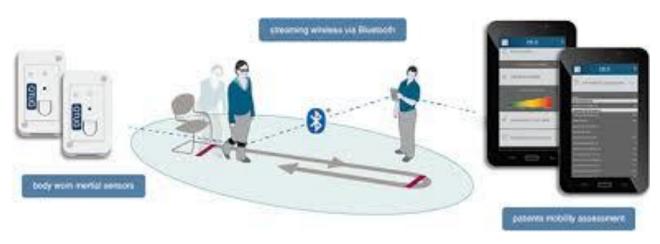
Quantified TUG – QTUG

uses body worn sensors



Breaks the test into meaningful spatial and temporal parameters

May identify subtle changes – earlier identification of risk



Aim

Walking while carrying cup of water

Motor dual-task

Single Task

Walking alone

Testretest reliability of QTUG

Over 5 consecutive days

Cognitive dual-task

Walking while performing serial subtractions x3

Methods

- 12 older adults
- Mean age 74±4
- Mean Berg balance 52

Observational study

QTUG

- Daily x 5 days
- Single
- Motor
- Cognitive

- Intra –class correlation coefficient (ICC 3:1)
- Standard error of measurement (SEM)

Test-retest reliability

Results

Strong ICC >0.7

- Time
- Walk Time
- No. of Gait Cycles
- Number of Steps
- Return from turn



Moderate ICC0.4-0.7

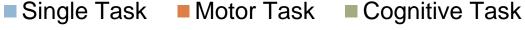
- Step time
- Stride length
- Stride time
- Stride velocity

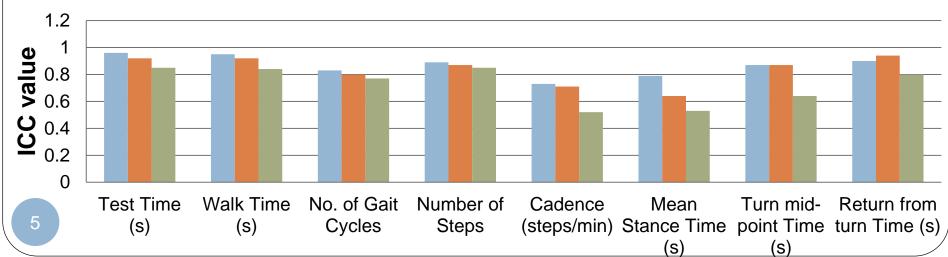


Weak ICC<0.4

Measures of gait variabilityTurn-derived parameters

Reliability under all 3 conditions





Conclusions

Particularly temporal measures

QTUG

Several Parameters reliable Overall reliability decreases with the addition of cognitive task

QTUG may provide additional resource in assessment of older people

Spatial, variability and turn-derived less reliable

Caution advised, especially under cognitive dual task conditions