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Responsiveness of static and dynamic balance tests in elderly with risk of fall

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Balance impairment often induces risk of fall in the elderly. Thus, balance assessments are crucial in these individuals. The evidences support that the tandem stand test (TS) and timed up and go test (TUG) are reported as reliable static and dynamic balance tests. Furthermore, gait speed is commonly used as a standard method to indicate functional mobility using the 10 meter walk test (10 MWT). However, these tests have not been reported the responsiveness to reflect accurate changes in elderly with risk of fall. Therefore, the study aimed to investigate the responsiveness of these balance tests in this group. The prospective study was conducted in elderly who aged at least 65 years with a body mass index between 18.5-29.9 kg/m². They were screened fall risk using the scores of Thai falls risk assessment tool (Thai-FRAT) at least 4 out of 11 scores. Subjects were assessed 10 MWT, TS and TUG before and after three week fall exercise. Then responsiveness of test was determined by the standardize response mean (SRM). There were eighteen subjects aged 72.85±5.08 years (12 female and 6 male) with risk of fall (Thai-FRAT 4.67±0.84 scores). The SRM of 10 MWT, TS and TUG were 0.85, 1.19 and 0.65 that indicated moderate effect size (10 MWT and TUG) and large effect size (TS) after three week fall exercise. The findings support that TS and TUG are responsive to assess balance ability in elderly with risk of fall. It is useful for guiding the health officers to select the appropriate tests and interventions in this group.

Biography

Roongnapa Intaruk is pursuing her Masters in the Physical Therapy program from School of Physical Therapy, Khon Kaen University, Thailand. She is a Physiotherapist and interested in physical therapy in elderly.

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