

Measuring the Reliability of Motor Coordination and Balance Testing in Youth with Intellectual Disabilities

Jeraka Adair, Brian Barnes, Ashlyn Fuller, Reine Nola & Theodora Stevens

Faculty: Ken Pitetti

Department of Physical Therapy

Work by Wuang and colleagues (2009) in Taiwan, using revised components of the Bruininks-Oseretsky Test of Motor Proficiency (BOT-2), established valid and reliable protocols in evaluating motor coordination (MC) and balance (BAL) in children with intellectual disabilities (ID). The purpose of this study was to determine if similar reliability scores would be recorded in youth with ID in the United States. Twenty-five youth (age = 14.0 ± 3.1 ; 15 males, 10 females) performed three MC and four BAL evaluations of the Wuang et al (2009) revised BOT-2 on two different days with three to four weeks between evaluations. Concordance between evaluations was estimated using percent (%) agreement and Cohen's kappa coefficient. Percent agreement ranged from 35%-88%, with kappa scores indicating one test with no (<0), three tests with slight (0-.20), two test with fair (.41-.50) and one test with moderate (.40-.60) agreement, respectively. These results differ significantly with those of Wuang and colleagues (2009), who reported excellent test-retest intraclass correlation coefficients (0.95-0.99) for the same tests. Although differences in mean age (present study older) and number of participants (25 vs 100) exist, results of the present study suggest further research is needed on reliability of the BOT-2 for youth with ID within the United States.