Abstract

Background: Assessing the functional level of children with severe cerebral palsy (CP) requires sensitive tools. In this study, an 'assessment tool' was developed based on the Test of Infant Motor Performance (TIMP) for this population and the reliability and validity evaluated.

Methods: Five physical therapists administered the 'assessment tool' to six children (3-6 years old with a diagnosis of CP, GMFCS Level V). Subtest I of the Gross Motor Function Measure (GMFM-88) was also administered. Intra- and inter-rater reliability were assessed, and the concurrent validity between the 'assessment tool' and GMFM-88 calculated.

Results: The intra-rater reliability, a comparison of the total scores on the 'assessment tool' (live test) and the videotaped rescoring of the same test one month later showed consistency among four of the five therapists (ICC = 0.7545 to 0.979). The inter-rater reliability varied on some of the items but the total score on the 'assessment tool' showed good reliability ($ICC_{2,5}$ 0.816). Scores of children with dyskinesia were less stable. The Spearman's rank correlation coefficient was not significant. Therapists provided recommendations for item revisions.

Conclusion: Further development of an 'assessment tool' appears justified; a larger study using a version with revised administration guidelines and items should be undertaken to re-verify the psychometrics properties of the 'assessment tool.'

Keywords: Cerebral palsy; GMFCS V; TIMP; assessment; psychometric properties.