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VALIDITY AND RELIABILITY OF GROSS MOTOR FUNCTION MEASURE TO MEASURE GROSS MOTOR FUNCTION IN CHILDREN WITH CEREBRAL PALSY

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Background:

Cerebral palsy (CP) is the most physical disabling disease in children. Gross motor capacity in CP usually measured and evaluated by Gross Motor Function Measure (GMFM), a standardized observational instrument to evaluate gross motor function. Validity and reliability studies have shown GMFM reliable, valid, and responsive to change of gross motor function in CP children. This research aims to examine validity and reliability of GMFM translated into Indonesian.

Methods:

Cross sectional study with consecutive sampling of CP children aged 2 to 15 years who came to pediatric rehabilitation clinic at RSCM Medical Rehabilitation Department or to Yayasan Pembinaan Anak Cacat Jakarta. Subjects were classified by age, type, anatomical distribution, and severity of CP. Gross motor function was evaluated with 88 GMFM items translated into Indonesian. Interrater evaluated gross motor function through video records. Criterion validity tested by correlation coefficient, construct validity tested by comparing GMFM item with dimension total scores and GMFM total score with corrected Spearman correlation. Interrater reliability tested by unpaired T-test, internal consistency by alpha Cronbach.

Results:

Thirty one CP children were included. Mean age was 7 years 11 months, mean GMFM score was 58.40 (SD=49.09). No significant difference of all GMFM dimensions and almost all GMFM items obtained from interrater evaluation. Internal consistency was good (alpha Cronbach 0.884). Criterion validity of all dimensions was good; with inter-item and total correlations good to strong ($r=0.523-0.859$).

Conclusion:

Criterion validity of GMFM Indonesian was good to strong. Construct validity of all GMFM dimensions was quite good. Internal consistency was good, while interrater reliability GMFM was good enough.

Keywords:

Cerebral palsy, gross motor function, gross motor function measure, validity, reliability.