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Sogbossi, E.S.^{a b}, Arnould, C.^c, Kpadonou, T.G.^{b d}, Batcho, C.S.^{e f}, Bleyenheuft, Y.^a

Measuring global activity performance in children with cerebral palsy in West Africa: validation of an adapted version of the ACTIVLIM-CP questionnaire

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^a Motor Skill Learning and Intensive Neurorehabilitation Lab, Institute of Neuroscience, Université catholique de Louvain, Brussels, Belgium

^b School of Physical Therapy, Faculty of Health Sciences, University of Abomey-Calavi, Cotonou, Benin

^c Forme & Fonctionnement Humain Lab, Physical and Occupational Therapy Departments, Haute Ecole Louvain en Hainaut, Montignies-sur-Sambre, Belgium

^d Clinique Universitaire de Médecine Physique et Réadaptation, Centre National Hospitalier et Universitaire Hubert Koutoukou MAGA (CNHU-HKM) de Cotonou, Cotonou, Benin

^e Centre for Interdisciplinary Research in Rehabilitation and Social Integration, Laval UniversityQC, Canada

^f Department of Rehabilitation, Faculty of Medicine, Laval UniversityQC, Canada

Abstract

Purpose: To calibrate a West-African version of the ACTIVLIM-CP questionnaire (ACTIVLIM-CP-WA) for children with cerebral palsy (CP). **Materials and Methods:** We recruited 287 children with CP of various age range: 2–6 years ($n = 117$, preschoolers), 6–12 years ($n = 96$, children) and 12–19 years ($n = 74$, adolescents). Caregivers of children of each age range completed the experimental version of the ACTIVLIM-CP-WA including 76 (preschoolers), 78 (children) and 76 (adolescents) global daily life activities. Responses were analyzed using the Rasch RUMM2030 software. **Results:** The final West-African version of ACTIVLIM-CP including 31 items (both common and age-specific items) defined a unidimensional, linear scale with well-discriminated response categories. It presented a high internal consistency ($R = 0.94$). Moreover, all items were locally independent and the item difficulty hierarchy was invariant regarding caregivers' education, children's age and gender, MACS and GMFCS levels. The ACTIVLIM-CP-WA measures were significantly correlated ($p < 0.05$) with Gross Motor Function Classification System ($p = -0.77$), Manual Ability Classification System ($p = -0.75$), Box and Block test (dominant hand $r = 0.51$; non-dominant hand $r = 0.49$), One-minute walking test ($r = 0.28$), and Timed up and Go test ($r = -0.40$). **Conclusions:** The ACTIVLIM-CP-WA questionnaire provides a valid and reliable tool that has the potential to follow children's evolution and quantify changes consecutive to neurorehabilitation in Sub-Saharan Africa. **IMPLICATIONS FOR REHABILITATION** The West-African version of the ACTIVLIM-CP questionnaire (ACTIVLIM-CP-WA) measures global activities requiring a combination of lower and upper extremities in children with cerebral palsy. As a Rasch-built scale, measures are unidimensional and linear to document changes in children with cerebral palsy from 2 to 19 years in Sub-Saharan Africa. Rehabilitation professionals are encouraged to use the ACTIVLIM-CP-WA questionnaire as a psychometrically robust assessment tool measuring the global performance in daily life activities in children with cerebral palsy in Sub-Saharan Africa. © 2022 Informa UK Limited, trading as Taylor & Francis Group.

Author Keywords

activities of daily living; Africa; Cerebral palsy; patient reported outcome measures; psychometrics

Correspondence Address

Bleyenheuft Y.; Motor Skill Learning and Intensive Neurorehabilitation Lab, COSY - Avenue Mounier 53/B1.53.04, Belgium; email: yannick.bleyenheuft@uclouvain.be

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