

Psychometric qualities of a functional independence self-rating scale for adolescents with motor impairment

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Background: There is a shortage of a validated instrument to evaluate the effectiveness of the rehabilitation intervention by adolescents with motor impairment. The purpose of this study was to develop and evaluate its psychometric qualities of an instrument to assess functional independence that can be used by adolescents with motor impairment.

Methodology: Based on Functional Independence Measure scale (FIM) we develop a self-report multidimensional instrument, to assess the functional independence by adolescents. The final version a 16 likert-type items oriented format with, 1 (I can't), 2 (I can with much help), to 5 (I can without help). Its psychometric properties (sensitivity, reliability and validity) were evaluated among 101 adolescents with motor impairment.

Results: The final version of SSFIA 16 items (Motor Domain) psychometric qualities was assessed by Internal consistency (Cronbach's $\alpha = 0.938$, split-half


using Spearman & Brown correction $\alpha = 0.869$). Construct validity were evaluated using principal factor analysis method with varimax orthogonal rotations, revealed a tridimensional structure and explained 74.6% of the variance (elimination, self-care and transfers). We found good support for convergent (FIM scale $r_p = 0.83$ and $r_p > 0.5$ between items) and discriminant validity (average variance extracted analysis).

Conclusions: The good psychometric qualities showed clear evidence that the newly developed instrument provides a sensitive, reliable and valid tool to assess the functionality (motor domain) on adolescents with motor impairment.

Biography

Maria Isabel Dias da Costa Malheiro is an Assistant Professor at the Nursing College of Lisbon, Child and Adolescent Department. She has completed her Doctorate in Nursing at the Lisbon University, Master's in Special Education, Faculty of Human Motricity and Graduate Nurse, Specialist in Child and Pediatric Health Nursing. She has started to work in the hospital since 1988, Neonatology, Pediatrics, Child Development Center. She was the Member of the Spina Bifida Center at Garcia de Orta Hospital until 2002. Since 2002, she has joined the academic career at Nursing College of Lisbon as an Assistant Professor. She collaborates with the Spina Bifida and Hydrocephalus Portuguese Association since 2002, was Vice-President from 2005 to 2013. She was the Coordinator of the project training camp - educational program for self-management on adolescents with spina bifida/spinal cord injury 2011, 2012, 2013, 2014, 2015 and 2016.

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