

questionnaire (Domains: Gynecological consultation; Consciousness of the genito-urinary tract; Social activity; Habits of life; Self-perception; Sexual activity; Female anatomical knowledge). In the data analysis were calculated, according to the distribution of normality of the sample, the means and standard deviation of the variables and compared the groups with and without dysmenorrhea as a function of self-perceived PF with the t test for independent samples. Data were analyzed using the *Statistic Program for Social Science* (version 23) considering the significance level of 5%.

Results: Participated in this study 69 young adult nulliparous women with a mean age of 21.86 ± 3.16 years, mean schooling of 13.62 ± 4.72 and 82.6% were attending higher education in health courses. The prevalence of dysmenorrhea was 65.21% (n=45) and most had regular menstrual flow. The level of pain of dysmenorrhea was low presenting average in VAS of 3.59 ± 3.16 points. By the analysis of the domains and total score of the scale of self-perception of the PA it was verified that the majority of the sample presented a moderate level of perception. There was no statistically significant difference between the groups with and without dysmenorrhea in relation to the perception of PFM, however the group with dysmenorrhea had lower values. There was no correlation between the presence of dysmenorrhea and the domains of self-perception of PF.

Conclusion: Dysmenorrhea is prevalent among young nulliparous women and did not interfere with the perception of PF.

Implications: In scientific terms, it is worrisome to recognize that women who attend health courses have only a moderate level of perception of PF but also that although there was no statistical significance, if the sample was increased probably the symptom dysmenorrhea can interfere in functional terms of PF and alter their self-perception. In clinical terms, this study supports the importance of considering the perception of women in relation to their PF and can collaborate in therapeutic clinical practice.

Keywords: Women's health, Dysmenorrhea, Pelvic floor

Conflict of interest: The authors declare no conflict of interest.

Acknowledgment: Not applicable.

Ethics committee approval: Universidade Estadual do Centro-Oeste, approval opinion number. 5.299.509.

<https://doi.org/10.1016/j.bjpt.2024.100826>

230

DORSIFLEXION RANGE OF MOTION (ROM) AND SHANK-FOREFOOT ALIGNMENT ARE ASSOCIATED WITH THE PERFORMANCE OF THE MODIFIED STAR EXCURSION BALANCE TEST

Lais Emanuelle Meira Alves¹, Natália Franco Netto Bittencourt², Renato de Paula da Silva³, Luciana De Michelis Mendonça⁴

¹ Postgraduate Program in Rehabilitation and Functional Performance (PPGREab) – Universidade Federal dos Vales do Jequitinhonha e do Mucuri (UFVJM), Diamantina, Minas Gerais, Brazil

² Department of Health and Performance in Clube Esporte Bahia, Salvador, Bahia, Brazil

³ Postgraduate Program in Sports Science (PPGCE), Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

⁴ Department of Physical Therapy – School of Physical Education, Physiotherapy and Occupational Therapy - Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

Background: The modified Star Excursion Balance Test (mSEBT) is a valid, low-cost, and easily implemented screening tool in clinical practice recommended for assessing dynamic postural control in athletes. Previous studies evidenced that poorer performance on

the mSEBT predicts an increased risk of injury in several sports. The performance of the mSEBT depends on the contribution of various body segments and constructs of physical function to reach maximum distance in the anterior, posteromedial, and posterolateral directions. Understanding the relationship between mSEBT performance, distal and proximal factors in the kinetic chain and other constructs of physical function in soccer athletes can contribute to a more assertive assessment in clinical practice, since soccer athletes with dynamic balance deficient are more likely to sustain a lower limb injury.

Objective: To verify if hip and foot/ankle musculoskeletal factors predicts the performance of the modified Star Excursion Balance Test (mSEBT) in male youth soccer athletes.

Methods: In this cross-sectional study, 108 athletes (18.04 ± 0.14 years, 72.86 ± 0.76 kg, 1.78 ± 0.7 m) in categories Under-17 and Under-20 from a professional soccer club in Brazil were assessed during the preseason assessment. The assessment included the following tests: shank-forefoot alignment (SFA), passive hip IR ROM, hamstring flexibility (HF), dorsiflexion range of motion (ROM), Single Leg Hamstring Bridge (SLHB), and the performance of the modified Star Excursion Balance Test (mSEBT). Multiple linear regression analysis was performed to identify if the foot/ankle musculoskeletal factors could explain the performance of the mSEBT.

Results: Regression analyses revealed that shank-forefoot alignment and ankle dorsiflexion ROM predicted the performance of the mSEBT ($P < 0.05$). In model 1, SFA explained 9% of the mSEBT performance ($F = 10.19$; $r = 0.3$; $r^2 = 0.9$; $p = 0.002$). The inclusion of the ankle dorsiflexion ROM in model 2 explained 16% of the total variance of the mSEBT ($F = 8.54$; $r = 0.4$; $r^2 = 0.16$; $p = 0.004$).

Conclusion: The ankle dorsiflexion ROM and shank-forefoot alignment explained 16% of the performance of the mSEBT in male youth soccer athletes. These results suggest that the ankle dorsiflexion ROM and shank-forefoot alignment contribute to test performance and the physiotherapist must assess these factors.

Implications: The results of this study suggest that considering the influence of distal musculoskeletal factors of the kinetic chain on dynamic postural control and the association of the ankle dorsiflexion ROM and the shank-forefoot alignment with the performance of the mSEBT in youth soccer athletes. Athletes with a lower performance in the test should be assessed to verify the shank-forefoot alignment and the ankle dorsiflexion ROM. In addition, the improvement of the ankle mobility can be considered a good intervention in the implementation of prevention programs.

Keywords: Postural control, Assessment, Kinetic chain

Conflict of interest: The authors declare no conflict of interest.

Acknowledgment: Not applicable.

Ethics committee approval: The study was approved by the Human Research Ethics Committee of the Federal University of Vale do Jequitinhonha e Mucuri, Brazil (CAAE - 42214920.4.0000.5108).

<https://doi.org/10.1016/j.bjpt.2024.100827>

231

ANALYSIS OF RELIABILITY, VALIDITY, RESPONSIVENESS AND MEASUREMENT ERROR OF THE COMPREHENSIVE MOTOR COORDINATION SCALE IN INDIVIDUALS WITH NEUROLOGICAL DISORDERS

Lais Ester Roveron Souto¹, Emilyn Baragati¹, Ayeska Gabriele de Moraes Ramos¹, Andrea Vancetto Maglione¹, Sandra Regina Alouche¹

¹ Masters and Doctoral Program in Physical Therapy, Universidade Cidade de São Paulo (UNICID), São Paulo, São Paulo, Brazil

Background: The Comprehensive Motor Coordination Scale (CCS), developed with the purpose of analyzing the coordination of multiple body segments in individuals with neurological lesions, based on observational kinematics, assesses the quality of movement in patients with neurological dysfunctions.

Objectives: To perform the cross-cultural adaptation and measurement properties of CCS evaluation in patients with neurological disorders. Specifically, it is intended to evaluate the construct validity, inter-rater and intra-rater reliability, and responsiveness, of the Brazilian Portuguese version of the CCS in individuals with stroke.

Methods: The translation and comprehension analysis of the Portuguese-Brazil version was verified by specialists. The CCS will be applied to individuals with stroke, in conjunction with the graduation scale of this health condition, the Fugl-Meyer Scale, which grades the severity of this health condition. Each individual will perform 3 evaluations. Evaluators were trained by means of video for correct scale application and analysis. Two evaluators will apply the CCS to analyze inter-rater reliability in the first evaluation. Videos of all CCS tests will also be recorded for later scoring if two evaluators are not present. In the second evaluation, up to 5 days after the first, the CCS will be reapplied by one of the previous evaluators, allowing the analysis of intra-rater reliability. In the third application of the CCS, responsiveness of the scale will be evaluated after 10 physiotherapy sessions. Concurrent analysis will use the Box and Blocks Test and the 10-meter walking test (applied in the first and third evaluation).

Results: So far, data from 33 patients have been collected, with a mean age of 53.9 years (SD = 14.2), with the diagnosis of stroke, all chronic. Of this, 15 (45%) are female. Regarding education level, most patients had completed high school (27.3%). 57.6% of patients have predominantly left hemiparesis and 42.4%, right hemiparesis. Regarding the degree of stroke impairment, the mean Fugl Meyer score was 161.7 points (SD= 31.2).

Conclusion: We expect that the Brazilian version of the CCS will achieve good inter- and intra-evaluator reliability, strong positive correlation with patient severity and good responsiveness. The validation of video analysis should be confirmed.

Implications: The results of this study will provide information about the measurement properties of this new motor coordination assessment scale. Based on this information, implementation in clinical practice will be direct, allowing clinicians to use a valid tool, based on observational kinematics, both in-person and via video. The CCS will allow the assessment of motor coordination in patients with neurological disorders for clinical decision making and monitoring of recovery process after injury.

Keywords: Motor coordination, Evaluation, Motor performance

Conflict of interest: The authors declare no conflict of interest.

Acknowledgment: Not applicable.

Ethics committee approval: Universidade Cidade de São Paulo (UNICID) and Associação de Assistência à Criança Deficiente (AACD) - CAAE:22875419.6.3001.0085

<https://doi.org/10.1016/j.bjpt.2024.100828>

232

IDENTIFICATION OF PRETERM INFANTS AT HIGH RISK OF CEREBRAL PALSY: PRELIMINARY DATA

Lara de Almeida Rodrigues¹, Hiane Aparecida Silva¹, Karoline Tury de Mendonça², Rafael Coelho Magalhães³, Livia de Castro Magalhães¹, Ana Cristina Resende Camargos³

¹ Postgraduate Program in Rehabilitation Sciences, School of Physical Education, Physical Therapy and Occupational Therapy,

Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

² Hospital das Clínicas of Universidade Federal de Minas Gerais/ EBSERH, Minas Gerais, Brazil

³ Postgraduate Program in Occupational Studies/Occupational Therapy Department, School of Physical Education, Physical Therapy and Occupational Therapy, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

Background: The increase in the survival rate of preterm newborns is associated with a high risk of delay or changes in neuropsychomotor development, among them, cerebral palsy (CP), the most common childhood disability in the world. Although diagnosis has been traditionally made late, between the ages of 12 and 42 months, the use of tools that allow early detection of this health condition is recommended. The use of results from neuroimaging, from Hammersmith Infant Neurological Examination (HINE) and from general movements assessment (General Movements - GMs) in a combined way allows detecting infants at high risk of CP before 5 months of corrected age.

Objectives: Early identification of preterm infants between the ages of 2 and 4 months who are at high risk of CP.

Methods: This is a cross-sectional observational study carried out between February and December 2022. The sample consisted of preterm infants, born in the maternity of a university-hospital, with gestational age < 34 weeks and/or weight ≤ 1500 grams, who were referred for follow-up at a preterm children's outpatient clinic in the university-hospital complex. The criteria considered as a high risk of CP were the presence of peri-intraventricular hemorrhage (PIVH) grades III and IV on cranial ultrasound (US); HINE total score ≤ 56; and abnormal classification (mildly abnormal or definitely abnormal) in GMs.

Results: In the present study, were assessed 26 preterm infants, 65.4% male, with a mean age of 99.88 days (±22.28), mean gestational age of 31.19 weeks (±2.45), and mean birth weight of 1491.92 grams (±455.99). Seven infants (26.9%) presented a HINE total score ≤ 56 points. Five infants (19.2%) had abnormal classification in GMs, 3 were classified as definitely abnormal and 2 as mildly abnormal. Twelve (46.2%) infants did not present PIVH, grades I and II were identified in 14 (53.8%) infants and none of them presented grades III and IV.

Conclusion: The use of GMs and HINE in a follow-up service of preterm infants provided early detection of infants at high risk of CP and referral for early intervention in a timely manner. However, US results should be interpreted with caution in this population, suggesting further investigation of this tool in future research.

Implications: Early detection of CP can facilitate diagnosis and enable referral for early intervention in the period of greater brain neuroplasticity, allowing better functional outcomes. In addition, it is important to emphasize that it can also contribute to coping and the family's mental health, reducing stress, anxiety and depression and increasing well-being.

Keywords: Prematurity, Early detection, Cerebral Palsy

Conflict of interest: The authors declare no conflict of interest.

Acknowledgment: We thank the Universidade Federal de Minas Gerais (UFMG) for institutional support and the CAPES, CNPq, PROEX for the financial support and scholarships.

Ethics committee approval: Universidade Federal de Minas Gerais - CAAE 48187321.4.0000.5149

<https://doi.org/10.1016/j.bjpt.2024.100829>