

the presence or absence of pain. The density and texture of the soft tissues adjacent to the occipital region (suboccipital muscles) and C1-C4 and T5-T9 vertebrae (paravertebral muscles) were assessed by palpating the soft tissues immediately lateral to the spinous processes of the vertebral column and the occipital bone. Asymmetry of the occipital and vertebral (C1-C4 and T5-T9) regions was assessed as follows: for the occipital region, the evaluator, with their fingers placed on the occipital bone, determined if one side was more posterior than the other. For the C1-C4 and T5-T9 segments, the evaluator located the transverse processes of the cervical and thoracic vertebrae and identified posteriority through palpation. Vertebral mobility of C1-C4 was assessed by evaluating two main movements, lateral flexion, and vertebral rotation. For vertebral mobility of T5-T9, rotational movements of the vertebrae were investigated.

Results: The GG exhibited greater restriction in lateral gliding and left rotation mobility at the vertebral levels between C2 and C4 and T6 and T9, as well as increased pain (at C3 to C4 and T7 to T9), muscle tension (at all levels), and vertebral asymmetry (at C2 to C4 and T7 to T9) compared to the GC, with a significance level of $p < 0.05$.

Conclusion: Individuals with chronic gastritis showed reduced left-sided vertebral rotation mobility in the cervical and thoracic spine, as well as decreased left-sided vertebral lateral gliding mobility in the cervical region. Additionally, they exhibited increased pain at the spinous process, right-sided vertebral transverse process asymmetry, and increased muscle tension adjacent to the right-sided vertebrae in the thoracic and cervical regions, compared to healthy individuals.

Implications: It is of paramount importance to investigate the relationships between the viscera and the musculoskeletal system, as it can help prevent potential associated musculoskeletal dysfunctions and promote a more comprehensive alternative treatment through osteopathy, chiropractic, or other approaches.

Keywords: Gastritis, Posture, Range of motion

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

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FINE MANUAL DEXTERITY OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND WITH TYPICAL DEVELOPMENT THROUGH IDADI

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Background: Autism affects 1 in every 160 children in the world. It is estimated that there are about 2 million people within the spectrum in Brazil. Its diagnosis is based on the presentation of the disorder, since there is no biological marker, which led to the emergence of numerous international instruments for screening and more assertive diagnosis. In Brazil, the use of these instruments is limited by translation, validation, psychometric quality and by the large geographic dimension that can, for example, generate different motor repertoires among children of the same age group due to the great diversity between the regions of the country. So far, only one study used the Dimensional Inventory of Child Development

Assessment (IDADI), created in Brazil, to assess fine motor skills in children with Autism Spectrum Disorder (ASD), but without including the population of the northern region of Brazil.

Objectives: To compare the fine motor skills of children with ASD and those with typical development using the Dimensional Inventory for Child Development Assessment.

Methods: This is a descriptive and observational study with a cross-sectional design developed in Pará. Data collection was carried out by four researchers online or in person, divided into two groups: children with ASD and children with typical development. The instrument uses the parental report of mothers or other family members of daily contact with the child who had a clinical diagnosis (in all degrees) of Autistic Spectrum Disorder determined by a licensed professional (psychologist or physician), and the age group was used between 24 and 72 months. The group of typically developing children were in the same age group and scored less than 15 on the Social Communication Questionnaire, indicating no risk of ASD. For the assessment of fine motor skills, the standardized score of the IDADI fine motor domain was used.

Results: 66 children participated in the study, 22 diagnosed with ASD and 44 with Typical Development. A significant difference was observed comparing the fine motor skills of children with ASD (69.5 ± 19.6) with children with TD (98.2 ± 19.0), with statistical difference between groups ($p < 0.0001$), with large effect size ($d = 1.48$).

Conclusion: We carried out the analysis of fine motor skills in child development through the Dimensional Inventory of Child Development Assessment, created in Brazil, comparing children with TD and ASD, and our results confirmed that children with ASD have significantly lower scores than typical children when compared fine motor skills between children with ASD and with typical development.

Implications: Motor abnormalities are usually the first sign of atypical development in ASD and can be detected before social and language disorders, being able to significantly affect other aspects of child development. In addition, impaired fine motor skills can be predictors of ASD severity, making detection essential to enable effective interventions for this population.

Keywords: Autistic Spectrum Disorder, Motor Skills, Motor behavior

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

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CAPACITY OF PHYSICAL AND NON-PHYSICAL CHARACTERISTICS IN PREDICTING OBJECTIVE FUNCTION OF WOMEN WITH PATELLOFEMORAL PAIN

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Background: Patellofemoral pain (PFP) is a chronic musculoskeletal disorder characterized by an insidious and diffuse pain around and/or behind the patella. People with PFP have decreased levels of physical activity and muscle strength of the knee extensors, as well as higher levels of pain, kinesiophobia, and body mass index (BMI).

In addition, people with PFP experience decreased performance during objective function tests, such as the single leg hop test (SLHT). Although, theoretically, all the alterations above mentioned may be contributing to the decreased SLHT performance of individuals with PFP, no study has investigated this to date.

Objectives: To determine the capacity of physical activity level, BMI, pain level, kinesiophobia and muscle strength of knee extensors in predicting SLHT performance of people with PFP.

Methods: Sixty-two women with PFP were included in this study. Demographic data, level of physical activity (Baecke questionnaire), kinesiophobia (Tampa Scale) and average pain in the previous month (Visual Analogue Scale – 0 to 100 mm) were obtained. The objective function was evaluated with the SLHT, in which participants were required to hop forward as far as possible and the distance in centimeters was obtained. The concentric strength of the knee extensors was obtained with an isokinetic dynamometer at 60°/s. A multiple linear regression was performed to determine the capacity of muscle strength, kinesiophobia, BMI, pain and the level of physical activity in predicting the objective function of women with PFP.

Results: None of the independent variables (i.e., concentric knee extensor strength, Kinesiophobia, Pain, Physical activity level, BMI) were able to significantly predict the SLHT performance of women with PFP ($F_{(5,56)}=0.328$; $p=0.884$; $R^2=0.028$).

Conclusion: Despite the theoretical plausibility, the variables investigated in this study were not able to significantly predict the SLHT performance of women with PFP. It is possible that other variables not investigated in this study, such as the strength of the hip extensors, and the rate of torque development of the knee flexors and extensors may present with better predictive capacity. However, future studies are needed to confirm or refute this hypothesis.

Implications: As none of the variables were able to explain the performance of women in SLHT, it remains inconclusive why they present a decreased performance on this task compared to asymptomatic individuals.

Keywords: Patellofemoral pain, Objective function, Performance

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

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Ethics committee approval: The study was approved by the Ethics and Research Committee of FCT-UNESP (approval number 4,649,629).

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ASSESSMENT OF THE FUNCTIONALITY OF HOSPITALIZED ELDERLY INDIVIDUALS AND IDENTIFICATION OF THEIR DISABILITIES

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Background: Hospitalization-associated disability (HAD) results from the impact of acute illness and hospital factors and can affect 1/3 of the elderly. This context reflects functional dependency and increased consumption of health resources. Clinical tests applied in the hospital environment help quantify the effects of acute illness and hospitalization.

Objective: To evaluate the impact on functionality of hospitalized elderly by means of clinical tests and to assess their correlations.

Methods: Cross-sectional study with 40 elderly patients hospitalized for acute illness and who were ambulating independently 2 weeks before admission. Variables assessed: manual grip strength

(MPF) (it was considered as weakness below 27 kgf for men and 16 kgf for women), Short Physical Performance Battery (SPPB) test (evaluates balance, speed and strength with scores from 0 to 12) and gait speed at admission and at discharge.

Results: Of those evaluated, 25 were male, mean age was 77 ± 7 years, mean length of stay 8 ± 6 days. At admission, FPM: 22 ± 9 kgf, SPPB score: 7 ± 4 and walking speed: $0.65\text{m/s} \pm 0.25$. At hospital discharge: FPM: 21 ± 9 kgf, SPPB score 8 ± 4 and gait speed $0.60 \pm 0.23\text{m/s}$. There was no statistically significant difference between FPM and gait speed at admission and at discharge ($p > 0.05$). Only the SPPB showed statistical and clinical significance ($p = 0.02$). Length of stay correlated negatively with FPM ($p = 0.11$, $r = -0.26$) and SPPB ($p = 0.12$, $r = -0.25$). FPM correlated with SPPB ($p = 0$, $r = 0.58$) and with gait speed ($p = 0$, $r = 0.71$).

Conclusion: Average of 8 days of hospitalization was not enough to reduce the functionality of the hospitalized elderly by the applied tests, however, there is correlation between loss of strength and functional loss.

Implications: FPM, gait speed and SPPB may be useful tools to assess the functionality of hospitalized elderly.

Keywords: Activities of Daily Living, Hospitalization, Patient Discharge

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

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PREVALENCE OF DCD AMONG SCHOOL CHILDREN FROM 6 TO 10 YEARS OF AGE: COMPARISON BETWEEN TWO BRAZILIAN REGIONS

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Background: Developmental Coordination Disorder (DCD) is characterized by a significant delay in the acquisition and execution of motor skills, impacting children's daily activities and school performance. The most recent prevalence estimates indicate that this disorder affects between 5 and 6% of school-age children. Therefore, we emphasize the importance of investigating the prevalence of DCD in different Brazilian regions.

Objectives: To explore the prevalence of risk for DCD and probable DCD in children aged 6 to 10 years from two Brazilian regions.

Methods: 199 children aged 6 to 10 years old from public schools in the South (n=89) and Southeast (n=108) regions of Brazil participated in this cross-sectional study. Parents/guardians signed the informed consent form under ethics approval. For screening and identification of alterations in motor function, the Movement Assessment Battery for Children (MABC-2) was used, following all the criteria for the diagnosis of DCD recommended in the literature. The assessment was conducted in schools by trained professionals with experience in motor assessment. Prevalence of risk ($\leq 15\%$ percentile) and probable DCD ($\leq 5\%$ percentile) in both regions was calculated and analyzed descriptively. MABC-2 total scores and component scores were compared by region using t-tests, with a significance level of 5%.

Results: The sample of this study consisted of 54.3% girls with a mean age of $7.95 (\pm 1.34)$ years and 45.7% boys with $7.88 (\pm 1.47)$ years. There were no differences between the mean age and sex