

the Kolmogorov-Smirnov test. Comparison between CVH groups was performed using the one-way ANOVA test with Tukey's post hoc (symmetrical distribution) and the Kruskal-Wallis test for independent samples with Dunn's post hoc. Multiple linear regression verified the relationship between the CVH score and the HRQoL domains, with data adjusted for sex and age. The software used for analysis was the Statistical Package for Social Science (SPSS) and the value considered for  $p$  was  $<0.05$ .

**Results:** Of the workers, 25.6% had poor CVH, 27.2% intermediate and 47.1% ideal. Workers with poor CVH [46.26 (6.98)] had lower PC HRQoL values when compared to the intermediate [50.34 (6.53),  $p=0.036$ ] and ideal group [50.07 (6.21),  $p=0.002$ ]. There was also a positive relationship between the CVH score and the PC [ $\beta=0.068$  (95%CI= 0.011 to 0.126),  $p=0.020$ ] of HRQoL.

**Conclusion:** Half of the workers had between poor and intermediate CVH. Those with poor CVH had worse HRQoL on the PC. There was a direct relationship between the CVH score and HRQL PC.

**Implications:** The use of metrics can be a tool for screening CVH, easy collection and good cost-effectiveness. It is also an opportunity to show workers the importance of physical exercise and proper nutrition.

**Keywords:** Cardiovascular health, Quality of life, Worker's health

**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 Universidade Evangélica de Goiás under number 4.512.382/2021.

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375

### COMPARTMENTAL THORACOABDOMINAL VOLUME DISTRIBUTION IN PATIENTS WITH PARKINSON'S DISEASE IN THE OFF STATE OF LEVODOPA USE

Pedro Vinicius Manso Porfírio<sup>1</sup>, Lucas Rafael da Silva Fraga<sup>1</sup>, Wagner Souza Leite<sup>1</sup>, Fátima Natário Tedim de Sá Leite<sup>1</sup>, Shirley Lima Campos<sup>1</sup>, Armele Dornelas de Andrade<sup>1</sup>

<sup>1</sup> Departamento de Fisioterapia, Universidade Federal de Pernambuco (UFPE), Recife, Pernambuco, Brasil

**Background:** Parkinson's disease (PD) is a neurodegenerative disorder resulting from the death of motor neurons in the substantia nigra and is associated with reduced lung volumes.

**Objectives:** To analyze the compartmental distribution of thoracoabdominal volumes in PD patients evaluated by optoelectronic plethysmography (OEP) and describe the respiratory function of the sample.

**Methods:** This is a cross-sectional study in which 16 patients (12 men and 4 women), between 50 and 75 years old, classified in stages 2 to 3 of the Hoehn and Yahr Scale, were evaluated by OEP and spirometry. Data collection was performed at the Cardiopulmonary Physical Therapy Laboratory (LACAP) of UFPE.

**Results:** In the analysis of the distribution of thoracoabdominal volumes, there was a predominance of abdominal tidal volume compared to the other compartments ( $VC_{ab}\% = 0.34 > VC_{crp}\% 0.13 > VC_{ra}\% 0.09$ , with  $p < 0.001$ ). Patients maintained tidal volume ( $V_t$ ), minute ventilation ( $V_e$ ), and respiratory rate (RR) within the normal range ( $V_t 0.54 \pm 0.22$  L;  $V_e 9.198 \pm 3.40$  L/min;  $RR 18.25 \pm 5.73$ ), and forced spirometry yielded an FEV1 (% predicted) of  $0.71 \pm 0.17$  L and FVC (% predicted) of  $0.69 \pm 0.58$  L.

**Conclusion:** The results suggest that in the distribution of thoracoabdominal volumes, there was an abdominal predominance

compared to the others. In the respiratory pattern and spirometric variables, patients presented normal ventilation with a predominance of abdominal breathing pattern, despite the presence of longer inspiratory time. Despite the condition of Parkinson's disease, patients without medication therapy and normal respiratory function showed greater ventilation in the abdominal compartment compared to the thoracic compartments.

**Implications:** Despite normal respiratory function, future studies should elucidate the reasons for the disadvantage of thoracic impairments compared to abdominal impairments in the breathing pattern of these patients. An alternative would be to compare this assessment of the respiratory pattern in patients with medication use.

**Keywords:** Parkinson Disease, Plethysmography, Physical Therapy

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

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376

### THE INFLUENCE OF FUNCTIONAL CAPACITIES ON THE PARTICIPATION OF ADOLESCENTS WITH CEREBRAL PALSY: PRELIMINARY DATA

Pollyeverlin Rego Rocha<sup>1</sup>, Camila Araujo Santos Santana<sup>1</sup>, Carolina Fioroni Ribeiro da Silva<sup>1</sup>, Monique Maria Silva da Paz<sup>1</sup>, Vitoria Regina Rocha Urruchia<sup>1</sup>, Eloisa Tudella<sup>1</sup>

<sup>1</sup> Núcleo de Estudo em Neuropediatria e Motricidade (NENEM), Universidade Federal de São Carlos (UFSCar), Programa de Pós-Graduação em Fisioterapia (PPG-FT), São Carlos, São Paulo, Brasil

**Background:** The motor dysfunctions that result in the incapacity and participation limitations in individuals with Cerebral Palsy (CP) are described as adjacent alterations from their pathology. The characterization of daily activities and participation is still little explored and studied in the literature to assist practice. We need to know the characteristics of the participation of adolescents with CP to guide a more assertive clinical practice.

**Objectives:** To explore associations between the functional level and the frequency of social participation of adolescents with CP.

**Methods:** Observational cross-sectional study. Adolescents diagnosed with CP, between 12 and 17 years old, without associated cognitive or behavioral changes were assessed. The adolescents were classified by the Brazilian Economic classification criteria ABEP-2022, and regarding the frequency of participation at home, school and community by the Participation scale and environment Measure for Children and Youth (PEM-CY) and the functional levels classified by Gross Motor Function Classification System (GMFCS), Manual Ability Classification System (MACS), Communication Function Classification System (CFCFS), Eating and Drinking Ability Classification System (EDACS) and Vision Function Classification System (VFCS). Data were analyzed descriptively and through Spearman correlations, using the Statistical Package for Social Science.

**Results:** 10 adolescents were evaluated, 5 boys and 5 girls, with a mean age of  $13.90 (\pm 1.79)$ . Regarding socioeconomic status, measured by ABEP, 3 (30%) of the adolescents were classified as B2, 3 (30%) as C1 and 4 (40%) as C2. Classifications of functional levels were: GMFCS level I = 4 (40%), II = 1 (10%), IV = 3 (30%) and V = 2 (20%); MACS level I = 4 (40%), II = 3 (30%) and IV = 3 (30%); CFCFS level I = 2 (20%), II = 3 (30%), III = 4 (40%) and IV = 1 (10%); EDACS level I = 4

(40%), II = 2 (20%), III = 2 (20%), IV = 1 (10%) and V = 1 (10%); and VFCS level I = 7 (70%), II = 2 (20%) and III = 1 (10%). Significant negative correlations were found between GMFCS levels and the frequency of participation at school ( $\rho = -0.72$ ;  $r^2 = 0.34$ ;  $p\text{-value} = 0.01$ ). No significant correlations were observed between participation and functional levels of MACS, EDACS, VFCS, CFCS.

**Conclusion:** These preliminary data may indicate a tendency that the better the gross motor function (GMFCS) the better the frequency of participation in activities in the school environment for adolescents with CP. These results suggest that better motor skills may facilitate activities in the school environment.

**Implications:** Knowledge about the influence of functionality on the participation of adolescents with CP is essential to guide individualized and family-centered clinical practice. Furthermore, it is essential to verify the influence of factors related to the body function and levels of frequency in social participation experienced by these individuals in different environments.

**Keywords:** Cerebral palsy, Functionality, Social participation

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**Acknowledgment:** Not applicable.

**Ethics committee approval:** Universidade Federal de São Carlos (CAAE:64919722.9.0000.5504).

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377

### EVALUATION OF ONCOLOGICAL PATIENT MOBILITY WHO HAVE PERFORMED OR NOT A PREOPERATIVE PHYSIOTHERAPEUTIC INTERVENTION – OBSERVATIONAL STUDY

Priscilla Galvão de Oliveira<sup>1</sup>, Cristina Rosa Souza<sup>1</sup>, Ana Paula Alves de Andrade Cabral<sup>1</sup>, Aline Teixeira Alves<sup>2</sup>, Liana Barbaresco Gomide Matheus<sup>2</sup>

<sup>1</sup> University Hospital of Brasília (UnB), Universidade de Brasília, Brasília, Distrito Federal, Brazil

<sup>2</sup> University of Brasília (UnB), Brasília, Distrito Federal, Brazil

**Background:** the importance of assessing patient mobility has been described in the literature. Recognition of low mobility on admission or declining mobility status during hospitalization should lead to early involvement by staff, including physiotherapists. It is important to know the level of functional capacity in the short and long term, after the surgical procedure, so that it is possible to adequately direct the health care that goes beyond the clinical solution of the disease, prolonging the desired functional recovery.

**Objectives:** to describe the mobility index assessed on the first postoperative day, according to the JH-HLM scale, in cancer patients who underwent preoperative physical therapy intervention or not.

**Methods:** observational, retrospective study with a quantitative approach. Sociodemographic and clinical data as well as mobility data were obtained from the electronic database of the physiotherapy service of the surgical clinic of the Hospital Universitário de Brasília and confirmed in the electronic medical record available in the Management Application for University Hospitals (AGHU). The mobility assessment was performed using the Johns Hopkins Highest Mobility Scale (JH-HLM).

**Results:** the study sample consisted of seventy-six patients, most women (76.31%), with a mean age of 56.44 years. In the comparison between the groups, at the time of the postoperative period, there was a significant difference ( $p = 0.029$ ) in the mobility of the group that underwent preoperative physiotherapy (mean 7.3; median 8; interquartile 6.5-8) and the group who did not undergo preoperative physiotherapy (mean 6.09; median 7; interquartile 5-8).

**Conclusion:** the group that underwent preoperative physiotherapy had a higher mobility index than the group that did not undergo this intervention.

**Implications:** Based on the positive result of the physical therapy intervention in the preoperative period on the mobility index of patients, it is possible to implement a structured protocol for monitoring surgical patients at different times during their hospitalization, providing better functional results until discharge.

**Keywords:** Physical therapy, Oncology, Mobility

**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 Ceilândia Faculty of the University of Brasília (3,022,045), in accordance with ethical standards of norms and regulatory guidelines for research involving human beings, in accordance with Resolution 466, of 2012, of the National Health Council.

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378

### INFLUENCE OF LIFESTYLE ON CARDIORESPIRATORY FITNESS OF UNIVERSITY STUDENTS

Rafael Araujo Motta<sup>1</sup>, Jhonathan Wéllington Pereira Gaia<sup>1</sup>, Lívia Patrícia da Silva Nascimento<sup>1</sup>, Andréa Camaz Deslandes<sup>2</sup>, Felipe Barreto Schuch<sup>3</sup>, Daniel Alvarez Pires<sup>1</sup>

<sup>1</sup> Postgraduate Program in Human Movement Sciences, Federal University of Pará (UFPA), Belém, Pará, Brazil

<sup>2</sup> Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Brasil

<sup>3</sup> Universidade Federal de Santa Maria (UFSM), Santa Maria, Rio Grande do Sul, Brasil

**Background:** The relationship between lifestyle and cardiorespiratory fitness (CRF) has been extensively studied in adults, with evidence indicating that CRF is associated with a lower risk of physical and mental health problems<sup>1-3</sup>. However, this relationship is still not clearly established for university students and most studies in this area have not explored how different aspects of lifestyle can affect cardiorespiratory fitness in the young population<sup>4</sup>. In view of this, understanding how different aspects of lifestyle are associated with ACR can be useful for the development of interventions aimed at promoting the health and well-being of this population.

**Objectives:** The objective of this study was to evaluate the associations between lifestyle components and cardiorespiratory fitness in university students.

**Methods:** The research used a quantitative cross-sectional observational method with a sample of 139 university students (53% women), with a mean age of  $23 \pm 6$  years. To assess lifestyle, the instrument The Short Multidimensional Inventory Lifestyle Evaluation (SMILE-C)<sup>5</sup> was used. Cardiorespiratory fitness was assessed using the 20m Shuttle Run test<sup>6</sup>, which is a valid measure to estimate the ACR in the young population<sup>4</sup>. Statistical analysis was performed using a univariate general linear model to assess the contribution of each lifestyle component to cardiorespiratory fitness. The significance adopted was  $p < 0.05$ . All analyzes were performed using SPSS Version 27.0 software.

**Results:** The results demonstrated that lifestyle was a significant predictor ( $F(7, 131) = 3.472$ ;  $p = 0.002$ ;  $R^2 = 0.15$ ), explaining approximately 15% of the variation in cardiorespiratory fitness. However, the results for each specific lifestyle component were different. Physical activity showed a significant positive relationship with cardiorespiratory fitness ( $\beta = 0.55$ ; CI 95% = 0.12, 0.98;  $p = 0.013$ ;