Background: Chronic Obstructive Pulmonary Disease (COPD) should be considered in individuals exposed to harmful agents to lung health, especially in people aged 40 years or older who present chronic signs and symptoms such as cough, dyspnea, fatigue with minimal exertion, and sputum production. Although a reduction in FEV1 is an important indicator, the assessment of the severity and prognosis of COPD requires additional parameters. The BODEXs90 index is a multidimensional tool that evaluates predictive variables for mortality, providing a more comprehensive assessment of the consequences of the disease.
Objectives: To explore the association between COPD severity and prognosis using the BODEXs90 index.
Methods: A cross-sectional study was conducted with patients diagnosed with COPD, confirmed by spirometry with FEV1/FVC < 0.7, according to the criteria of the Global Initiative for Chronic Obstructive Lung Disease (GOLD), under follow-up in an outpatient pulmonary service. Patients aged 40 to 90 years, without cognitive or oral communication deficits, and who did not depend on oxygen supplementation, were included. To compose the domains of the prognostic index, the following were evaluated: Body Mass Index (BMI), percentage of FEV1 after bronchodilation spirometry, symptom intensity by the COPD Assessment Test (CAT), degree of dyspnea by the Modified Medical Research Council (mMRC), history of exacerbations, and baseline oxygen saturation (SpO_2). The associations were determined through Pearson chi-square analysis and Fisher's exact test.
Results: The sample consisted of 65 individuals, with an average age of 67.1 $\pm$ 8.5 years, with the majority being female (55.4%). The predominant educational level was elementary school (75.4%). More than half of the patients (56.9%) reported exacerbation events. Regarding BMI, 44.6% were of normal weight, 16.9% were underweight, 16.9% were overweight, and 21.5% had some degree of obesity. The average baseline SpO_2 was 94.5 $\pm$ 2.8. Severe FEV1 reduction (GOLD 3) was more prevalent (44.6%). No significant difference was observed between the CAT classification and predominant sex in both sexes [??2(3) = 2.394; p = 0.49], nor in degree 1 of dyspnea by sex [??2(4) = 1.381; p = 0.85]. A significant association was observed between COPD severity and prognosis in the BODEXs90 index [??2(6) = 22.925; p = 0.001], indicating that patients with moderate obstruction were classified in the mild category of BODEXs90 compared to other categories.
Conclusion: The greater the degree of airflow obstruction, the worse the prognosis and the estimated survival at four years, regardless of sex. The use of the BODEXs90 index proved to be effective in assessing the prognosis of COPD patients.
Implications: Personalizing the treatment of COPD patients based on a multidimensional prognostic system such as the BODEXs90 index is important for adjusting therapies and also for supporting the early identification of patients at higher risk of disease progression.
Keywords: Sarcopenia, COPD, Prognosis

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PERIPHERAL OXYGENATION BEHAVIOR IN PEOPLE WITH COPD: PILOT STUDY

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Background: Chronic obstructive pulmonary disease (COPD) is a systemic condition that causes microvascular alterations, interfering with muscle metabolism and leading to reduced oxidative capacity and exercise tolerance limitations.
Objectives: To analyze the peripheral oxygenation behavior of people with COPD.
Methods: This was a cross-sectional, analytical, and quantitative study conducted with 12 individuals with COPD. The participants' peripheral oxygenation behavior was assessed using near-infrared spectroscopy (NIRS), positioned on the medial gastrocnemius muscle, while they performed a treadmill exercise test. The evaluated variables included initial saturation (StO_2 initial), lowest saturation (StO_2 lowest), final saturation (StO_2 final), desaturation time, and desaturation rate. Data analysis was performed using the Statistical Package for Social Science (SPSS), applying the Shapiro-Wilk normality test and a significance level of 5%.
Results: The mean age of female participants was 68.6 $\pm$ 23.0 years, and for males, it was 69.3 $\pm$ 20.0 years. In men, the values were: StO_2 initial = 53.7 $\pm$9.58%, StO_2 lowest = 48.3 $\pm$ 10.9%, StO_2 final = 53.4 $\pm$ 7.92%, desaturation rate = -0.03 (-0.15 $-$ -0.01). In women, the values were: StO_2 initial = 58.6 $\pm$ 4.37%, StO_2 lowest = 52.2 $\pm$ 4.45%, StO_2 final = 54.5 $\pm$ 4.55%, desaturation rate = -0.18 (0.67 $-$ -0.01).
Conclusion: The peripheral oxygenation behavior observed in this study differs from reference values, showing numerically lower levels. These results may be attributed to the fact that people with COPD often present chronic hypoxemia, reduced muscle perfusion due to endothelial dysfunction, and lower vasodilatory capacity. Despite the low saturation values, the volunteers were able to sustain exercise, as the desaturation rate remained below the reference values for individuals without apparent pathologies.
Implications: These findings encourage further research with a larger sample size to provide a more robust analysis of oxygenation behavior. Even with low saturation, there is resistance to continuing exercise, which may contribute to more tailored treatments for this condition through peripheral exercise.
Keywords: Chronic Obstructive Pulmonary Disease, Near-Infrared Spectroscopy, Peripheral Tolerance

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LEVEL OF PARTICIPATION IN PEOPLE WITH INTERSTITIAL LUNG DISEASE (ILD): PRELIMINARY RESULTS

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Background: Interstitial Lung Disease (ILD) refers to the involvement of the pulmonary interstitium, characterized by inflammation and fibrosis. Psychological and functional impairments also impact patients' social participation, often resulting in social isolation. In this context, it becomes critically important to implement assessments that consider the individual's level of social participation.
Objectives: To assess the level of participation of individuals affected by ILD through the Participation Scale.
Methods: This is a preliminary multicenter cross-sectional study, part of a larger project approved by the research ethics committee, conducted with participants of both sexes diagnosed with interstitial lung disease (ILD). The participants underwent a standardized anamnesis and the Participation Scale, which consists of 18 items addressing dimensions of daily life affected by health. The scores from each item were summed to calculate a total score ranging from 0 to 72, where higher scores indicate more significant participation restrictions and an average of 12 points suggests the absence of participation restrictions. Additionally, individuals performed the 6-Minute Walk Test (6MWT) following the American Thoracic Society (ATS) guidelines and underwent muscle strength assessment through Handgrip Strength (HGS) using a Jamar hydraulic dynamometer. For statistical analysis, Spearman's correlation was performed, with a significance level set at 5%.
Results: The sample consisted of 13 participants, 7 of whom were male (53%), with a mean age of 55.82±13.8 years. Only 3 (23.1%) participants had a body mass index within normal parameters. Regarding education, 7 (53.8%) had completed high school, and 7 (53.8%) self-identified as mixed-race. Post-COVID fibrosis was the most prevalent condition, affecting 4 (30.8%) participants, followed by idiopathic fibrosis, fibrosis associated with rheumatic diseases, silicosis, and sarcoidosis, each with 2 (15.4%) individuals, and finally, usual interstitial pneumonia, with 1 (7.7%) case. The total score of the Participation Scale had a mean of 31.64 ± 19.07 points. Thus, it can be inferred that the individuals presented significant participation restrictions. Specifically, 2 (15.4%) participants had no significant restriction, 1 (7.7%) had a mild restriction, 5 (38.5%) had a moderate restriction, 1 (7.7%) had a severe restriction, and 3 (23.1%) had extreme restriction. The mean distance covered in the 6MWT was 394 m, suggesting reduced functional capacity. The mean HGS was 34.38 KgF, indicating a reasonable level of peripheral muscle strength. The Participation Scale showed a strong correlation with the 6MWT distance (r: -0.702; p: 0.016) and a moderate correlation with HGS (r: -0.589; p: 0.044).
Conclusion: Participants showed significant restrictions in social participation. The negative correlation between 6MWT distance and HGS suggests an impact on both exercise capacity and muscle strength.
Implications: The preliminary findings underscore the need for targeted interventions and health policies to enhance social participation in individuals with ILD.
Keywords: Interstitial Lung Diseases, Participation

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HUMAN ACTIVITY PROFILE IN PEOPLE WITH INTERSTITIAL LUNG DISEASE: PRELIMINARY ANALYSIS

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Background: Interstitial Lung Disease (ILD) is a set of pathologies that result in fibrosis, impaired gas exchange, and functional limitations. Individuals with ILD have a reduced level of physical activity due to dyspnea and fatigue. Evaluating the Human Activity Profile (HAP) is essential for understanding the impact of the disease on functionality and physical activity levels and thus guiding better physiotherapeutic interventions.
Objectives: To evaluate functional capacity and physical activity levels in individuals with ILD using HAP questionnaire.
Methods: This is a preliminary cross-sectional multicenter study, part of a larger project approved by the research ethics committee conducted with volunteers diagnosed with ILD. After collecting anthropometric data, the participants were assessed using the HAP, the 6 Minute Walk Test (6MWT) according to the standards of the American Thoracic Society (ATS), and the measurement of muscle strength using the Jamar hydraulic dynamometer. The HAP was analyzed using a questionnaire made up of 94 components which analyzed the level of physical activity and functionality, based on the variables Maximum Activity Score (MAS) and Adjusted Activity Score (AAS). The MAS corresponds to the numbering of the activity with the highest oxygen demand that the individual "still does," reflecting the highest level of metabolic effort achieved. The AAS represents the average levels of metabolic equivalents (METs) spent on a typical day, allowing an estimate of daily energy consumption based on the activities performed. Participants were classified as inactive (score < 53), moderately active (53-74), or active (> 74).
Results: The sample consisted of 13 volunteers, 7 (53.8%) of whom were male, with an average age of 55.82 ± 13.84 years, 5 (38.5%) were overweight, and 7 (53.8%) were self-declared as brown. The majority, 7 (53.8%), had finished high school. In addition, post-COVID fibrosis was the most prevalent condition found in 4 (30.8%) volunteers. In the HAP, 9 (69.2%) were classified as "inactive" and only 4 (30.8%) as "moderately active". The average distance covered in the 6MWT was 394m, suggesting a reduction in functional capacity since reference values for healthy individuals generally exceed 500m. The mean of muscle strength was 34.38 KgF, which is above the predicted value for patients with Chronic Obstructive Pulmonary Disease (COPD), which is approximately 28.0 KgF, suggesting that the participants maintain a reasonable level of peripheral muscle strength.
Conclusion: Individuals with ILD exhibit reduced physical activity levels and impaired functional capacity, despite preserved muscle strength. These findings highlight the need for interventions to mitigate functional decline.
Implications: The results underscore the importance of pulmonary rehabilitation and individualized exercise programs to enhance physical activity and quality of life in individuals with ILD.
Keywords: Lung Diseases, Interstitial, Human Activity Profile