

**Methods:** This is a qualitative and descriptive study, taking the case study as a guiding model, developed from ethnographic analysis resources. The study was developed with the association of three data collection strategies: document analysis, direct observation with conversational approaches and interviews with CER physiotherapists in the state of Paraíba-PB, data analysis was performed through the reconstruction of scenes, articulating the elements captured in the data production process.

**Results:** The study reveals that there are weaknesses in the organization of the work of physiotherapists in the CER in question, and that these have an impact on the way work is conducted and provided to people with disabilities, noting that improvements and adjustments are needed in the organization of work in issues such as: promoting strategies that bring the physiotherapist closer to practices such as welcoming, favoring moments between the physiotherapist and the multidisciplinary team for assessments in an integrated manner and articulation with other points of the care network for people with disabilities, stimulating and organizing strategies to strengthen and include shared care in the sector, and implement strategies such as team meetings and the execution of the Singular Therapeutic Project.

**Conclusion:** Knowledge of the facilitators and obstacles in the organization of the physiotherapists' work allowed identifying the weaknesses present in the service, which distances these professionals from providing assistance from the perspective of the biopsychosocial approach to CER users, and verifying the aspects that contribute to the distance between work prescribed by the Rehabilitation Instruction, and how the work is performed at the study site.

**Implications:** Understanding the organization of the work of physiotherapists in health services is still a scarce task in the field of research, so this work raises this debate in the field of physiotherapy. In addition, its results can become important elements for a better understanding of the management of the work of these professionals in the centers and perhaps produce changes in the organization and work process of physiotherapists in the CER.

**Keywords:** Physiotherapy. Work. Rehabilitation Centers

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358

## 6-MINUTE WALK TEST EVALUATION WITH CARDIAC AUTONOMIC CONTROL IN WOMEN WITH SYSTEMIC SCLEROSIS

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**Background:** Systemic sclerosis (SSc) is a complex immune-mediated connective tissue disease characterized by progressive fibrosis due to collagen deposition. In the heart, all structures can be affected, with inflammation, oxidative stress, vascular damage and fibrosis. However, the main underlying mechanism seems to be microcirculation impairment, with abnormal vasoreactivity due to autonomic nervous system (ANS) dysfunction. In fact, ANS

dysfunction in SSc patients is associated with a risk of arrhythmias and mortality, in addition to being an early marker of SSc progression that can help identify subclinical involvement and precede the occurrence of cardiac fibrosis. The six-minute walk test (6MWT) is a simple, inexpensive, easy-to-administer, well-tolerated, safe, non-invasive, and reliable submaximal test. In SSc, the 6MWT has been increasingly used to assess performance during exertion and as a follow-up tool and primary measure of outcome and response to therapy.

**Objectives:** To evaluate the associations between sympathetic-vagal balance and exercise measured by the 6MWT in women with SSc without cardiac involvement.

**Methods:** This was a cross-sectional study in which 69 women with SS [median age 51 (40–63) years] without cardiac involvement underwent the 6MWT. Throughout the 6MWT, heart rate variability (HRV) was evaluated using specific software.

**Results:** The median six-minute walk distance (6MWD) was 451 (392–498), with 29 (42%) participants not achieving 80% of the predicted value. Desaturation during the 6MWT ( $SpO_2 \leq 4\%$ ) was observed in 10.1% of participants. Significant correlations were observed between the 6MWD and the following HRV parameters: number of interval differences of successive NN intervals greater than 50 ms ( $r_s = -0.397$ ,  $p = 0.013$ ), low-frequency range ( $r_s = 0.374$ ,  $p = 0.023$ ), high-frequency range ( $r_s = -0.372$ ,  $p = 0.023$ ), and parasympathetic nervous system index ( $r_s = -0.342$ ,  $p = 0.045$ ). No significant correlation was noted between delta peripheral oxygen saturation and HRV parameters.

**Conclusion:** In women with SSc, there is an interrelationship between the 6MWD and both vagal withdrawal and sympathetic hyperactivation. This relationship between autonomic imbalance and worse exercise performance could potentially increase cardiovascular risk, even in patients without apparent cardiac involvement.

**Implications:** People with SS may be involved of the cardiovascular system which, even subclinical, can potentially have an important impact on functional capacity. In this sense, HRV analysis is a powerful non-invasive tool to access the sympathetic and vagal modulations of the heart, in addition to being simple to apply and widely available. Control of the autonomic nervous system of the heart could be a potential target in the treatment of SSc patients. Thus, drug and non-drug approaches that reduce sympathetic hypertonia and prevent parasympathetic withdrawal should be considered to counteract autonomic dysfunction in SSc.

**Keywords:** Systemic sclerosis, Exercise, Autonomic nervous system

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359

## VARIABILITY OF 6-MINUTE WALK DISTANCE IN PATIENTS WITH INTERSTITIAL LUNG DISEASE ASSOCIATED WITH DIFFUSE CUTANEOUS SYSTEMIC SCLEROSIS

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**Background:** Systemic sclerosis (SSc) is a connective tissue disease characterized by autoimmunity, small vessel vasculopathy and excessive collagen deposition in the skin and internal organs. Pulmonary involvement is responsible for reducing the functional capacity to exercise and represents the main cause of death. The six-minute walk test (6MWT) is a simple, non-invasive, easy-to-perform, and reliable submaximal aerobic exercise test that can be used in patients with advanced lung disease. Patients with SSc often have not only lung disease, but combinations of cardiopulmonary involvement, skin fibrosis, musculoskeletal damage, and joint disease, which can confound the 6MWT interpretation. As it is an independent predictor of SSc-related mortality, the 6MWT is a potentially useful tool in the assessment of outcomes along with pulmonary function tests (PFTs) and computed tomography. Currently, there is a huge concern about the need for early screening, search for new treatments and closer monitoring of patients with diffuse cutaneous systemic sclerosis-associated interstitial lung disease (dcSSs-ILD) before irreversible deterioration of lung function occurs.

**Objectives:** To build a predictive model for the six-minute walk distance (6MWD) in women with dcSSs-ILD without pulmonary arterial hypertension.

**Methods:** This is a cross-sectional study in which 69 women with dcSSs-ILD underwent the 6MWT, Health Assessment Questionnaire-Disability Index (HAQ-DI), PFTs (including spirometry, measurement of pulmonary diffusion capacity for carbon monoxide-DLCO and measurement of respiratory muscle strength), handgrip strength (HGS) and quadriceps strength (QS).

**Results:** The mean 6MWD was  $447 \pm 78$  m, with 43.5% of the participants not reaching 80% of the predicted value. The 6MWT was positively correlated with HR ( $r = 0.418$ ,  $P = 0.0004$ ), forced vital capacity ( $r = 0.306$ ,  $P = 0.011$ ), DLCO ( $r = 0.360$ ,  $P = 0.002$ ), maximal inspiratory pressure ( $r = 0.268$ ,  $P = 0.029$ ), and maximal expiratory pressure (MEP,  $r = 0.288$ ,  $P = 0.019$ ) and negatively with age ( $r = -0.378$ ,  $P = 0.001$ ), body mass index (BMI)  $r = -0.248$ ,  $P = 0.039$ ) and HAQ-DI ( $r = -0.438$ ,  $P = 0.0001$ ). In the multiple linear regression analysis, QS, BMI, DLCO, age and MEP explained 72% of the 6MWD variability.

**Conclusion:** In patients with dcSSs-ILD, alongside reduced pulmonary diffusion, deterioration in respiratory and peripheral muscle strength negatively impact performance during the 6MWT. Furthermore, the greater the age and BMI, the lower the 6MWD. Our results are promising and may become a contribution to future investigations aimed at new pharmacological therapies for dcSSs-ILD.

**Implications:** These findings may help the growing number of randomized controlled trials that have emerged in search of disease-modifying therapies for dcSSs-ILD, with the aim of incorporating the 6MWD as a clinical outcome measure.

**Keywords:** Systemic sclerosis, Interstitial lung disease, Exercises

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360

## EFFECTS OF DANCE THERAPY IN WOMEN WITH BREAST CANCER UNDERGOING RADIOTHERAPY TREATMENT

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**Background:** Radiotherapy is essential to reduce the risk of locoregional recurrence in patients with breast cancer. However, several symptoms and adverse effects can be manifested during or after radiotherapy. There is evidence that the use of non-pharmacological interventions can reduce symptoms resulting from radiotherapy treatment in cancer patients. Dance/movement therapy (DTM), defined by the American Dance Therapy Association (ADTA) as the psychotherapeutic use of movement to promote the emotional, social, cognitive and physical integration of the individual, could be a way of approaching to minimize the adverse effects of that treatment.

**Objectives:** Conduct a review on the effects of dance therapy in patients with breast cancer during and/or after radiotherapy.

**Methods:** The research was carried out between September and November 2022, through searches in the Pubmed, SciELO, Cochrane Library and Google Scholar databases with the search strategy of the descriptors obtained in the Medical Subject Headings (MESH) of the National Library of Medicine with the combination of keywords and the following Boolean operators: ((Dance therapy or Therapy or Dance or Dance Therapies or Therapies or Dance or dance movement therapy) AND (Breast cancer or Breast Neoplasm or Neoplasm or Breast or Neoplasms or Breast or Breast Tumors)) AND (Radiotherapies or Radiation Therapy or Radiation Therapies or Therapies, Radiation or Therapy or Radiation). Studies that addressed the use of dance therapy in patients with breast cancer undergoing radiotherapy were included. Exclusion criteria were studies involving patients with other types of cancer and studies made available in languages other than Portuguese and English.

**Results:** A total of 3,966 articles were found in the four searched databases. After reading the title and abstract, 16 articles were selected and read in full. Of these, 3 articles remained in the study for analysis. The results presented in this review demonstrate that dance therapy can contribute to improving or reducing the perception of stress, anxiety, fear, fatigue, pain, internal reconnections, in addition to improving functionality, returning to activities of daily living and improving the quality of life of patients undergoing radiotherapy.

**Conclusion:** Dance therapy can help improve morbidities in patients with breast cancer undergoing radiotherapy.

**Implications:** Dance therapy is a clinically relevant intervention, but it has few studies in the oncology area. More studies are needed, with better standardization of the intervention, for better scientific evidence of the effects of dance therapy in these patients.

**Keywords:** Dancetherapy, Breast neoplasm, Radiotherapy

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361

## APPLICATION OF TIMP SCALE ON THE HOSPITAL ENVIRONMENT: A REALITY FOR EARLY INTERVENTION IN PRETERM INFANTS

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**Background:** The upscale of surf life on preterm neonates (PTN) is due to the advances in antenatal care, those individuals must have