

**Results:** Six hundred and fifty women (n= 400 SDR; n= 250 CDR) participated in the study. The group with rheumatic diseases had worse results in fatigue and mental health outcomes (anxiety, depression and associated anxiety and depression) when compared to the group without this condition ( $p<0.01$ ). Among the group of women with rheumatic diseases, fibromyalgia was the disease that presented the worst results for the outcomes of mental health aspects ( $p<0.01$ ).

**Conclusion:** During the COVID-19 pandemic in Brazil, women with rheumatic diseases experienced symptoms of fatigue and compromised aspects of mental health when compared to women without this condition. Among those who had some disease, women with fibromyalgia were the most affected in the period evaluated.

**Implications:** The study demonstrates the need for intervention programs focused on biopsychosocial aspects and the search for self-management strategies in the CDR population. These strategies could aim to minimize the impacts arising from future emergency public health situations, causing managers to promote public policies of comprehensive health care, including the physiotherapy professional to integrate more multidisciplinary teams with a focus on multiple health areas of individuals with chronic illnesses.

**Keywords:** Rheumatology, Public health, Women's health

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

**Acknowledgment:** We thank Coordination of Superior Level Staff Improvement for financial support and all the volunteers who participated in this research.

**Ethics committee approval:** Ethics Committee for Research on Human Beings of the Federal University of São Carlos (CAAE 36469420.1.0000.5504).

<https://doi.org/10.1016/j.bjpt.2024.100735>

139

### FEASIBILITY STUDY OF THE ASSOCIATION OF PHOTOBIOMODULATION THERAPY WITH EXERCISE IN INDIVIDUALS WITH CHRONIC AND NON-SPECIFIC LOW BACK PAIN

Micaelen MF Barroso<sup>1</sup>, Gabriel C Mariz<sup>1</sup>, Milena PM Oliveira<sup>1</sup>, Marcílio C Ferreira<sup>1</sup>, Vinicius C Oliveira<sup>1</sup>, Murilo X Oliveira<sup>1</sup>

<sup>1</sup> Department of Physical Therapy, Postgraduate Program in Health Sciences Federal University of the Jequitinhonha and Mucuri Valleys (UFVJM), Diamantina, Minas Gerais, Brazil

**Background:** Chronic Non-specific Low Back Pain (CNSLBP) is considered an unknown-origin pain or discomfort in the lower back, persistent for a period equal or higher than 12 weeks. Although it is commonly prescribed, exercises alone seem to be less effective than associated with other modalities for the CNSLBP treatment. Thus, guidelines recommend a combination of interventions. Photobiomodulation Therapy (PBMT) is an effective method for alleviating CNSLBP. Thought, the scientific evidence about the effectiveness of laser PBMT combined with exercise is scarce and contradictory.

**Objective:** to evaluate the feasibility of carrying out a study of PBMT combined with exercise in individuals with CNSLBP.

**Methods:** 36 participants with CNSLBP aged between 18 to 65 years old were selected. Participants were randomly allocated in (1) a six-week exercise program matched with active PBMT (n = 18) and (2) a six-week exercise program matched with placebo PBMT (n = 18). The clinical outcomes were measured at baseline, as well as 8 and 20 weeks after randomization. The primary outcomes were the feasibility of blinding patient, measuring patient's treatment satisfaction, the patient's difficulty in understanding past information, the occurrence of adverse effects, and patient adherence to treatment, evaluated using an adapted model of MedRisk Instrument

for Measuring Patient Satisfaction with Physical Therapy Care Questionnaire.

**Results:** blinding of the patients was possible, since 75% believe they used the active PBMT and 25% the placebo PBMT. Adherence to all meetings was 76.92%, requiring monitoring of the procedures. 87.5% of the patients are totally satisfied with the treatment received. 54.2% of the patients reported that was very easy to understand the given commands and 41.7% stated that was easy and 4.1% that was neither, nor easy or difficult to understand and no patient reported the occurrence of adverse effects during the interventions.

**Conclusion:** based on the results, it is possible to conclude that is feasible to carry out a treatment protocol using PBMT associated with exercise in individuals with CNSLBP.

**Implications:** the findings will help to determine the additional effect of PBMT to an exercise protocol on CNSLBP, potentially guiding clinical practice by providing an alternative method of therapy.

**Keywords:** Exercise, Backache, Photobiomodulation

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

**Acknowledgment:** "This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) – Finance Code 001 and Research Support Foundation of the State of Minas Gerais - FAPEMIG".

**Ethics committee approval:** This study was approved by the Ethics Committee of Jequitinhonha and Mucuri Valleys Federal University (certificate: 25777019.0.0000.5108).

<https://doi.org/10.1016/j.bjpt.2024.100736>

140

### CARDIOVASCULAR FITNESS IS CORRELATED WITH SPATIAL WORKING MEMORY IN OLDER ADULTS

Gabriel Oliveira dos Santos Pinto<sup>1</sup>, Layce Bianca Pereira da Silva<sup>1</sup>, Luana Guimarães Santos<sup>1</sup>, Cristovam Wanderley Picanço Diniz<sup>1</sup>, Natáli Valim Oliver Bento-Torres<sup>1</sup>

<sup>1</sup> College of Physical Therapy and Occupational Therapy. Neurodegeneration and Infection Research Laboratory (LNI), João de Barros Barreto University Hospital (HUIBB), Federal University of Pará (UFPA), Belém, Pará, Brazil

**Background:** Age-related cognitive decline in spatial working memory occurs on aging. Working memory requires manipulation and retention of visuospatial information (Spatial Working Memory - SWM) and it has been shown that higher levels of cardiorespiratory fitness are associated with more accurate and faster spatial memory responses in older people. Walked distance in the 6-minute walk test (6MWT) is considered an adequate indirect measure of the physical and cardiorespiratory capacity of older adults, both in clinical and academic environments. Considering that higher levels of cardiorespiratory fitness may be associated with better cognitive performance, we investigated the relationship between this construct and the working memory of older adults.

**Objectives:** To analyze whether cardiovascular fitness is correlated to spatial working memory performance in a sample of older adults.

**Methods:** Participants over 60 years old were invited to the study. All participants performed an indirect assessment of cardiovascular fitness (6MWT), considering the distance walked and the average speed during the test. The cognitive assessment included the Mini-Mental State Examination (MMSE) and working memory through the measurement of total errors (SWM TE) by automated testing of the Cambridge Battery of Automated Neuropsychological Tests (CANTAB). After searching for and removing outliers values and analyzing

normality (Shapiro-Wilk), the Spearman test was performed. The significance level was set at  $p \leq 0.05$ . SPSS 20.0 software was used.

**Results:** One hundred and forty-eight older adults (female: 120) participated. Participants were 70.2 ( $\pm 5.967$ ) years old and had 9.31 ( $\pm 4.136$ ) years of schooling. All participants performed within normal scores adjusted for schooling on the MMSE. The results indicated a negative correlation between performance in the SWM TE and the distance walked in the 6MWT ( $\rho = -0.166$ ;  $p \leq 0.047$ ), and between performance in the SWE TE and the average speed in the test ( $\rho = -0.164$ ;  $p \leq 0.05$ ).

**Conclusion:** Our results indicate that better cardiovascular fitness is correlated with fewer errors in the assessment of spatial working memory in older adults.

**Implications:** The 6MWT can be performed in clinical settings due to its low cost, easy application and reliable replication rates. Its use for monitoring health conditions, treatment and prevention strategies can be important as objective measures dedicated to minimizing age-related cognitive decline.

**Keywords:** Cardiovascular Fitness, Spatial Working Memory, Aging

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

**Acknowledgment:** João de Barros Barreto University Hospital (HUJBB); Neurodegeneration and Infection Research Laboratory (LNI).

**Ethics committee approval:** Research Ethics Committee of the João de Barros Barreto University Hospital. Opinion n° 858.134.

<https://doi.org/10.1016/j.bjpt.2024.100737>

141

## FUNCTION OF PELVIC FLOOR MUSCLES, FUNCTIONAL CAPACITY, QUALITY OF LIFE AND SEXUAL FUNCTION IN WOMEN WITH BREAST CANCER

Thiago Rosendo Santos Miranda<sup>1</sup>, Gabriel Renato Godoy Casagrande<sup>1</sup>, Anna Julia Santana Ribeiro<sup>1</sup>, Maria Fernanda de Souza Macedo<sup>1</sup>, Ana Beatriz Gomes de Souza Pegorare<sup>1</sup>, Gláucia Helena Gonçalves<sup>1</sup>

<sup>1</sup> Department of Physical Therapy, Postgraduate Program in Movement Sciences at the Federal University of Mato Grosso do Sul (UFMS), Campo Grande, Mato Grosso do Sul, Brazil

**Background:** Breast cancer is a pathology with heterogeneous characteristics, with wide variation in terms of its morphological nature and unpredictable clinical responses. Despite increasing the chances of cure and survival, the therapeutic approaches indicated for its treatment, such as breast removal surgery, chemotherapy, radiotherapy, and hormone therapy, weaken the woman's body and directly impact her quality of life.

**Objectives:** Thus, this study aimed to analyze the function of the pelvic floor muscles in women who survived breast cancer and compare them to healthy women, as well as to compare their functional capacity, quality of life and sexual function.

**Methods:** 40 women were recruited, equally, divided into two groups: Group of Women with Breast Cancer (GMC, from the Hospital do Câncer Alfredo Abrão de Campo Grande-MS) and Group of Healthy Women (GMS, from the Clínica UFMS Integrated School). All participants were submitted to the following evaluations: sociodemographic and clinical information questionnaire; 6-Minute Walk Test (6MWT); Sit and Reach Test (SAT); handgrip dynamometry; Female Sexual Function Index (FSFI) questionnaire; PERFECT scheme and pelvic floor manometry. The GMC participants also answered two specific questionnaires for cancer patients (Quality of Life Questionnaire - QLQ C30, Quality of Life Breast Cancer - QLQ BR23).

**Results:** The statistical analysis showed a significant difference between the functional capacity tests in the 6MWT ( $p < 0.01$ ), in the TSA ( $p < 0.01$ ) and dynamometry ( $p 0.012$  for the right hand and  $p 0.003$  for the left hand), in addition to the FSFI questionnaire, scheme PERFECT and manometry ( $p < 0.001$ ).

**Conclusion:** The results of this study suggest that among women with breast cancer, sexual dysfunctions and losses related to functional abilities are common, especially in the strength of contraction of the pelvic floor muscles, aspects related to desire and sexual satisfaction.

**Implications:** Even with the constant technological advances of low, medium and high complexity related to the treatment and cure of cancer, women survivors can experience sequelae of a physical and emotional nature, reflected in their function of the pelvic floor muscles, functional capacity, quality of life and sexual function, which can last for long periods or for a lifetime. Especially pelvic floor disorders, little studied in the literature and neglected by health professionals, as it is not considered a fatal problem for the health of patients. Physical therapy proves to be an important ally in this scenario, contributing to the integration of sociodemographic and clinical data of the participants for a better understanding of the factors that most impact the quality of life of women who had breast cancer.

**Keywords:** Pelvic floor disorders, Physical-functional performance, Breast neoplasms

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

**Acknowledgment:** We would like to thank the Mato Grosso do Sul State Support Foundation for the Development of Teaching, Science and Technology for granting the scholarship.

**Ethics committee approval:** Federal University of Mato Grosso do Sul, number 20615819.2.0000.0021.

<https://doi.org/10.1016/j.bjpt.2024.100738>

142

## PERCEPTIONS OF INDIVIDUALS WITH PARKINSON'S DISEASE ABOUT SLEEP: A QUALITATIVE ANALYSIS

Gabriela Casagrande Zago<sup>1</sup>, Suhaila Mahmoud Smaili<sup>1</sup>, Larissa Laskovski<sup>1</sup>

<sup>1</sup> Universidade Estadual de Londrina (UEL), Departamento de Fisioterapia, Londrina, Paraná, Brasil

**Background:** Among the non-motor symptoms in Parkinson's disease (PD), sleep disturbances stand out, which can affect up to 90% of these individuals. Sleep plays a role in memory consolidation, learning, and refinement of procedural skills, and thus, alterations negatively impact the quality of life of the PD population. Physiotherapy promotes deeper sleep, reduces awakenings and wakefulness periods, improving objective and subjective perceptions of sleep.

**Objectives:** To understand the perception of individuals with PD regarding sleep disturbances.

**Methods:** Descriptive-analytical qualitative study, with recorded telephone interviews. The questions addressed the sleep disturbances perceived by individuals with PD, perceptions about the consequences of sleep deprivation, and aspects involving physiotherapy and sleep. Individuals with PD who were regular attendees of a specialized physiotherapy group for at least 2 years of both sexes, without communication difficulties, and available to discuss the interview topic were included. The recorded statements were transcribed, considered individually, divided into units of meaning, categorized, and analyzed based on the principles of phenomenology.

**Results:** The sample size was ten individuals with PD. The qualitative analysis revealed four themes that formed the structure of the