

and Standing Test (5STS), appendicular muscle mass using bioimpedance analysis (BIA), and physical performance using the Timed Up and Go Test (TUG Test). Subsequently, the participants were evaluated for the presence and degree of sarcopenia (pre-sarcopenia, sarcopenia, severe sarcopenia), following the criteria and cutoff points for muscle strength, muscle mass, and physical performance proposed by the EWGSOP2. Statistical analysis: Student's *t*-test for independent samples and Chi-square test, significance level of 5%.

**Results:** Women with fibromyalgia had worse results for 5STS (GF  $16.7 \pm 5.5$ ; GC  $10.3 \pm 3$  s,  $p < 0.001$ ) and TUG TEST (GF  $8.7 \pm 2.4$ ; GC  $6.3 \pm 0.6$  s,  $p < 0.001$ ) compared to healthy women. There was no statistical difference between groups regarding appendicular skeletal muscle mass (GF  $22.9 \pm 2.8$ ; GC  $22.9 \pm 2.6$  kg/m<sup>2</sup>,  $p = 0.981$ ). Pre-sarcopenia occurrence was higher in GF than in GC (GF 57.9%; GC 5.3%,  $p < 0.001$ ). There was no occurrence of sarcopenia and severe sarcopenia in either group.

**Conclusion:** The occurrence of pre-sarcopenia is higher in adult women with fibromyalgia when compared to women without fibromyalgia. In addition, women with fibromyalgia have lower muscle strength and worse physical performance than women without fibromyalgia, but without a reduction in muscle mass.

**Implications:** It is important to monitor muscle function (muscle strength and physical performance) in individuals with fibromyalgia, even in the absence of muscle mass reduction, to develop health intervention strategies that attenuate or prevent sarcopenia.

**Keywords:** Sarcopenia, Chronic pain, Fibromyalgia

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

**Acknowledgment:** Federal University of Mato Grosso do Sul (UFMS) and CAPES.

**Ethics committee approval:** Federal University of Mato Grosso do Sul (UFMS). CEP/UFMS Approval Opinion N°. 5.265.046

<https://doi.org/10.1016/j.bjpt.2024.100697>

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## MULTICOMPONENT TRAINING ASSOCIATED WITH WHOLE BODY VIBRATION: EFFECT ON FUNCTIONAL CAPACITY AND QUALITY OF LIFE IN ELDERLY WOMEN WITH OSTEOPOROSIS

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**Background:** Aging is associated with functional decline and increased risk of contracting diseases. Osteoporosis (OP), a systemic disease, causes deterioration in bone microarchitecture and an increased propensity for fractures. Functional decline in the elderly is linked to decreased physical fitness, balance changes, increased risk of falls and impaired quality of life. Multicomponent Training (MCT) associated with Whole Body Vibration (WBV) brings functional benefits to the health of the elderly, as it is able to improve balance, muscle strength, functional capacity and reduce the risk of falls.

**Objectives:** To verify the effect of MCT associated with WBV on functional capacity and quality of life in osteoporotic elderly women.

**Methods:** Case study approved by CEP/CCS/UFPE, position n°: 3.608.668. During the intervention, the volunteer underwent 3 reassessments (after the 8th, 16th and 24th session). To measure the functional capacity, the distances covered in meters in the 6-Minute Walk Test (6MWT) were considered and the evaluation of the quality

of life was made through the results expressed in the WHOQOL-OLD questionnaire. The interventions lasted for 8 consecutive weeks, three times a week, totaling 24 sessions. MCT lasted 45 minutes, consisting of 3 stations: cardiorespiratory/aerobic resistance; strength/endurance and flexibility; body balance/stability, respectively. The WBV was performed on a side-to-side oscillating vibrating platform, with progressive frequency incremental increase up to 30 Hz and oscillation amplitude of 2 mm peak to peak, duration of 60 seconds and rest of 10 to 30 seconds. Statistical analysis was carried out descriptively with data summarization before and after the 8 interventions, calculating the percentage differences between the predicted values, the frequencies of cut-off points achieved and the percentage increase in gain or loss, being represented numerically or graphically.

**Results:** Through the distance covered in the 6MWT, a variation from 521m to 564m in the last reassessment was verified. As for quality of life, the score ranged from 61.46% to 85.42% in the last reassessment.

**Conclusion:** The study showed significant effects on the functional capacity and quality of life of the evaluated elderly women. However, it is still not possible to state that the proposed protocol promotes greater benefits to the observed population in general.

**Implications:** Faced with the scarcity of protocols that prescribe MCT training associated with a vibrating platform in osteoporotic elderly women with risk of falls, the importance of proceeding with the proposed method was perceived in order to identify alternatives to guarantee functional capacity and quality of life in this population.

**Keywords:** Multicomponent Training, Whole Body Vibration, Osteoporosis

<https://doi.org/10.1016/j.bjpt.2024.100698>

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## LEVEL OF SELF-DETERMINATION AND SELF-EFFICIENCY IN PATIENTS HOSPITALIZED FOR COPD EXACERBATION: PRELIMINARY ANALYSIS

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**Background:** Chronic obstructive pulmonary disease (COPD) is characterized by a persistent respiratory disorder due to airflow limitation. COPD is considered a debilitating disease in which the symptomatology and muscle and functional damage affect the performance of physical activity and the quality of life of individuals. In these, periods of exacerbation of the disease can be frequent, with increased symptoms and even the need for hospitalization, which accentuates physical deconditioning, loss of strength and muscle mass. In this context, rehabilitation strategies should be designed and knowing the level of self-determination and symptomatology after COPD exacerbation can be useful for clinical decision.

**Objectives:** The objective of the study was to evaluate the existence of a correlation between self-determination, self-efficacy for physical activity and symptomatology in patients hospitalized for COPD exacerbation.

**Methods:** This is a cross-sectional study. Nine individuals hospitalized for COPD exacerbation were evaluated. At the time of pre-hospital discharge, they were asked about self-determination (Behavioral Regulation in Exercise - Questionnaire 2 [BREQ-2]), self-efficacy (The COPD Self-Efficacy Scale) and symptomatology (COPD Assessment Test™ [CAT] and Medical Research Council [mMRC