

to risk factors for work-related musculoskeletal disorders and found that direct measurement by electromyography was more accurate than video analysis and self-report questionnaires. The co-occurrence network analysis of the authors' keywords resulted in the formation of 2 clusters, with emphasis on the themes of workers' compensation ("injury", "work-related injury", "prevention") and occupational injuries ("work-related musculoskeletal disorders", "ergonomics", "physical therapy").

**Conclusion:** Bibliometric analysis of primary studies on RSI/WMSDs at work revealed a marked increase in the number of publications in 1994, evidencing the growing interest related to worker safety and health. This growth in scientific production highlights the importance of research in this field and highlights the relevance of the topic in the academic and professional community.

**Implications:** Evidence-based bibliometric indicators can guide researchers and health professionals in identifying gaps and more influential themes on comprehensive preventive and physiotherapeutic measures in all aspects of the work environment, aiming to reduce the number of workers affected and away from their work activities.

**Keywords:** RSI/WMSD, Occupational Health, Bibliometric Analysis

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

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**Ethics committee approval:** Not applicable.

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## ANALYSIS OF THE OCCURRENCE OF FALLS, PAIN, MENTAL HEALTH, AND LEVEL OF PHYSICAL ACTIVITY OF ELDERLY PEOPLE DURING THE COVID-19 PANDEMIC

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**Background:** During the pandemic caused by Coronavírus, the main strategy to avoid contamination was the lockdown, especially for the elderly population, in which the restriction of physical and social activities may have negatively influenced issues related to mobility and balance, leaving them more susceptible to the occurrence of falls, pain, and the occurrence of mental disorders.

**Objectives:** To analyze the occurrence of falls, pain, mental health, and level of physical activity of the elderly in times of the COVID-19 pandemic.

**Methods:** A cross-sectional, descriptive, and quantitative study. The sample of this study consisted of 195 individuals aged 60 years or older, of both sexes, who answered an online questionnaire that contained self-reported information about the history of falls in the last 12 months: contamination by COVID-19. The pain was analyzed using the Analog Pain Scale (VAS), mental health using the Geriatric Depression Scale (GDS), and the level of physical activity was measured using the International Physical Activity Questionnaire (IPAQ). Data were analyzed descriptively in *Statistical Package for the Social Sciences* (SPSS), and reported in absolute and relative frequency, and mean and standard deviation.

**Results:** Most of the sample consisted of female elderly (71.3%), with a mean age of 70.89(+7.63) years. About a third of the sample (32.8%) reported having suffered at least one fall in the last 12

months, and 21.5% reported having contracted COVID-19 during the pandemic. As for pain, 69.2% reported feeling some kind of pain, and when asked about the intensity of pain, 43.6% reported feeling moderate pain and 13.3% reported feeling severe pain. When analyzing mental health through the GDS, 28.2% of the elderly had possible depressive symptoms, and regarding the level of physical activity, according to the IPAQ, it was observed that 50.3% of the elderly were active or very active, 29.2% were irregularly active and 20.5% were classified as sedentary.

**Conclusion:** The findings of the present study showed that one third of the sample, predominantly female, reported episodes of falls during the pandemic period, as well as the majority performing some physical activity. Furthermore, it is possible that social isolation, as a strategy for coping with the pandemic, had a negative impact on the mental health of the elderly.

**Implications:** The pandemic period had a negative impact on the physical and mental health of the population, mainly due to the need for social isolation. Despite its undeniable importance for the control and prevention of COVID-19, it is possible that today's mental health needs will continue well beyond the coronavirus outbreak itself. As we come out of the COVID-19 pandemic and the public health emergency comes to an end, it will be important to consider developing a comprehensive rehabilitation approach based on helping people cope with the aftermath of the pandemic in order to reduce the impact of COVID-19 on physical and mental health.

**Keywords:** Fall Accidents, Coronavirus infections, Elderly

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

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**Ethics committee approval:** Universidade Federal do Pampa (Unipampa) - CAAE: 50665321.3.0000.5323.

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## EVALUATION OF FUNCTIONAL CAPACITY AND SARCOPENIA IN ADULT WOMEN WITH AND WITHOUT FIBROMYALGIA

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**Background:** Fibromyalgia is a chronic condition of unknown cause, characterized by widespread pain sensitivity and fatigue. After the updates in the criteria for the diagnosis of sarcopenia, carried out by the European Working Group on Sarcopenia in the Elderly (EWG-SOP2), muscle strength reduction has become the main parameter for investigating this condition. In this context, there is a lack of information in the literature about the occurrence of sarcopenia in women with fibromyalgia, considering this new criterion.

**Objectives:** To evaluate and compare functional capacity and occurrence of sarcopenia in adult women with and without fibromyalgia.

**Methods:** This is a cross-sectional study carried out at the Integrated School Clinic of the Integrated Institute of Health of the Federal University of Mato Grosso do Sul (CEI/INISA/UFMS). The sample was composed by 38 women aged between 20 and 50 years (with index body mass (BMI) <30kg/m<sup>2</sup>, non-pregnant or puerperal women, non-menopausal and without the presence of another rheumatological condition), divided into two groups, fibromyalgia (GF; n=19) and control (GC; n=19), and matched by age. All participants were evaluated for muscle strength using the five-repetition Sitting

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±5.5; GC 10.3±3 s,  $p<0.001$ ) and TUG TEST (GF 8.7±2.4; GC 6.3±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±2.8; GC 22.9±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.

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

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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

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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