

5.9 (SD=1.5), measured on a 0-10 scale. SMT was shown to be more effective than conventional physical therapy for leg pain, with a low certainty evidence and a moderate effect size (MD= -1.78 points; 95% CI -0.44 to 3.11 in 4 weeks) but not for back pain (MD= -2.04 points; 95% CI -5.15 to 1.07 in 4 weeks). There is low certainty evidence that SMT is similar to microdiscectomy for chronic sciatica in the short term (MD= -0.3; 95% CI -0.95 to 0.35), medium-term (MD= -0.2; 95% CI -0.87 to 0.47), and long term (MD= -0.1; 95% CI -0.82 to 0.62).

Conclusion: The certainty of the evidence ranged from low to very low in all comparisons, with small to moderate size effects. There is uncertainty around the effect estimates of SMT for patients with acute, subacute, and chronic sciatica.

Implications: Based on this systematic review, there is uncertainty about the efficacy of spinal manipulative therapy (SMT) for patients with acute, subacute, and chronic sciatic pain. Healthcare professionals should carefully evaluate treatment options for patients with sciatic pain. Further research is needed to evaluate the efficacy of manipulative therapy in patients with sciatic pain.

Keywords: Low back pain, Sciatica, Spinal Manipulative Therapy

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DO SLEEP DISORDERS INFLUENCE THE COGNITION AND QUALITY OF LIFE OF INDIVIDUALS WITH PARKINSON'S DISEASE?

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Background: Poor sleep is common among individuals with Parkinson's disease (PD) and may affect up to 98% of patients. However, the relationship between poor sleep, cognitive aspects, and quality of life (QoL) in this population remains unclear.

Objective: To investigate the relationship between poor sleep, cognition, and QoL in individuals with Parkinson's disease.

Methods: This cross-sectional study included 53 subjects with idiopathic Parkinson's disease (PD), who were non-institutionalized and had mild to moderate PD. Sociodemographic data was collected using a questionnaire, and the following assessment tools were used: the Parkinson's Disease Sleep Scale-2 (PDSS-2) to assess the quality of sleep, the Montreal Cognitive Assessment (MoCA) to assess the cognitive status of patients, and the Parkinson's Disease Quality of Life Questionnaire (PDQ-39) to assess the QoL. Spearman correlations were used for statistical analysis, with a significance level of 5%.

Results: Out of the 53 subjects, 34 were men and 19 were women, they had an average age of 66.62 ± 9.46 . In analysing the sleep and cognition, a moderate correlation was found between the Parkinson's Disease Sleep Scale-2 (PDSS-2) and the visuospatial domain ($r=-0.401$; $p=0.003$) as well as the total Montreal Cognitive Assessment (MoCA) score ($r=-0.309$; $p=0.024$). In analysing the sleep and quality of life, a moderate to strong correlation was observed between the PDSS-2 and the PDQ-39 domains, specifically mobility ($r=0.598$; $p<0.001$), communication ($r=0.628$; $p<0.001$), bodily discomfort ($r=0.620$; $p<0.001$), and the total score ($r=0.773$; $p<0.001$). Furthermore, a subanalysis by gender was performed, and the groups of men and women were found to be similar in terms of age, time of diagnosis, the stage of the disease, and the PDSS-2, PDQ-39, and

MoCA scores. The results showed that in men, the PDSS-2 had a correlation with cognition, with a strong correlation observed between the PDSS-2 and the naming domain ($r=-0.623$; $p<0.001$), and moderate correlations with the visuospatial ($r=-0.494$; $p=0.003$), language ($r=-0.365$; $p=0.034$), abstraction ($r=-0.400$; $p=0.019$), delayed recall ($r=-0.416$; $p=0.014$), orientation ($r=-0.392$; $p=0.022$), and the total MoCA score ($r=-0.512$; $p=0.002$) domains. In terms of QoL, women showed a strong correlation between the PDSS-2 and the Activities of Daily Living domain ($r=0.685$; $p=0.001$), bodily discomfort ($r=0.649$; $p=0.003$), and the total PDQ-39 score ($r=0.728$; $p<0.001$). In men, a strong correlation was found between the PDSS-2 and the domains of emotional well-being ($r=0.644$; $p<0.001$), communication ($r=0.731$; $p<0.001$), bodily discomfort ($r=0.718$; $p<0.001$), and the total PDQ-39 score ($r=0.772$; $p<0.001$).

Conclusion: Individuals with worse sleep quality have poorer cognitive scores, particularly men. Additionally, poorer sleep quality is associated with a worse quality of life in domains such as mobility, communication, and bodily discomfort.

Implications: Screening for sleep disorders and implementing prevention and treatment strategies are necessary for individuals with Parkinson's disease (PD) who have worse sleep quality, given the negative impact on cognitive performance and quality of life. Further studies should explore the association of sleep quality with other symptoms of PD.

Keywords: Parkinson's Disease, Sleep, Cognition

Conflict of interest: The authors declare no conflicts of interest.

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Ethics committee approval: This study was approved by the Research Ethics Committee from the State University of Londrina (UEL) under approval, CEP-UEL No. 5,271,985.

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THE EFFECT OF BIOFEEDBACK ON ANXIETY AND BALANCE CONFIDENCE DURING STANDING

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Background: Postural control involves the maintenance of orientation and postural balance, which are crucial aspects to allow the activities of daily living. The biofeedback technique has been of potential interest to postural control rehabilitation, since it seems to confine postural sway within the stability limits, ensuring postural balance during standing. However, whether the performance of postural balance is associated with other factors, such as anxiety and balance confidence, is an open issue we addressed here.

Objectives: This study aimed to investigate the effect of different biofeedback techniques on anxiety and balance confidence during standing.

Methods: Twenty-sixty participants were recruited in this study and tested in three tasks while standing on the force platform: 1) standing with eyes open (EO); (2) posturography biofeedback (BFcp), consisting of keeping the center of pressure (CP) position as close as possible to a target located in front of the individual; (3)

biofeedback of laser (BFlaser), consisting of pointing a laser as close as possible to the same target used before from the right wrist. The CP position was measured using the force platform for 60 seconds and the CP sway area was computed using the whole trial data in each experimental task. Scales for the assessment of balance confidence and anxiety, consisting of visual scales ranging from 0 to 100, were applied at the end of each task. On the confidence scale, “0”, “50” and “100” mean “no confidence”, “moderate confidence” and “complete confidence”, respectively. On the anxiety scale, “0”, “50” and “100” denote “no anxiety”, “moderate anxiety”, and “complete anxiety”. A one-way analysis of variance (ANOVA) for repeated measures was used to compare the emotional scores and CP sway area among postural tasks, and post hoc comparisons were made with the Tukey HSD test (significance level of 5%).

Results: ANOVA ($F=6.19$, $p<0.01$) revealed a smaller balance confidence in BFcp (média±desvio padrão; 72.88 ± 22.41) than EO (86.15 ± 22.05), while no differences were observed between BFlaser (81.34 ± 19.82) and the other tasks. For anxiety, ANOVA did not show differences among EO (20.76 ± 33.21), BFcp (27.88 ± 25.42), and BFlaser (24.23 ± 29.78). Moreover, the CP sway area ($F=33.11$, $p<0.01$) was significantly smaller in the BFcp (2.27 ± 1.27 cm²) than EO (3.54 ± 2.08 cm²) and BFlaser (5.51 ± 2.87 cm²), and in the EO compared to BFlaser ($p<0.01$ in all cases).

Conclusion: Balance confidence alterations were identified with BFcp in relation to the other postural tasks. These findings seem to suggest that psychological factors could contribute to explain, even if partially, alterations in the postural stability during the biofeedback; a smaller CP sway area was found in BFcp than EO.

Implications: These aspects seem to be little exploited in the clinical environment, in which the knowledge of factors associated with postural stability during biofeedback could assist in improving the evaluation and rehabilitation protocols of postural control.

Keywords: Postural balance, Biofeedback, Balance confidence

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PROGNOSTIC MODELS FOR PEOPLE WITH LOW BACK DISORDERS RECEIVING CONSERVATIVE TREATMENT: A SYSTEMATIC REVIEW

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Background: Low back pain is a musculoskeletal condition that affects many people worldwide and although there are several types of conservative treatments, either physiotherapy and/or pharmacological, the patient does not always obtain satisfactory results after treatment. To improve this situation, many prognostic models have been studied, developed, and validated. However, it is uncertain the available evidence about the prognostic models for predicting

the success or failure of patients with low back pain after a conservative treatment.

Objectives: Identify and evaluate prognostic models' ability to predict success or failure in patients with low back pain after receiving conservative treatments.

Methods: Literature searches were conducted in three different electronic databases (MEDLINE, EMBASE and CINHAL). Prognostic models predicting the success or failure of conservative treatment in adults with low back pain were considered eligible. Studies investigating low back pain related to a severe pathology were excluded. Two independent reviewers performed the study selection and data extraction. The individual performances of the prognostic models were performed descriptively.

Results: Searches initially retrieved 13,013 studies. After analysis considering inclusion criteria, 81 studies were included in this systematic review. Of these, 78 (96.3%) developed and internally validated the prognostic models, and only 4 (3.7%) developed and externally validated the models. Regarding the discrimination of the models studied, the c-statistics or area under the curve (AUC) ranged from 0.44 to 0.96. Regarding the calibration, the calibration slope and intercept ranged from 0.74 to 1.06 and from -0.01 to 0.34, respectively. Regarding the sensitivity and specificity of the prognostic models, there was a variation between 31.0% and 94.5% and from 14.9% to 93.7%, respectively.

Conclusion: Although prognostic models have been developed, discrimination and calibration, as well as specificity and sensitivity, varied significantly among them. In addition, there were few studies investigating the external validation of these models.

Implications: Although some prognostic models have been developed, validated, and are able to predict success or failure in patients with low back pain undergoing conservative treatment, necessary to implement such models in clinical practice due to the lack of evidence regarding external validation.

Keywords: Low back pain, Prognostic models, Conservative treatment

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PREVALENCE OF SARCOPENIA IN BRAZILIAN ELDERLY: AN UPDATE AND SYSTEMATIC REVIEW

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Background: The sarcopenia associated with aging is characterized by loss of muscle mass and strength, decline in functionality, independence, and quality of life. With increasing life expectancy in Brazil, the number of elderly is growing, and with this, attention must be paid to changes in sarcopenia prevalence rates over the years.

Objective: This systematic review aims to estimate and update data on the prevalence of sarcopenia in Brazilian elderly.

Methods: Electronic and manual searches of databases, relevant journals and reference lists with no language restriction were performed. English descriptors (mentioned in a previous study¹) were