Keywords: Parkinson's disease, Physical therapy, Transcranial direct current stimulation

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REHABILITATION IN LOW BACK PELVIC PAIN IN PREGNANCY: A BIBLIOMETRIC ANALYSIS

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Background: Pelvic low back pain (PLBP) is a complex and multifactorial pathophysiology, common during pregnancy and postpartum. In the last decade, there has been an increase in research on the rehabilitation of PLBP in pregnancy, seeking to test the effectiveness of treatments and understand the causes of this problem. Therefore, it is necessary to analyze the peer-reviewed literature on the subject to identify different perspectives and gaps on the available field of knowledge.
Objectives: To map the scientific production by analyzing published scientific articles on the rehabilitation of pelvic low back pain in pregnancy.
Methods: The search ((pregnancy OR pregnant AND women) AND (low AND back AND pain OR backache OR lumbar AND pain) AND (physical AND therapy OR exercise OR rehabilitation)) was conducted in March 2023 in the Web of Science and Scopus databases, filtering for primary articles. We identified 294 records in Web of Science and 1,266 in Scopus. The titles and abstracts of the records were analyzed, and 347 articles were excluded according to the criteria: non-primary articles, no relationship between low back pelvic pain, pregnancy and exercise, and duplicate records were also excluded (n=159). Data were analyzed in R (version 4.2.2) with the aid of the bibliometrix package (version 4.1.2).
Results: They have analyzed 1.054 articles from 1980 to 2023 in 454 journals, with an annual growth rate of 6,6%. They have researched on the topic by 3.686 authors, with 3,9% international collaborations. The journals that have published the most on the topic are BMC Pregnancy and Childbirth (n=36) and Spine (n=33). Among the most relevant authors, physical therapist Britt Karin Stuge, a senior researcher at Oslo University Hospital in Norway, was the most productive author on the subject (n = 26). The countries with the most publications in this field of research are the USA (n=239), Sweden (n=158) and Norway (n=138). The most influential study entitled "Prevalence of back pain in pregnancy" by Ostgaard and colleagues (1991), was published in the journal Spine. This is a prospective longitudinal study of 855 pregnant women from the maternity health care system in Gothenburg, Sweden. Due to its long duration, significant sample size, number of questionnaires applied, and observations analyzed, this study is considered the most influential worldwide in this field of research. The authors' keyword co-occurrence analysis resulted in 3 clusters with the themes: low back pain (*"low back pain", "pelvic girdle pain", "pelvic pain", "postpartum", "period postpartum", "disability"*), pregnancy and rehabilitation (*"pregnancy", "exercise", "physical activity", "health women's", "back pain", "rehabilitation"*).
Conclusion: The bibliometric analysis of primary studies on PLBP rehabilitation in pregnancy revealed a marked increase in the last 10 years, evidencing the growing interest in this subject for the prevention and treatment of this pathology. However, it is important to highlight that most of the evidence comes from developed countries.
Implications: Quantitative mapping of the knowledge area can help researchers and health professionals identify more influential experts and sources of information, as well as research gaps in addressing PLBP in pregnancy.
Keywords: Pain, Pregnancy, Exercise

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Social isolation as a risk factor for neck and low back pain: a cotwin design

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Background: Perceived social isolation (PSI) is a personal contextual factor that is associated with morbidity and mortality. It is a factor that contributes to a worse quality of life for individuals, being associated with a worse prognosis for several clinical conditions, including low back pain (LBP) and neck pain (NP). However, information on whether ISP is a possible risk factor for LBP and NP is scarce. The few studies that investigated social isolation in back pain have scope or methodological limitations.
Objectives: To investigate the association between individual ISP and the presence of LBP and NP through a co-twin study.
Methods: Cross-sectional observational study of 141 pairs of complete twins. The sample was taken from the Brazilian Twin Registry. We used self-reported questionnaires to assess the occurrence of LBP and NP (yes or no) and the level of physical activity. The Friendship Scale was used to measure people's PSI. The Peas in a Pod and Pittsburgh Sleep Quality questionnaires were used to determine twin pair zygosity and sleep quality, respectively. Regression models were constructed to investigate whether people's ISP is associated with the occurrence of LBP or NP. Models were adjusted for potential confounders: family factors; age; gender; level of physical activity; and sleep quality.
Results: The sample consisted of adults of good socioeconomic status, mostly female (73.76%). Most had LBP and/or NP (84.75%), social isolation (58.87%), poor sleep quality (62.42%) and did not practice regular physical activity (69.15%). A change of one point in 25 in people's perception of less social isolation represented a 6% reduction in the risk of having NP (OR:0.94; 95%CI:0.84−1.05) and an 8% reduction in risk to present LBP (OR :0.92; 95%CI:0.81−1.05), after adjusting models for possible confounding factors mentioned above, however the confidence intervals included 1.0, so the estimates did not reach significance statistic.

Conclusion: Our study is the first to investigate the association between these variables, adjusting for potential confounders, and the data suggest an association of PSI with NP and LBP, being a possible risk factor that can be taken into account in preventive approaches focused on individuals.
Implications: We consider that the results have a scientific, sociocultural, educational, and clinical practice impact, since the PSI is such an important personal contextual factor that is associated with several clinical conditions of health and quality of life, but which is still subjugated in the literature. We emphasize the importance of further studies to clarify gaps about PSI, particularly post-pandemic as our data were collected before the COVID-19 pandemic, and we believe that PSI risks due to COVID-19 may have increased. We hope that based on these results, health professionals will start to include the ISP in their assessment routine and, thus, more fully address the biopsychosocial model focused on the individual.
Keywords: Social isolation, Neck Pain, Low Back Pain

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EXPLORING MOBILITY DYSFUNCTION IN PEOPLE WITH AND WITHOUT IMPAIRED COGNITION IN PARKINSON DISEASE

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Background: The relationship between mobility and cognition has been studied in the elderly population. In atypical aging, such as Parkinsonś disease (PD), these associations have also been reported. It is believed that people with PD may compensate for mobility deficits using increased attentional resources to overcome deficit. This phenomenon reflects the importance of understanding the relationship between mobility and cognition.
Objectives: To compare gait and balance characteristics in PD individuals with and without cognitive impairment.
Methods: Cross-sectional study, comprising 143 participants with PD divided into two groups according to the Montreal Cognitive Assessment (MoCA) cut-off: 1) without cognitive impairment (MoCA $>$ 26) and 2) with cognitive impairment (MoCA $\leq$ 26). Groups were compared through instrumented and clinical measures for gait and balance in the following domains: sensory orientation, anticipatory postural adjustments, automatic postural responses, and dynamic gait. Clinical measures were obtained from Mini-BESTest. Instrumented measures of gait and balance were obtained via six wearable sensors (Opals, APDM Wearable Technologies, A Clario company), each including triaxial accelerometers, triaxial gyroscopes, and magnetometers, placed on both feet, wrists, sternum, and the lumbar region while performing a total of eight different motor tasks. For data analysis, t-test for independent samples and a general linear model were carried out using the SPSS 28.0.
Results: 72 individuals had cognitive impairment and 71 were considered without cognitive impairment. There was no difference in the total Mini-BESTest score between groups, however, in the dynamic gait domain there was a difference between groups (p=0.010), in which the group with cognitive impairment presented worse performance in dynamic gait when compared to the group without cognitive impairment (p=0.010). When looking at the instrumented measures for gait and balance domains, all significant group differences were under the dynamic gait domain, specifically, dual task gait speed (p=0.004), dual cost stride length (p=0.016), stance time (p=0.038), and turn velocity (p=0.037). For all the instrumented measures where it was possible to verify differences between groups, the worst performance in dynamic gait was presented by the group with cognitive impairment.
Conclusion: Dynamic gait performance was worse in individuals with PD who had cognitive impairment compared to individuals without cognitive impairment, both for clinical and instrumented measures.
Implications: Gait performance differs between individuals with and without cognitive impairment. This fact helps to guide the clinician therapeutic prescription, prioritizing gait training for individuals with PD, rehabilitation strategies focused on mobility, as well as approaches that treat gait and cognition simultaneously, particularly for individuals who have cognitive impairments.
Keywords: Parkinson Disease, Mobility Limitation, Cognition

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PERCEPTIONS OF INDIVIDUALS WITH PARKINSON DISEASE REGARDING A TELEREHABILITATION PROTOCOL DURING THE COVID-19 PANDEMIC: A QUALITATIVE STUDY

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Background: Due to the COVID-19 pandemic, changes were necessary in the field of physiotherapy, requiring new models of care that could be promoted by telerehabilitation. Therefore, a group of individuals with Parkinson's disease (PD), who before the pandemic performed face-to-face physical therapy, had their way of treatment replaced by a telerehabilitation program consisting of synchronous remote sessions of physical therapy, provision of graphic material and videos about physical and cognitive exercises and health education activities.
Objectives: To understand the meaning of the experience of individuals living with PD regarding a telerehabilitation protocol.
Methods: This is a qualitative descriptive analytical study with a phenomenological basis in which 20 individuals with PD who