

Ethics committee approval: The project is in the qualification phase and will be sent to the Ethics Committee.

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VALIDITY OF THE TELEPHONE-BASED APPLICATION OF THE PORTUGUESE VERSION OF THE PARKINSON'S DISEASE QUESTIONNAIRE (PDQ-39): PRELIMINARY RESULTS

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Background: Individuals with Parkinson's Disease (PD) commonly have disabilities that impact their health and quality of life. These individuals may have difficulties to access face-to-face health services. In addition, telerehabilitation has been an important strategy for healthcare. The 39-item Parkinson's Disease Questionnaire (PDQ-39) is a valid and recommended tool to assess the health-related quality of life of these individuals. However, studies investigating the concurrent validity of the telephone-based application of the PDQ-39 were not found.

Objectives: To investigate the concurrent validity of the telephone-based application of the PDQ-39 to assess the quality of life in individuals with PD.

Methods: This is a measurement proprieties study. Individuals were included according to the following criteria: idiopathic PD diagnosed by a neurologist, age 50 years or older, using an anti-parkinsonian medication, clinically stable for at least 6 months, and classified between stages 1-3 of the modified Hoehn and Yahr scale. The Portuguese version of the PDQ-39 was applied by interview in a face-to-face assessment, and after seven to 10 days, it was applied by telephone, by the same examiner. Descriptive statistics were used to characterize the sample. Intraclass correlation coefficient (ICC) was used to assess the agreement between the scores, considering the total score and domains' scores. When the ICC values were statistically significant, the magnitude was classified as: very low ≤ 0.25 ; low = 0.26 to 0.49; moderate = 0.50 to 0.69; high = 0.70 to 0.89; and very high = 0.90 to 1.00. The established significance level was $\alpha=5\%$.

Results: A total of 49 individuals, 34 men (69.4%), with a mean age of 66.51 ± 8.08 years and mean disease duration of 9.06 ± 6.89 years, were included. Most were classified at stages 2 (46.9%) and 3 (20.4%) of the modified Hoehn and Yahr scale. Significant correlations, classified as very high magnitude for the total score ($ICC=0.95$; $p<0.001$) and for the stigma and mobility domains ($0.92<ICC<0.94$; $p<0.001$), and classified as high for the domains social support, activities of daily living, cognitive impairment, communication, bodily discomfort, and emotional well-being ($0.77<ICC<0.81$; $p<0.001$) were found.

Conclusion: Preliminary results indicate that the telephone-based application of the Portuguese version of the PDQ-39 has adequate concurrent validity to assess the quality of life in individuals with PD. However, the study must be finalized to ensure these results.

Implications: These results indicate the potential of assessing the quality of life of individuals with PD using the PDQ-39 over the telephone, which can increase the feasibility of administration, reduce problems with transportation and costs.

Keywords: Parkinson's Disease, Quality of Life, Validation Study

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

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FUNCTIONAL CAPACITY AND DISABILITY IN OLDER ADULTS WITH CHRONIC LOW BACK PAIN: A STUDY OF RESPONSIVENESS

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Background: Chronic low back pain (LBP) is a prevalent condition in older adults, being identified as a cause of disability in this population. Despite its validity and reliability, the functional capacity tests are not often administered in patients with LBP but provide useful information related to mobility. A measurement property of the functional capacity tests that has not been investigated extensively in the LBP field is the responsiveness, such as the capacity to detect changes during the intervention.

Objectives: To determine the responsiveness of three functional capacity tests, the Timed Up and Go test, the 4-meter Walk test, the 5 times Sit to Stand test, and to compare with the responsiveness of the Roland Morris Disability Questionnaire (RMDQ) in older adults with chronic LBP undergoing an 8-week intervention.

Methods: This is a responsiveness study with measurement before and after an 8-week intervention. It was prospectively registered at the Brazilian Registry of Clinical Trials (RBR-9prhznng). Patients with nonspecific LBP (age ≥ 60) were recruited. The functional capacity tests and the RMDQ were administered at baseline and after 8 weeks. The intervention followed the recommendations from clinical practice guidelines for the management of nonspecific LBP: The responsiveness was determined by calculating the effect size (ES), correlation analysis, and the analysis of the Receiver Operating Characteristic (ROC) Curve to calculate the area under the curve (AUC).

Results: 118 older adults with chronic LBP were recruited. The RMDQ was the most responsiveness measure, followed by the Sit to Stand test. The ES for the RMDQ was large ($ES= -0.74$; 95%CI: -0.56 ; -0.92), whereas the 5 Times Sit to Stand test presented a small effect ($EF= -0.45$, 95%CI: -0.26 ; -0.64). The Timed UP and Go test and the 4-meter Walk test small ESs ($ES< 0.25$). The 5 Times Sit to Stand test was the only one to show a fair correlation ($0.25 < r < 0.50$) with RMDQ. The ROC analysis, only the RMDQ showed AUC values above the cut-off point of 0.70.

Conclusion: The RMDQ was responsive to an 8-week lumbar stabilization program in older adults with chronic LBP. The 5 Times Sit to Stand test was the most responsive but presented limitations with regard to the capacity to discriminate patients who recovered from those who did not recover. A possible explanation for the lack of responsiveness of the tests may be due to the nature of the intervention, which was not focused on increasing ability and balance, components that are necessarily assessed by functional capacity tests.

Implications: Functional capacity tests are widely used to assess mobility and balance in older adults. Only the 5 Times Sit to Stand

test was considered to be able to detect changes in older adults who underwent an 8-week intervention program. The RMDQ was more responsive than any of the functional capacity tests.

Keywords: Chronic low back pain, Functional capacity, Disability

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

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PROBABLE SARCOPENIA, PAIN, AND DISABILITY IN OLDER ADULTS WITH CHRONIC LOW BACK PAIN

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Background: As the population ages, the prevalence of chronic musculoskeletal conditions, such as low back pain (LBP), increases. Sarcopenia, defined as an age-related loss of skeletal muscle mass, is a prevalent condition in the older population that contributes significantly to functional decline, disability, frailty, and falls. The coexistence of both conditions may negatively impact the functional decline of the older adults, which may require a specific therapeutic approach to deal with both conditions. However, the first step is to investigate the prevalence of probable sarcopenia among older adults with chronic LBP and whether older adults with both conditions are more clinically disabled than older adults with chronic LBP without probable sarcopenia.

Objectives: The aims of this study were to determine the prevalence of probable sarcopenia among older adults with chronic LBP seeking physical therapy care in a primary care setting and to investigate whether older adults with chronic LBP and probable sarcopenia present with higher pain and disability than those with chronic LBP and no probable sarcopenia.

Methods: This is a cross-sectional study design. We recruited older adults (age ≥ 60) living in Belo Horizonte, Brazil, reporting LBP for more than 3 months, seeking physical therapy care in a basic health unit (i.e. primary care setting) from the Brazilian National Health-care System. Data collected included age, sex, pain intensity (0-10 scale), disability (i.e., Roland Morris disability questionnaire) and probable sarcopenia (i.e. algorithm from the European Working Group on Sarcopenia in Older People – EWGSOP2). To compare pain and disability levels in older adults with chronic LBP with and without probable sarcopenia, we calculate the mean difference (MD) and its confidence interval (CI).

Results: A total of 156 participants (73% women), mean age of 69.5 ± 6.2 years, mean pain intensity of 7.1 ± 2.3 points, and mean disability of 12.7 ± 5.5 points. The prevalence of probable sarcopenia was 31.40%. Patients with chronic LBP and probable sarcopenia reported higher mean pain intensity (MD=1.63; 95%CI: 0.89, 2.37) and disability (MD=5.38; 95%CI: 3.69, 7.07) than those with no probable sarcopenia.

Conclusion: Nearly a third of older adults with chronic LBP seeking physical therapy care were classified as having probable sarcopenia.

These patients reported higher pain and disability than patients with chronic LBP with no probable sarcopenia.

Implications: In clinical practice, an approach to screening cases in older adults with chronic LBP and probable sarcopenia may help to identify more severe and disabling cases of low back pain. Future studies should investigate the prognostic value of sarcopenia in older adults with LBP. It may be possible that future therapeutic approaches should be developed and tested to treat older adults with both conditions.

Keywords: Chronic low back pain, Probable sarcopenia, Older adults

Conflict of interest: The authors no conflict of interest.

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LOWER LIMB COORDINATION AND COORDINATION VARIABILITY IN MALE AND FEMALE RUNNERS WITH AND WITHOUT PATELLOFEMORAL PAIN

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Background: According to the dynamic system theories, the motions of the lower limb are coupled, and it is likely that these motions may be uncoupled/less well coordinated in the presence of patellofemoral pain (PFP). Literature also suggests that there may be differences between males and females with and without PFP. However, evidence to support this hypothesis in runners is contradictory.

Objectives: To investigate differences between lower limb coordination and coordination variability between male runners with and without PFP and between female runners with and without PFP.

Methods: A cross-sectional study involving 83 runners. The female group was composed by 40 runners, 20 with PFP (mean age 27.5 years, running average of 20.1 km/week, mean duration of pain 14.6 months) and 20 without PFP (27.2 years, running average of 28.5 km/week). The male group was composed of 43 runners, 22 with PFP (28.4 years, running average of 22.5 km/week, mean duration of pain 14.4 months) and 21 without PFP (28.5 years, running average of 39.8 km/week). A 3-dimensional kinematics analysis of the femur, tibia, and foot during a treadmill running was recorded. Vector Coding technique was used to analyze coordination and coordination variability for the femur-tibia-foot segments couplings. The couplings variables of interest were: (I) tibia internal/external rotation vs foot inversion/eversion, (II) femur internal/external rotation vs foot inversion/eversion, (III) femur adduction/abduction vs foot inversion/eversion, (IV) femur flexion/extension vs tibia flexion/extension, (V) femur adduction/abduction vs tibia adduction/abduction. Differences between males with and without PFP