

performance on the FSS ( $r_s = -0.27$  to  $-0.37$  and  $0.29$  to  $0.36$ ,  $p < 0.05$  for all). Construct validity was observed by the moderate association between the four versions of the BBT and the SPPB ( $r_s = -0.63$  to  $-0.58$  and  $0.43$  to  $0.53$ ,  $p < 0.05$ , for all). Criterion validity was observed by the moderate association between the four versions of the BBT and the BBT ( $r_s = -0.48$  to  $-0.58$  and  $0.64$ ,  $p < 0.05$  for all).

**Conclusion:** All versions of the BBT showed good reproducibility, measurement error and validity measurement, with no ceiling or floor effect in hospitalized patients. The BBT versions can be a good alternative for the functional assessment of bedridden patients.

**Implications:** This study allows us to present suggestions for future studies. Thus, it is suggested to continue investigating whether the BBT can be used as a predictor of other outcomes.

**Keywords:** Hospitalization, Patient Outcome Assessment, Mobility Limitation

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## TRANSLATION, TRANSCULTURAL ADAPTATION AND CONSTRUCTION VALIDITY OF THE PITTSBURGH FATIGABILITY SCALE INTO BRAZILIAN PORTUGUESE

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**Background:** Fatigue is a symptom associated with the weakening or depletion of an individual's physical and/or mental resources. The term fatigability comprises the subjective perception of fatigue in face of activities of specific intensity and duration. The Pittsburgh Fatigability Scale (PFS), originally published in English, is the only validated scale to measure perceived fatigability in older adults. Considering the importance of specific assessment in the aging population for the prevention of conditions and for the rehabilitation, it is necessary to translate and adapt it cross-culturally to the specificities of the Brazilian context.

**Objectives:** To translate and cross-culturally adapt the Pittsburgh Fatigability Scale into Brazilian Portuguese to assess fatigability in the Brazilian older adult's population.

**Methods:** Based on Beaton et al. (2000) we carried out the translation and cross-cultural adaptation to generate the PFS version in Brazilian Portuguese (PFS-Brasil), following the steps: translation from the source language (English), comparison and synthesis of translated versions, blind back-translation, comparison of back-translations and assessment of instrument clarity by the expert committee. Older adults who met the inclusion and exclusion criteria were invited to participate voluntarily. Each participant provided demographic data, responded to the PFS-Brasil and reported their understanding, difficulty in responding and suggestions about each item on the scale. All assessments were performed in environments with noise, temperature, and lighting control to ensure privacy and comfort conditions for the proper performance of the tests. The R software was used to analyze the evidence of construct

validity and instrument precision based on Confirmatory Factor Analysis (CFA), Cronbach's  $\alpha$ , McDonald's  $\omega$  and composite reliability. **Results:** The Brazilian version of the PFS (PFS-Brasil) was developed. The pilot test referring to the last phase of the cross-cultural adaptation included the assessment of 103 participants. Confirmatory factor analyzes carried out point to the adequacy of bifactorial models for both subscales, with satisfactory and excellent internal consistency for the physical and mental subscales, respectively.

**Conclusion:** The present study demonstrated that the Brazilian version of the Pittsburgh Fatigability Scale has adequate construct validity for assessing perceived fatigability in older adults, both in its physical and mental subscales.

**Implications:** To have an assessment tool that is easy to use, brief, easy to understand and validated for our culture is essential for proper clinical assessment. The PFS-Brasil scale analyzes the degree of perceived physical and mental fatigability in the older adult and the scale will allow health professionals to assess health conditions in a comprehensive and precise way, defining rehabilitation procedures and its follow-up for the integral health care of the aging populations. To analyses other validation parameters are needed and are being performed as part of a second study.

**Keywords:** Validation Study, Patient-Reported Outcomes Measure, Functional Physical Performance

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**Acknowledgment:** Not applicable.

**Ethics committee approval:** Research Ethics Committee of the Institute of Health Sciences of the Federal University of Pará (n° 56210622.0.0000.0018).

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## EFFECTIVENESS OF CUPPING THERAPY ON MUSCLE PAIN IN RECREATIONAL RUNNERS: RANDOMIZED CLINICAL TRIAL

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**Background:** It is recommended that physical activity be a routine for people throughout their lives. The WHO recommends that adults get an average of 300 minutes of moderate activity or at least 75 minutes of high intensity activity per week. Among the sports, street running attracts more and more fans. It is an inclusive modality as it enables several people of different ages to practice it on a daily basis. It is associated with easy access, low cost, and low technical level. The incidence of running-related injuries is between 2.5 to 33 injuries per 1000 hours of running, and the variation occurs due to the type of runner, operationalization of the term injury, and duration of follow-up. To reduce the deleterious effects of muscle damage it is important for athletes to utilize recovery strategies to reduce pain, fatigue, prevent future injury, and enable a faster and more efficient return to training. It is believed that ventosaterapy is a recovery technique that performs drainage and increases blood circulation, facilitating the release of toxins that are associated with pain processes. The application time varies between 5 to 10 minutes with a negative pressure of 300 millibars being sufficient to generate changes in musculoskeletal pain. However, there are several modes of application. Therefore, the development of studies is important to prove the effectiveness of the technique.

**Objectives:** The primary endpoint evaluates the effectiveness of ventosaterapy on quadriceps muscle pain and the secondary endpoints investigate the effectiveness of the technique on muscle fatigue, performance, overall perceived effect after running.

**Methods:** This is a randomized controlled trial study, with a follow-up period of 72 hours, registered in the REBEC platform. The runners will be distributed in experimental or control group in a randomized manner. The experimental group will receive vacuum therapy in the quadriceps muscle belly after running and the control group will receive non-effective joint mobilization in the hip and knee joints. Both interventions will last 5 minutes. Allocation will be concealed using opaque, sealed, and numbered envelopes. The runner and the assessor will be blinded to the interventions. Intent-to-treat analysis will be used. Sample selection will be by convenience. Runners will be recruited after running street races in the city of Juiz de Fora and will be instructed not to perform vigorous physical activity 24 hours before and 72 hours after data collection. Inclusion criteria: running at least 6km, adult, running for at least 1 year, and having the habit of practicing running at least twice a week. The intervention or placebo will be performed on the leg that is most sore after running. If participants report the same level of pain in both legs or no pain at all, the side to be evaluated and treated will be randomly selected. The endpoints will be measured: Pain and fatigue (EVAN), muscle performance (unipodal vertical jump) and overall affect (perceived global affect scale).

**Keywords:** Runner, Recovery, Cupping

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### ANALYSIS OF SURVIVAL TIME AND FUNCTIONAL PROGRESSION IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS: A LONGITUDINAL STUDY

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**Background:** Amyotrophic lateral sclerosis (ALS) is a disease that causes progressive degeneration of neurons present in the spinal cord and cerebral cortex. It is a disease with a progressive course, with worsening disability and death 3 to 5 years after diagnosis. However, some patients seem to have a slower progression, while others maintain a rapid progression, which may influence the clinical course of the disease and accelerate death.

**Objectives:** To evaluate the survival time of patients with ALS, according to the progression of the disease in rapid or slow, and to compare the level of functionality between two evaluations.

**Methods:** A longitudinal case series study that followed patients with a confirmed diagnosis of ALS from August 2018 to February 2022. Data were collected from medical records of periodic evaluations, in which pulmonary function tests were performed and the ALS Functional Assessment Scale (ALSFAS-r) was applied. From the values obtained in the scale, the progression rate was calculated, where the patients were divided into slow or rapid progression and

followed for 3.5 years for statistical analysis of survival, later performed by the Kaplan-Meier test. The results of the scores of the first and second evaluation of each patient were compared using the paired t-test.

**Results:** 11 patients were followed, 7 with rapid progression (63%) and 4 slow (37%) with a mean age of 61.64 years and forced vital capacity (FVC): 62.2 (38.7-85.7)%pred. In the functionality evaluation, it was observed that there was a significant reduction ( $p < 0.01$ ) in the total scale score compared to the first evaluation. The survival percentage was 0%, where all patients died at the end of the study, but the median survival of the slow progression group from the first evaluation until the final outcome was 46 months, while the rapid progression group was 28 months, with no significant difference between the survival curves (HR = 0.42; CI 0.12 - 1.48).

**Conclusion:** The present study was able to demonstrate that after the second evaluation ALS patients may have significant losses of functionality by the decline of the ALSFAS-r functional score. Also, it can determine the evolution of the disease and assist in identifying the speed of progression of the pathology.

**Implications:** Regular use of the ALS functional assessment scale and calculation of the rate of progression in the outpatient clinical setting becomes essential to chart a better short- and long-term prognosis and follow-up of the disease.

**Keywords:** Prognosis, ALS, Survival

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### USE OF SHAPING METHODS WITH FOCUS ON 1ST DORSAL INTEROSSEOUS' STRENGTHENING FOR TREATMENT OF INDIVIDUALS WITH RHIZARTHRITIS: CASE REPORT

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**Background:** Rhizoarthrosis is a chronic health condition characterized by progressive degeneration of the trapeziometacarpal joint. This implies a decreased range of motion, muscle weakness, and pain in the thumb base. Thus, the loss of structure and function of the hand can interfere with the characteristics of activities and participation of these subjects. These, however, can be minimized by the 1st dorsal interosseous muscle strengthening, an important trapeziometacarpal joint dynamic stabilizer. This strengthening is not usually included in physical rehabilitation, which also does not detail the exercises' load, progression, and number of repetitions.

**Objectives:** To reduce the impact of rhizoarthrosis on activities and the social participation of affected subjects, this study aimed to investigate the effect of an intervention with a shaping method focused on the 1st dorsal interosseous' strengthening.

**Methods:** Subjects with rhizoarthrosis, diagnosed according to the Eaton- Littler -Burton criteria, were included. These were evaluated before, after 4 weeks, and at the end of treatment. For the evaluation of aspects of body structure and function, the pain was assessed using the Numerical Pain Scale, handgrip and pinch strength, and the Nine-Hole Peg Test (NHPT). Activity and participation were assessed using the Australian/Canadian Hand