with LBP who had not received treatment in the PHC in the previous six months and aged >18 years were included. Those with red flag signs, limited mobility and pregnant women were excluded. Participants were stratified into groups: G1) People without referral and assistance (n:23); G2) People referred and assisted (n:15); G3) People who sought care without referral (n:10). We adopted multinomial logistic regression with backward stepwise to investigate whether age, sex, drugs and exams prescriptions, number of exams, consultations with specialists and other interventions adequately classify the groups G1 (reference), G2 and G3. There was no collinearity, and data fit was confirmed by the Akaike criterion. The pseudo-R^2 (Nagelkerke) demonstrated the weight of the variables in the model and the odds ratio (OR) was calculated with a 95% confidence interval (95%CI).
Results: The mean age was 55 years (SD: 13 years), and 75% were women. Of the total, 21% received imaging tests and 10.5% received drug prescriptions. The mean referral time until the first Physiotherapy appointment for LBP treatment (G2) was 99.5 days. The overall average of Physiotherapy visits was 6.5 sessions/person. Gender, age, number of consultations with specialists and other interventions explained 56% of the model (R^2). Compared to G1, the chance of being referred (G2) increased with increasing age (OR: 1.11 95%CI: 1.07;1.15), less number of consultations (OR: 0.26 95%CI: 0.10;0.91), less number of other interventions (OR: 0.21 95%CI: 0.05;0.91). The G3 was explained by female gender (OR: 17.1 95%CI: 3.3;88.8), age (OR: 1.24 95%CI: 1.17;1.31), and less number of consultations (OR : 0.06 95%CI: 0.11;0.39).
Conclusion: The time length for people with LBP to be treated after being referred to Physiotherapy was long. Age increments increased between 11% and 24% the chance of being referred and seeking care, respectively. The lower the number of consultations with specialists and other interventions, the greater the chance of being referred to Physiotherapy compared to people who are not referred. Women were 17 times more likely to seek Physiotherapy without a referral.
Implications: Our findings contribute to understanding the population profile and factors associated with referral to PHC Physiotherapists. We raise a caution note related to the delay in referral time is highlighted, which can cause deleterious clinical impacts.
Keywords: Low back pain, Primary health care, Physiotherapy

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IMPACTS OF AIR RESISTANCE IMPOSED BY RESPIRATORY FILTERS ON VOLUME AND FLOW VALUES DURING SIMULATED RESPIRATORY PATTERN

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Background: Pulmonary function and respiratory pattern exams are essential for the diagnosis of various diseases, such as COPD and asthma. Most equipment used in these exams is not sterilized, making the use of respiratory filters necessary for biological protection of the evaluated individual. However, the use of filters with high air resistance can alter the measurement of airflow and air volume during these evaluations. Thus, analyzing the influence of this resistance is important to ensure that the results of these exams can be reliable.
Objectives: To analyze the influence of the resistance of a respiratory filter on the flow and volume values collected in an innovative equipment used for the examination of the human respiratory pattern.
Methods: This is an experimental study. The measurement system consists of an Active Servo Lung (ASL) 5000 human breathing simulator; a respiratory filter holder for the KOKO spirometer; a respiratory filter for spirometry; and the Respiratory Diagnostic Assistant (RDA) device, developed by the LINDEF/UFPE laboratory for the evaluation of the respiratory pattern. The ASL 5000 was configured to simulate the normal respiratory pattern of a healthy adult individual. The settings were: respiratory frequency = 10 bpm; inspiratory time 2 s, expiratory time 4 s, I:E ratio = 1:2; tidal volume = 0.5L; airway resistance = 3cmH2O; lung compliance = 100mL/cmH2O; and muscle pressure = 15cmH2O. The breathing simulation was programmed to occur for 3 minutes, and thus, the ASL 5000 produced a total of 30 respiratory cycles, of which the flow and volume curves and respiratory pattern parameters were recorded by the RDA. This same procedure was performed twice, once with the presence of the filter membrane inside the filter holder, and another time without the presence of the filter membrane. The results were subsequently analyzed by the RDA Analysis software.
Results: With the addition of the filter to the system, there was a decrease from 84.46 L/min to 79.76 L/min in inspiratory flow and from 90.25 L/min to 85.76 L/min in expiratory flow, with a consequent reduction from 1323.63 mL to 1285.26 mL in inspiratory tidal volume and from 1293.73 mL to 1270.96 mL in expiratory tidal volume.
Conclusion: By comparing the mean values of inspiratory and expiratory flow and volume in the simulation of a basal respiration, it can be inferred that the resistance imposed by the filter added to the system produced considerable decreases in inspiratory and expiratory flow and volume values.
Implications: The differences obtained in this result are useful for compensation adjustments in the RDA software, aiming to correct this resistance imposed by the filter membrane, necessary during collection. Thus, this result will contribute to ensuring a respiratory pattern exam as close as possible to what the evaluated patient actually presents. It also brings reflection on the need to correct the volume and flow values obtained by other software responsible for the processing of respiratory pattern and pulmonary function data, which require the use of respiratory filters in their execution.
Keywords: Respiratory Filter, Respiratory Pattern, Pulmonary Function

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AGREEMENT OF PHYSIOTHERAPISTS WITH DIFFERENT TIMES OF CLINICAL PRACTICE IN RELATION TO BODY STABILITY IN THE TRADITIONAL FRONT PLANK: PILOT STUDY

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Background: Newly graduated physical therapists have received up-to-date education and training in evaluating techniques and interventions, providing a new perspective, and understanding of the field. Physiotherapists with more time in practice have acquired extensive clinical experience in the assessment of individuals with changes in body stability. It is believed that the assessment of stability in the plank exercise will depend on professional education, training, and clinical experience.
Objectives: To evaluate the agreement of physiotherapists with different times of clinical practice in the assessment of body stability while performing the traditional front plank (TFP).
Methods: Cross-sectional experimental study. Healthy adults of both genders were included, with self-reported practice of moderate physical activity of at least 150 minutes a week and/or vigorous activity of at least 75 minutes a week, without reports of pain or history of injury or trauma, with previous experience in exercise of TFP, and not having performed physical exercise in the last 48 hours. After reading and accepting the Free and Informed Consent Term, the evaluation form was completed. To perform the TFP, the participants should remain for as long as possible with elbows and feet flat on the ground in line with the shoulders, hips and spine in a neutral position and posterior pelvic inclination. Based on this, a control form was prepared to record the classification of body stability by evaluators with different times of clinical practice. The form consisted of three items in which the evaluator selected only one to classify the TFP through video analysis. The items were: TFP performed with high stability, complying with all items described in the exercise for the entire period of time; TFP performed with moderate stability, complying with the items described in the exercise for more than 50% of the time; TFP performed with low stability, complying with the described exercise items for less than 50% of the time. The TFP exercise was filmed with a Sony Handycam DCR-SR65 camcorder at a distance of 2.5 meters from the subject. The same footage was sent to the recently graduated Physiotherapist and the other with seven years of clinical practice on day 1 and day 7. The Kappa Index was used for all analyzes of the degree of intra and inter-rater agreement, being interpreted: 0.81 to 1.0 – excellent; 0.6 to 0.8 – substantial; 0.4 to 0.6 – moderate; 0.2 to 0.4 – low; 0 to 0.2 – very low.
Results: 10 individuals were evaluated (five men and five women), with a mean age of 27.1 (±7.6) years, and mean body mass index of 23.4 kg/m^2 (±4.2). The analysis showed a low degree of agreement (Kappa=0.167) in the perception of a recently graduated Physiotherapist and an excellent one in the perception of the Physiotherapist with seven years of clinical practice (Kappa= 1.000), in different periods, in relation to body stability in the TFP.
Conclusion: Physiotherapists with different times of clinical practice differ in the agreement of the response in relation to body stability during the execution of the traditional frontal plank.
Implications: As this is a pilot study, the limitations are related to the sample size.
Keywords: Physical Exercise, Isometric Exercise, Professional Practice

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

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CORRELATION BETWEEN THE TIME OF EXECUTION OF THE TRADITIONAL FRONT PLANK WITH THE WEEKLY VOLUME OF PHYSICAL ACTIVITY: PILOT STUDY

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Background: The traditional front plank (TFP) promotes increased core muscle strength and endurance, promoting greater body stability and greater individual capacity to maintain the exercise for as long as possible. The time to perform an exercise and the weekly volume of physical activity (PA) may be related, but the nature of the relationship will depend on factors such as type of exercise, intensity, frequency, motivation and verbal reinforcement. It is known that physical performance in trained individuals is greater, suggesting that they have more experience and, consequently, greater motivation and mental conditioning compared to untrained individuals.
Objectives: To verify whether the execution time of the plank is influenced by the volume of moderate and vigorous PA (MVPA).
Methods: Cross-sectional experimental study. Healthy adults of both genders were included, with practice of moderate PA of at least 150 minutes a week and/or vigorous PA of at least 75 minutes a week (International Physical Activity Questionnaire - IPAQ), without reports of pain or history of injury or trauma, with previous experience in the TFP exercise, and not having performed physical exercise in the last 48 hours. After reading and accepting the Free and Informed Consent Term, the evaluation form and the IPAQ were completed. The execution order between the test with verbal reinforcement (WVR) and without verbal reinforcement (WoutVR) was defined by simple draw. Participants should remain for as long as possible in the TFP position, with elbows and feet resting on the ground in line with the shoulders, hips and spine in a neutral position and posterior pelvic inclination. The words of encouragement were standardized, "let's go, contract and maintain", associated with the participant's name and repeated firmly in an uninterrupted sequence. The evaluator monitored the vertical displacement of the participant's hip during the planks. Fatigue time was defined when vertical displacement of the hip exceeded 10 centimeters. The maximum execution time was defined at the moment of contact with the knees on the ground. Between runs, participants rested for 30 minutes. The relationships between fatigue time and maximum time with the weekly volume of MVPA were evaluated using Spearman's correlation. All analyzes considered a significance level of 5%.
Results: 10 individuals were evaluated, five men and five women, with a mean age of 27.1 (±7.6) years, and mean body mass index of 23.4 kg/m^2 (±4.2). The analysis showed a strong and positive relationship between time of fatigue while performing TFP WoutVR and weekly MVPA volume (rho=0.640), and a strong and positive relationship between performing TFP WVR and weekly MVPA volume (rho= 0.652).
Conclusion: The findings of this study indicate that the greater the volume of MVPA, the greater the time to reach fatigue during the execution of the plank WVR and WoutVR.
Implications: The limitations are related to the sample size
Keywords: Physical Exercise, Isometric Exercise, Verbal Reinforcement