correlations of weak magnitude were observed between AIR and LCADL (rho = 0.39), AIR and CAT (rho = 0.10), and AIR and MRC (rho = 0. 17).
Conclusion: The study's preliminary results indicate that the AIR demonstrates adequate measurement properties for assessing anxiety symptoms in patients with COPD. The study will be continued to expand the sample number.
Implications: This study will provide a measurement instrument for investigating anxiety symptoms in patients with COPD with appropriate measurement properties, which may facilitate early identification and proper treatment.
Keywords: Chronic Obstructive Pulmonary Disease, Anxiety, Reproducibility of Tests

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: Polyclinic of the Regional Hospital of Araranguá, National Council for Scientific and Technological Development-Process 430966/2018-0 and Coordination for the Improvement of Higher Education Personnel-Financing 001.
Ethics committee approval: Federal University of Santa Catarina through number CAAE 21334419.6.0000.0121.

https://doi.org/10.1016/j.bjpt.2024.100765

169

ANALYSIS OF THE RELATIONSHIP BETWEEN FUNCTIONAL TESTS PERFORMANCE AND LOWER LIMB STRENGTH

Isabela Cristina Soares[1], Lucas Nogueira Pestana de Castro[2], Maria Vitória Gonçalves da Silva[1], Deborah Hebling Spinoso[2]
[1] *São Paulo State University (UNESP) - Institute of Biosciences, Rio Claro, São Paulo, Brazil*
[2] *São Paulo State University (UNESP) - Faculty of Philosophy and Sciences, Marília, São Paulo, Brazil*

Background: Lower limb stabilizing muscle strength imbalance and changes in functional performance and dynamic balance have been reported as predictors of lower extremity injuries. Lower limb functional tests are commonly applied in clinical practice to assess functional performance as well as used as a measure of progression during rehabilitation. Among them, the Star Excursion Balance Test (SEBT) and the Single Leg Hop Test (SLHT) stand out as easy-to-apply and low-cost tools.
Objectives: To evaluate the relationship between lower limb stabilizing muscle strength and performance in functional tests in individuals without history of injury.
Methods: This is a quantitative cross-sectional study. As eligibility criteria, male individuals, aged 18 to 30 years, with no history of previous injury to the lower limbs were included. The data collection was divided into two days. On the first day, anamnesis was performed, anthropometric data were collected, familiarization with the muscle strength test was carried out and the functional tests SLHT and SEBT were applied to the Dominant Limb (DL) and Non-Dominant Limb (NDL). On the second day, the strength of the stabilizing muscles of the hip (lateral rotators and abductors), knee (quadriceps and hamstrings) and ankle (inverters and evertors) were assessed using a portable Lafayette® dynamometer stabilized by an inelastic band. Three maximal voluntary isometric contractions were performed, lasting five seconds, with a thirty-second interval between each contraction, bilaterally. The peak strength of each movement was recorded and later normalized by body mass. Statistical analysis was performed using the SPSS 18.0® software, applying the Shapiro-Wilk normality test and the Pearson correlation test. A significance level of $\alpha<0.05$ was adopted.
Results: 20 male individuals were collected. A moderate positive correlation was observed between peak strength of the NDL lateral rotators and hip abductors with performance in the DL SLHT and posteromedial SEBT. In addition, the strength of the knee extensors of both limbs was positively correlated with performance in the SLHT of the NDL. Furthermore, a correlation was observed between peak strength of NDL lateral rotators, DL ankle inverters and hip abductors with NDL posteromedial SEBT.
Conclusion: The maximum isometric strength of the lower limbs stabilizing muscles is related to the performance in functional tests.
Implications: The weakness of the stabilizing muscles of the hip and knee is directly related to a lower performance in functional tests, which may cause instability during movements, resulting in biomechanical changes that increase the risk of injury to the lower limbs. Still, the findings of this study elucidate that the performance analysis should take into account the bilateral force for the parameters of rehabilitation and injury prevention.
Keywords: Muscle Strength, Physical Functional Performance, Muscle Strength Dynamometer

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: Not applicable.
Ethics committee approval: Study approved by the Research Ethics Committee of the Faculty of Philosophy and Sciences - São Paulo State University, under protocol n° 5.502.514.

https://doi.org/10.1016/j.bjpt.2024.100766

170

EFFECTS OF TRAINING WITH BLOOD FLOW RESTRICTION ASSOCIATED TO ELECTROSTIMULATION ON MUSCLE THICKNESS AND PERFORMANCE: CLINICAL TRIAL PROTOCOL

Isabela Cristina Soares[1], Maria Vitória Gonçalves da Silva[1], Leonardo Coelho Rabello de Lima[2], Cristiane Rodrigues Pedroni[1]
[1] *Universidade Estadual Paulista (UNESP), Instituto de Biociências, Campus de Rio Claro, São Paulo, Brasil*
[2] *Universidade de São Paulo (USP), Escola de Educação Física e Esporte de Ribeirão Preto (EEFERP), Ribeirão Preto, São Paulo, Brasil*

Background: Among the factors that can influence an athlete's performance, muscle strength stands out in relation to performance and risk of injuries in sports. As an alternative to quadriceps strength training, blood flow restriction (BFR) and neuromuscular electrical stimulation (NMES) are two techniques used to enhance muscle recruitment with less risk of mechanical damage and joint overload.
Objectives: Evaluate the effects of strength training with BFR and BFR associated with NMES of the quadriceps muscle in physically active subjects on parameters of muscle thickness and lower limb performance.
Methods: This is a randomized clinical trial. The volunteers will sign the informed consent form. Will be recruited 60 individuals of both sexes, aged between 18 and 35 years, physically active according to the International Physical Activity Questionnaire (IPAQ). An initial anamnesis will be carried out to characterize the sample and anthropometric data will be collected, as well as thigh cytometry. Then, the volunteers will be randomized into three groups: Blood Flow Restriction Group (BFRG), Blood Flow Restriction Associated with Electrostimulation Group (BFREG) and Conventional Exercise Group (CEG). The evaluators will be blind in relation to the group that the individual was allocated, as well as the person responsible for the statistical analysis. Ultrasonography will be used in vascular