

tibiofibular joint dorsiflexed. The cross-sectional area and the nerve-skin distance of each nerve were measured in each position in both groups. The measurements were compared by analysis of variance for repeated measures.

Results: The sample was predominantly composed of females [$n = 25$, (73.52%)], with a mean age of 30.47 years (6.84) for adults and 70.47 years (5.22) for older adults. The nerve-to-skin distance increased significantly between positions 1 and 2 for the median nerve ($F = 54.04$; $p < 0.001$) and between positions 1 and 2 for the sciatic nerve ($F = 107.54$; $p < 0.001$), regardless of age group. Similarly, the cross-sectional area of the sciatic nerve was greater in position 1 compared to position 2 for the sciatic nerve ($F = 17.27$; $p < 0.001$). No significant interactions were observed between age group and position for any of the variables, indicating that both adults and older adults responded similarly to the increase in neural tension. Moreover, the sciatic nerve was significantly more superficial in older adults than younger adults ($t = -3.09$; $p = 0.018$) in position 2.

Conclusion: The sciatic and median nerves responded similarly to increased tension in older adults and adults for the variables: cross-sectional area of the sciatic and median nerves and the nerve-skin distance of the median nerve. However, for the nerve-to-skin distance of the sciatic nerve, it was observed that the nerve was more superficial in older adults.

Implications: The neurodynamic response to tension was similar between asymptomatic older and younger adults. Although the sciatic nerve was more superficial in older adults, it is reasonably explained by the body mass index difference and the age-related trend of muscle mass decline.

Keywords: Peripheral Nerves, Ultrasonography, Age Groups

Conflict of interest: Os autores declaram não ter conflito de interesse.

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RESPONSE ANALYSES IN CHRONIC LOW BACK PAIN DO THEY MODIFY CLINICAL TRIAL OUTCOMES?

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Background: Most clinical trials in the field of low back pain use mean differences and 95% confidence intervals to estimate treatment effects. However, clinicians often criticize this statistical approach, arguing that it may not provide a "real estimate" at an individual level. An alternative strategy is to categorize patients as "recovered" or "non-recovered" to better identify those who may benefit more from specific treatments. This type of analysis is known as responder analysis.

Objectives: This study aims to perform a secondary analysis (responder analysis) of clinical trials involving patients with low back pain, examining each study's results individually and investigating whether a responder analysis would alter the conclusions of these trials.

Methods: We conducted a secondary analysis of fourteen randomized controlled trials performed by our research group on patients with chronic low back pain. Pain, disability, and global perceived effect outcomes were analyzed. We generated cutoff points to

classify patients as "recovered" or "not recovered" for the responder analysis. We then compared the results of the responder analysis to the original findings of these trials.

Results: We analyzed data from 2,187 patients with chronic low back pain. In total, only 23 out of 384 (6%) analyses altered the primary findings, suggesting that although the secondary analysis modified some individual outcomes, most results remained consistent with the primary analysis.

Conclusion: Reanalyzing the original clinical trial results using responder analysis did not lead to significant changes in the previous conclusions of any of these trials. The hypothesis that a response-based analysis could identify a higher proportion of recovered patients in the intervention groups was not confirmed.

Implications: Despite being widely used, responder analysis appears to yield similar conclusions to traditional statistical approaches in low back pain trials.

Keywords: Responder analysis, Low back pain, Clinical trial

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RELATIONSHIP BETWEEN ISOKINETIC MEASURES, PSYCHOLOGICAL READINESS AND SUBJECTIVE FUNCTION AFTER 6 MONTHS OF ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION: PILOT STUDY

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Background: Isokinetic measurements are considered important variables for return to sport, however, isokinetic testing is not easily accessible to most athletes. In this context, physical therapists use self-reported scales and questionnaires to better understand knee function and readiness to return to sports activities. However, little evidence addresses how self-reported measures of subjective function and psychological readiness may be associated with recovery of function after Anterior Cruciate Ligament Reconstruction (ACLR).

Objectives: To analyze the correlation between isokinetic variables, psychological readiness measured by the Return to Sport Scale (ACL-RSI) and subjective function by the International Knee Documentation Committee (IKDC) after 6 months of ACLR.

Methods: This is a pilot study (I), with 7 participants undergoing ACLR (27.5 ± 6.9), 6 men and 1 woman, who participated in the standardized evaluation and treatment protocol over 6 months. At the end of 6 months of ACLR, they underwent isokinetic evaluation and responded to ACL-RSI and IKDC. The outcomes evaluated were isokinetic strength, Limb Symmetry Index (LSI) and Muscle Impairment Index (MDI), ACL-RSI and IKDC. The analyses performed were Pearson's Correlation Coefficient in SPSS29 ($p < 0,05$). The correlations in relation to ACL-RSI and IKDC, respectively, were: For extensor strength $r = -0.200$ ($p = 0.667$) and $r = -0.860$ ($p = 0.855$) and flexor $r = -0.254$ ($p = 0.582$) and $r = -0.226$ ($p = 0.627$), extensor LSI $r = 0.422$ ($p = 0.346$) and $r = 0.294$ ($p = 0.523$) and flexor $r = 0.297$ ($p = 0.518$) and $r = 0.173$ ($p = 0.711$) and extensor IDM $r = 0.412$ ($p = 0.358$) and $r = 0.145$ ($p = 0.757$) and flexor $r = -0.740$ ($p = 0.057$)

$r=-0.580$ ($p=0.902$). There were no significant results. Conclusion: Isokinetic measures 6 months after ACLR were not associated with psychological readiness as measured by the ACL-RSI Return to Sport Scale (ACL-RSI) and subjective function as measured by the International Knee Documentation Committee (IKDC). This may be related to the sample size, subjectivity of the ACL-RSI and IKDC scores. Implications: The results provide information that self-reported outcome scores can be used as an additional screening tool in conjunction with isokinetic variables to help promote better recovery and resumption of activities.

Conclusion: Isokinetic measures 6 months after ACLR were not associated with psychological readiness as measured by the ACL-RSI Return to Sport Scale (ACL-RSI) and subjective function as measured by the International Knee Documentation Committee (IKDC). This may be related to the sample size, subjectivity of the ACL-RSI and IKDC scores.

Implications: The results provide information that self-reported outcome scores can be used as an additional screening tool in conjunction with isokinetic variables to help promote better recovery and resumption of activities.

Keywords: Anterior Cruciate Ligament Reconstruction, Knee, Questionnaire

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

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EFFECTS OF DIFFERENT SERIES PROGRESSIONS ON FUNCTIONAL DISABILITY IN PEOPLE WITH NON-SPECIFIC CHRONIC LOW BACK PAIN

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Background: Non-specific chronic low back pain (NSCLBP) is a significant public health problem, with increasing prevalence and incidence over the years. Physical exercise is recommended as the first-line treatment, with traditional resistance training widely used for strength and muscle hypertrophy development. The total training volume can be classified as low, medium, or high, directly influencing neuromuscular adaptations. Although evidence suggests that a higher number of sets results in greater adaptations, there are still gaps regarding the minimum necessary dose to optimize strength and hypertrophy gains, especially in individuals with musculoskeletal disorders such as NSCLBP. Furthermore, the ideal prescription of load, intensity, and recovery for this population remains a challenge.

Objectives: This study aims to analyze the influence of series volume progression (2, 4, and 6 sets) every two weeks on functional capacity, muscle power, and body composition in people with NSCLBP.

Methods: This is a randomized clinical trial lasting 12 weeks. The first two weeks will be dedicated to initial assessments and familiarization with the exercises, followed by eight weeks of intervention and, finally, two weeks for final evaluations. Functional capacity will be measured using the Roland-Morris Questionnaire, while muscle power will be assessed through the countermovement jump

(CMJ). Lower and upper limb strength will be measured using isokinetic dynamometry, trunk strength through functional tests, and body composition through densitometry (DEXA). The training protocol will include exercises such as stiff-leg deadlift, conventional deadlift, and half-squat, with a progressive increase in the number of sets throughout the intervention. The sample will include individuals of both sexes, aged between 18 and 40 years, with an NSCLBP diagnosis for at least 12 weeks. A total of 33 individuals (11 per group) are expected to participate in the study. The study will be conducted following ethical guidelines and submitted to the Research Ethics Committee.

Results: It is anticipated that all participants will show a reduction in disability associated with NSCLBP, with greater benefits in the groups performing a lower volume of sets.

Conclusion: It is hypothesized that the low- and medium-volume groups will perform better in functional capacity and physical tests compared to the high-volume group, considering guidelines that suggest excessive volumes may not be ideal for this population.

Implications: The study's findings are expected to contribute to the development of safe and effective training progression strategies for individuals with NSCLBP, providing scientific support for designing specific programs for this population.

Keywords: Low Back Pain, Disability, Strength Volume, Training Volume, Exercise

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

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ACUTE EFFECTS OF 2MM INFRACAPITAL INSOLES ON BODY CENTER OF PRESSURE, VERTICAL JUMP AND GLUTEUS MEDIUS STRENGTH – RANDOMIZED CLINICAL TRIAL

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Background: Dynamic knee valgus is a common biomechanical alteration, particularly in women, and is often associated with hip muscle weakness, especially in the gluteus medius (GM), which plays a key role in controlling knee alignment. In this context, insoles have been proposed as an intervention to modify lower limb biomechanics. However, there is limited evidence on their effect on dynamic valgus correction, gluteus medius strength, and center of pressure (CoP) distribution. This study investigates whether a 2 mm infracapital insole can improve knee alignment, muscle strength, and CoP in adult women with dynamic knee valgus.

Objectives: The primary objective of this study was to evaluate whether a 2 mm infracapital insole corrects dynamic knee valgus in adult women. Secondary objectives were to evaluate whether the use of this insole influences GM strength and alters CoP distribution, contributing to improved neuromuscular control and postural stability.

Methods: This randomized, triple-blind clinical trial included adult female participants with dynamic knee valgus. Subjects were randomly assigned to an intervention group (using a 2 mm infracapital insole) or a control group (using a flat insole). Motion analysis was conducted to assess changes in knee valgus angles, and GM force analysis was performed using an isometric dynamometer. Additionally, a force platform was used to assess CoP displacement, postural