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

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234

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

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235

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

stability, and vertical jump time. The study adhered to strict methodological protocols, ensuring blinding of participants, researchers, and statistical analysts.
Results: Participants in the intervention group exhibited a significant reduction in knee valgus angles compared to the control group. Furthermore, analysis of force and vertical jump time indicated a possible increase in GM activation in the intervention group, suggesting an improvement in neuromuscular control. CoP analysis revealed more stable weight distribution and reduced postural sway, indicating greater postural control with the use of the insole. These results support the potential biomechanical benefits of using infracapital insoles in individuals with dynamic knee valgus.
Conclusion: This study provides evidence that a 2 mm infracapital insole can contribute to the correction of dynamic knee valgus, increase GM strength, and improve postural stability by modifying the CoP distribution. These findings suggest that insoles may be a valuable tool for addressing lower limb biomechanics in individuals at risk for knee malalignment. Future studies should explore long-term effects and clinical applications in rehabilitation settings.
Implications: The results of this study have significant implications for physical therapy practice, rehabilitation, and injury prevention. The use of a simple, noninvasive intervention such as an infracapital insole may help optimize lower limb biomechanics, reducing injury risk, improving functional performance, and enhancing postural control. These findings may inform clinical guidelines for the treatment of dynamic knee valgus and provide a basis for future research in sports science and orthotic interventions.
Keywords: Dynamic knee valgus, Gluteus medius, strength, insoles

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236

RELIABILITY, STANDARD ERROR OF MEASUREMENT, AND MINIMAL DETECTABLE CHANGE OF PAIN PROCESSING ASSESSMENTS IN THE SHOULDER REGION

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Background: Assessment of pain processing is essential to understand underlying mechanisms, personalize treatments, and improve rehabilitation. Pain processing mechanisms, including pressure pain thresholds (PPT), temporal summation, and conditioned pain modulation (CPM), play a crucial role in understanding pain sensitivity and modulation in both clinical and research settings. Reliable assessment of these measures is essential for accurately evaluating pain responses and guiding treatment strategies. However, the consistency of these measurements in asymptomatic individuals remains a critical factor in ensuring their validity for broader applications.
Objectives: To assess the reliability, reliability, standard error of measurement (SEM), and minimal detectable change (MDC) of Pressure pain thresholds (PPT), temporal summation, and Conditioned pain modulation (CPM) in asymptomatic individuals.
Methods: This is a cross-sectional study. This study was approved by Ethics Research Committee. Two assessment sessions were conducted for assessment of test-retest reliability with an average interval of 3.80 ± 1.69 days. PPTs were assessed with a digital algometer (AlgoMed®, Hörby, Sweden) at four anatomical points: deltoid, acromion, trapezius, and anterior tibialis. The order of evaluation was randomized. Each point was measured three times, and the average was calculated. Temporal summation testing was also conducted on the deltoid and anterior tibialis, where the previously determined PPT pressure was applied 10 consecutive times. Pain intensity was recorded using the 11-point Numeric Pain Rating Scale before and after the last stimuli. CPM was evaluated using the cold pressor test, with PPT serving as the test stimulus. The participant's hand immersed in cold water (8°C) for two minutes and the PPT was measured on the deltoid during and after immersion. The reliability was assessed with Intraclass Correlation Coefficient (ICC 3.3) and measurement error with SEM and MDC95. ICC(3,3) with values interpreted as follows: greater than 0.90 as excellent, 0.75 to 0.90 as good, 0.50 to 0.75 as moderate, less than 0.50 as poor reliability.
Results: Ten asymptomatic individuals (7 women, mean age of 25 ± 4.12 years) participated in the study. The PPT of trapezius (ICC = 0.88; SEM = 0.13; MDC95 = 0.86), and anterior tibialis (0.78; SEM = 0.44; MDC95 = 1.23) were good and of acromion (ICC = 0.92; SEM = 0.15; MDC95 = 0.41) and deltoid (ICC = 0.93; SEM = 0.13; MDC95 = 0.37) were excellent. The temporal summation showed good reliability, with ICC values of 0.78 for deltoid (SEM = 0.74, MDC = 2.05) and 0.73 for tibialis anterior (SEM = 1.33, MDC = 3.69). The CPM showed good to excellent reliability, with ICC ranging from 0.84 to 0.95 (SEM: 0.41, 0.56; MDC95: 1.15, 1.57).
Conclusion: The procedures for the assessment of central pain processing showed good to excellent reliability. These results indicate those procedures are suitable tools for clinical pain assessment.
Implications: Clinicians should use the PPTs, temporal summation, and CPM for assessment of central pain processing in the shoulder region. In addition, clinicians should interpret the results of those procedures considering the SEM and MDC.
Keywords: measurement properties, clinimetric properties, Rotator cuff, subacromial

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237

PAIN AND ANXIETY CORRELATION IN PATIENTS WITH TEMPOROMANDIBULAR DISORDER AFTER PHOTOBIOMODULATION LASER AURICULOTHERAPY

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Background: TMD is often associated with both physical pain and psychological symptoms, particularly anxiety. Pain and anxiety can influence each other, creating a cycle that exacerbates symptoms. Bio-photobiomodulation (PBM) laser auriculotherapy has been proposed as a treatment to address both pain and anxiety in TMD