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Pilates; a potential prehabilitation tool in games players

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Introduction: Lower limb injuries are common in GAA (78%). Improved balance and proprioception decreases injuries rates and incidence of ankle sprains and knee ligament damage. Pilates is an exercise system developing strength, flexibility, balance and proprioception, aiming to improve functional movement and prevent injuries. The purpose of the current study was to assess reliability and repeatability of outcome measures and assess the impact of a Pilates intervention on these measures. **Methods:** Hip range of motion, sit and reach, single leg hop, flamingo balance test, active knee extension, vertical jump height and the Y balance test data were assessed in 35 individuals (male, n=20; female, n=15) to quantify reliability and reproducibility. Subsequently, 20 individuals (male, n=12; female, n=8) underwent an 8 week, 1 hour supervised Pilates class, outcome measures were assessed pre- and post-intervention. **Results:** Major findings were that a Pilates intervention resulted in clinically significant (exceeded 95% LoA) improvements for hip flexion (+4.5°, P<0.001, ES = 0.63), hip internal (+7.5°, P<0.001, ES = 0.87) and external rotation (+4.8°, P<0.001, ES = 0.51), active knee extension (-5.4°, P<0.001, ES = 0.70), sit and reach (+3.4 cm, P<0.001, ES = 0.39) and single leg hop (+13.0 cm, P<0.001, ES = 0.45) data. In addition, the HAGOS questionnaire assessing hip and groin pain and function pre- and post-intervention decreased by 3.3 (P<0.05, ES = 0.30). **Conclusion:** The current study identified clinically significant outcome measures attributable to Pilates in a non-injured population of games players.