

An Evaluation of Agonist: Antagonist Strength Ratios Among Futsal Players

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Futsal players often focus on passing and shooting movements during practice and competition. This concentration can cause muscle imbalances in the lower extremities, especially in the muscle groups that agonist in the kicking movement. Therefore, the aim of this study was to examine the agonist: antagonist power ratio among futsal players. A cross-sectional research design was used to conduct the study. Eighteen Vietnamese elite futsal players (20.79 ± 3.18) were selected from the professional Futsal team Thai Son Bac (Vietnam), who are participating in the National Futsal League 2020, were the subjects of this study and did not differ in age, height, or body mass. Players were tested for isokinetic strength of the hip, knee, and ankle joints at 450.s-1, 600.s-1 and 600.s-1 respectively, with an isokinetic dynamometer (Cybex Inc., USA). The average results of the two legs in the flexion and extension of the thigh, knee and the ankle were 65.61%, 42.61% and 29.83%, respectively. The above results show that the ratio of strength of agonist and antagonist muscles in the hip joint is up to standard, the knee and ankle joints are imbalanced, lower than the safety standard (61% and 31%), showing the imbalance between agonist: antagonist is still very large, high risk of injury for players.

Keywords: Agonist - Antagonist Strength, Isokinetic, H: Q Ratios, Muscle Imbalance