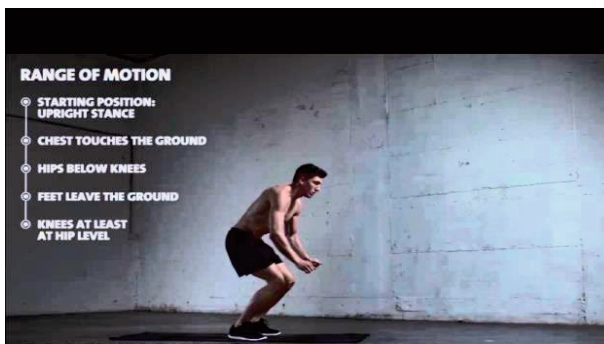


THE CORRELATION BETWEEN INITIAL VELOCITY AND JUMPING ABILITY IN TAIWANESE ADOLESCENT TRACK AND FIELD ATHLETES

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Introduction: This study analyzes the correlation between initial velocity and jumping ability in Taiwanese adolescent track and field athletes.

Methods: The study participants were 114 adolescent track and field athletes, aged (14.08±1.64), the squat jump height was measured through force plates, their speed performance from starting to 5 meters was measured with a split timer. Finally, Pearson correlation was applied to analyze the relationship between variables, with the significance level set at $p < .05$.

Results: There is no significant correlation of Squat jump and initial velocity.

Conclusion: The conclusion suggests that the speed performance of young track and field athletes does not have a direct significance on jumping ability. The reason may be that the strength of the lower limbs is weak and the

starting technique is not fully developed, resulting in a long starting reaction time. Therefore, during training, athletes should also incorporate lower limb strength training to increase muscle mass and strength, thereby improving overall sports performance. The results provide valuable insights for coaches in player development, particularly in strengthening technical and muscular training to support athletes' future growth.

Keywords: Squat jump, Lower limb explosive strength, Speed performance.

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