World Academy of Science, Engineering and Technology
International Journal of Sport and Health Sciences
Vol:17, No:09, 2023

Effect of In-Season Linear Sprint Training on Sprint Kinematics of Amateur Soccer Players

Authors : Avinash Kharel

Abstract : Background: - Linear sprint training is one possible approach to developing sprint performance, a crucial skill to focus on in soccer. Numerous methods, including various on-field training options, can be employed to attain this goal. However, the effect of In-season linear sprint training on sprint performance and related kinetics changes are unknown in a professional setting. The study aimed to investigate the effect of in-season linear sprint training on the sprint kinematics of amateur soccer players. Methods: - After familiarization, a 4-week training protocol was completed with sprint performance and Force Velocity (FV) profiles was compared before and after the training. Eighteen amateur soccer male players (Age 22 ± 2 years: Height: 178 ± 7cm; body-mass: 74 ± 8 Kg, 30-m split-time: 4.398 ± s) participated in the study. Sprint kinematics variables, including maximum Sprint Velocity (V0), Theoretical Maximum Force (F0), Maximum Force Output per kilogram of body weight (N/KG), Maximum Velocity (V(0)), Maximum Power Output (P MAX (W)), Ratio of Force to Velocity (FV), and Ratio of Force to Velocity at Peak power were measured. Results: - Results showed significant improvements in Maximum Sprint Velocity ($p<0.01$, ES=0.89), Theoretical Maximum Force ($p<0.05$, ES=0.50), Maximum Force Output per kilogram of body weight ($p<0.05$, ES=0.42), Maximum Power Output ($p<0.05$, ES=0.52), and Ratio of Force to Velocity at Peak Power (RF PEAK) ($p<0.05$, ES=0.44) post-training. There were no significant changes in the ratio of Force to Velocity (FV) and Maximum Velocity V (0) post-training ($p>0.05$). Conclusion: - These findings suggest that In-season linear sprint training can effectively improve certain sprint kinematics variables in amateur soccer players. Coaches and players should consider incorporating linear sprint training into their in-season training programs to improve sprint performance.

Keywords : sprint performance, training intervention, soccer, kinematics
Conference Title : ICSSMF 2023 : International Conference on Sport Science, Medicine and Fitness
Conference Location : London, United Kingdom
Conference Dates : September 18-19, 2023