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Effects of the 11+ and Harmoknee Warm-up Programs on Physical Performance Measures in Professional Soccer Players

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ABSTRACT

The purpose of this study was to examine the effects of the 11+ and Harmoknee warm-up programs on performance measures in professional soccer players. Thirty-six male professional soccer players (age: 18.9 ± 1.4 years) were divided into 3 groups, the 11+, Harmoknee and control group (n = 12 per group). The experimental groups performed the programs 3 times per week for 2 months (24 sessions), whereas the control group only performed their regular soccer training. The performance tests carried out were: 10m speed tests with and without a ball, 20m single sprint, vertical jump, Wall-Volley and Illinois agility tests. The 11+ group demonstrated significant increases from pre-to-post time points in the vertical jump (3.7%), Wall-Volley (5.4%) and Illinois agility tests (1.7%), while the Harmoknee group showed a significant increase in Wall-Volley test, with a 5.2% increase. The repeated measures analysis revealed differences between the groups (large effect size) in the 11+ and Harmoknee groups, compared to the control group, in 10m speed tests with and without a ball, 20m single sprint and Illinois agility tests (p < 0.05). Thus 8-weeks performing the 11+ warm-up program can enhance jump height, agility and soccer skill while the Harmoknee program generally only improves soccer skill in young professional male soccer players.

Key words: Performance, vertical jump, Illinois agility test, sprint, Wall-Volley test

Key Points

- The 11+ improves performance by means of Illinois agility, vertical jump and Wall-Volley tests whereas Harmoknee improves Wall-Volley test. Incorporating 11+ as a part of the warm-up program by the young teams would be beneficial in agility, leg power and soccer skill respectively.
- Further modification of both programs may be required to fully realize the players' speed.

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