

PERFORMANCE ENHANCEMENTS OF FIFA'S "THE 11+" TRAINING PROGRAMME

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Introduction

"The 11+" training programme was developed by the FIFA Medical Assessment and Research Centre, and include exercises to improve strength, plyometrics and balance. The aim of this study was to evaluate whether "The 11+" training programme may enhance the strength of the knee extensor and flexor muscles, core stability, vertical jump performance and unilateral balance.

Methods

At the mid-season, nineteen sub-elite male soccer players (aged $XXX \pm XX$ yrs) performed "The 11+" training programme 2 times per week during 9 weeks. Isokinetic concentric and eccentric strength of the quadriceps and hamstrings on the dominant and non-dominant lower limb was evaluated at 60°/s. Core stability was assessed by determining the capacity to maintain a prone hold (commonly known as the 'plank') position for as long as possible. Vertical jump performance was evaluated by using the countermovement jump (CMJ) test. Unilateral balance was evaluated on the dominant limb using the Flamingo balance test. Comparisons between pre- and post-intervention scores were performed using paired-sample *t*-tests. Significance was set at 0.05.

Results & Discussion

The concentric peak torque of the quadriceps increased by 5% ($p = 0.036$) on the non-dominant limb, but no significant differences were observed on the dominant limb ($p = 0.072$). The concentric peak torque of the hamstrings increased by 12% and 11% ($p < 0.05$) on the dominant and non-dominant limbs, respectively. Significant changes were also observed in the eccentric hamstrings peak torque on the dominant and non-dominant lower limbs (8% in both limbs; $p < 0.05$). Core stability improved by 48% with the intervention programme ($p = 0.003$). The CMJ performance increased by 9% ($p < 0.001$), whereas unilateral balance improved by 32% ($p = 0.013$) from pre- to post-intervention.

Conclusion

"The 11+" practiced 2 times per week during 9 week seems to improve concentric and eccentric strength of the knee extensor and flexor muscles, as well as jumping performance and balance adult sub-elite soccer players. This way, "The 11+" training programme appears to be adequate and effective for soccer training and conditioning.