EFFECTS OF WHOLE BODY VIBRATION TRAINING ON SPRINT PERFORMANCE IN TEENAGE ATHLETES

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Whole body vibration (WBV), owing to its capability of inducing an adaptation in neuromuscular functions, was recently extensively used to enhance the explosive lower extremity performance in adult. However, the major neuromuscular development is known to take place in the adolescent age. Therefore, the purpose of this study was to investigate the effects of 6 week WBV training on the sprint performance of teenagers. Method: 20 male high-school athletes were recruited to be subjects, and randomly separated into the vibration and control groups. The participants were asked to perform 120 degree knee flexion on the WVB plate-form, and only the participants in the vibration group were given a 30Hz, 8mm vibration stimulation, 3 times per week. The vibration simulation consisted of 3 sets of 1-min static squat and a 10-min rest between sets, so the total training duration was 30 min. A 100 m running test was given before and after the training. Results: The time of 100 m improved significantly in the vibration group by 1.92%, comparing with 0.34% in the control group after 6 week of WBV training. Moreover, the average velocity of the intervals of 10-20 m, 20-30 m and 40-50 m in the vibration group increased significantly with an overall gain of 3.2%. Other interval speed among 2 groups showed no difference in pre and post training. Conclusion: The sprint performance in vibration group was significantly faster than control group after 6 weeks of WBV training.