



Comparison of the effect of eight weeks of resistance training with Traband and free weight on the strength and muscle power of adolescent volleyball players

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Abstract

By increasing sports fields; Injury, decreased performance, and withdrawal from exercise have increased in adolescents, which is mostly related to weakness of strength and muscle power during activity. The aim of this study was to compare the effect of resistance training with free weights and Traband on the strength and muscular strength of novice male volleyball players. In this quasi-experimental study, 35 adolescent volleyball students, with mean age of 15.30 ± 0.64 , height $173.4 \pm 7/68$ cm, weight 34.63 ± 13.6 kg, and mass index Body mass (21.92 ± 3.7 kg / m) were selected by purposive sampling method and randomly divided into experimental and control groups. Exercises were performed for eight weeks. 1RM test was used to muscle strength and sargeant jump (lower torso) and medicine ball throw (upper torso) were used for muscle power, which were measured before and after the intervention. For statistical analysis, descriptive and inferential statistics, Kolmogorov-Smirnov test and ANOVA were used which was performed using SPSS 24 software and the significance level of the tests was considered 0.05. The values of muscle strength and power in the experimental group increased significantly compared to the control group, but there was no significant difference in muscle strength and power between Traband and free weights. In the free weight group, they had more strength than Traband and also in Traband group, muscle strength increased more than the weight group. Resistance training in the form of fun and entertainment should be designed for children and adolescents. Use resistance training in combination with Traband and free weight training.

Keywords: Resistance Exercises, Free Weights, Traband, Muscle Strength And Muscle Power

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