

## **Comparison of two training methods, plyometric and Combined (plyometric and Balance) training on some of selected physical fitness components of juvenile Gymnast Girls**

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**Introduction:** The purpose of this study was to compare two training methods, plyometric and Combined (plyometric and Balance) training on some of selected physical fitness components of juvenile Gymnast Girls.

**Methods:** Thirty Minor Gymnast Girls those had at least two months history in gymnastics, Voluntarily associated in this Study and randomly assigned to Two Groups: Plyometric (Weight:  $31.62 \pm 7.29$  and BMI:  $15.75 \pm 2.40$ ) and Combined (Weight:  $30.06 \pm 6.93$  and BMI:  $16.96 \pm 2.62$ ). Agility, Explosive power, medicine ball throw, stork stand and body composition measures like as weight, height, waist to hip ratio (WHR) and body fat percent were assessed before and after 6 weeks training protocols.

All statistical analyses were conducted using SPSS Version 22 and significance was set at ( $p < 0.05$ ). An independent sample T-test was used to compare group Differences and a paired sample T-Test was used to compare in group differences.

**Results:** Implementation of six weeks plyometric and combined trainings showed no significant difference in body composition between groups, but a reduction in body fat percent in groups at combined group was detected. However in both groups agility, upper and lower limb explosive power, flexibility and balance were progressed.

**Conclusion:** Both plyometric training and combined training improve physical fitness components ( $p < 0.05$ ) but no differences in between group comparison were seen ( $p \geq 0.05$ ).

Also there was a higher reduction in body fat percent in combined training group when compared to plyometric training group ( $p = 0.56$ ).

**Keywords:** plyometric training, balance training, juvenile gymnast