Comparision the effect's of concurrent plyometric-balance training on physical fitness and body composition in boys and girls karatekas age 12-15 years

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Abstract The aim of the study was to investigate the effect of plyometric-balance training on physical fitness and body composition of children. 20 boy and 20 girls adolescents were randomly divided into 4 groups (each group= 10): including of boy plyometric-balance group (age: 13/30±1/15; BMI: 19/74±4/22) and plyometric-balance girl group (age: 12/62±0/74; BMI: 19/02±1/29), boy control group (age: 12/50±0/70; BMI: 19/31±1/56 and girl control group (age: 12/60±0/69; BMI: 18/10±2/64). All groups trained three times per week for 8 weeks. Plyometric-balance groups trained plyometric training for 30-35 min and consequently trained 60 min specific karate training. Two control groups trained specific karate training for 90 min. Before and following an 8-week training period, aerobic power, anaerobic power, agility, speed, balance, BMI, waist circumference, fat Percent and fat free weight were assessed. Also, aerobic power, anaerobic power, agility and speeds assessed with karate specific tests. All analyzed parameters were assessed using SPSS software, Version 22. The anaerobic power was statically increased in all groups and specific power was statically decreased in girl plyometric-balance group and boy control group, also increased in girl control group (P 0/05). Speed was showed significantly increase in all groups. Agility was statistically increased in boy plyometric-balance group, girl control group and specific agility was significantly improved in boy plyometric-balance group (P 0/05). Balance showed statistically increased in boy control group (P 0/05). In conclusion 8 week plyometric- balance training probably improved anaerobic power, agility and specific agility in boy plyometric-balance group.

Keywords : Key word: plyometric-power training - physical fitness - body composition

– adolescents- boy - girl