

Abstract

THE DIFFERENCE BETWEEN THE INFLUENCE OF CONVENTIONAL AND MODIFIED PLYOMETRICS EXERCISE ON MUSCULAR EXPLOSIVE POWER AND AGILITY

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The general purpose of this experimental study was to prove the influence of conventional and modified plyometrics exercise on the increase of muscular explosive power and agility.

This study used the pretest posttest control group design. Samples involved 45 students of semester VI, department of physical education, Faculty of Sport Sciences, Surabaya State University, who took the subject basketball 2. Samples were divided into three groups using random technic. These groups were control group (without treatment), conventional plyometrics group, and modified plyometrics group. Exercise frequency was three times a week, each in 8 sets, with the duration 24 seconds/set and resting interval of 2 minutes, using cones as high as 30 cm. Exercise was carried out for 6 weeks. Data were analyzed using descriptive statistics, normality distribution test, homogeneity test, and multivariate test (Manova).

The results of LSD (Manova test) to explosive power in modified group revealed ($22,91 \pm 3,75$), conventional group ($11,85 \pm 4,04$), and control group ($2,83 \pm 3,49$), indicating that the change of explosive power in modified group was higher than that in conventional group. The agility in modified group revealed ($3,40 \pm 1,54$), conventional group ($2,00 \pm 1,30$), and control group ($0,33 \pm 0,61$), showing that the change of agility in modified group was higher than that in conventional group. Modified plyometric exercise improved muscular explosive power and agility more than those in conventional group, with respective mean difference and significance of 11,063 ($p < 0,05$) and 1,400 ($p < 0,05$).

In conclusion, conventional and modified plyometrics exercise can increase muscular explosive power and agility. Modified plyometric exercise increases muscular explosive power and agility more than conventional plyometric exercise does.

Keyword : *plyometrics training, explosive power, agility*