

Effect of Plyometric Training Combination of Weight and Plyometric Training on Anaerobic Capacity and Speed

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Abstract

In this study the Plyometric training combination of weight and plyometric training on anaerobic capacity and speed is taken to know the what is the effect of training of plyometric and combination of weight and plyometric on aerobic capacity and speed in this study the researcher taken three group group one is plyometric training, group two is weight and plyometric and group three is control group. Significant difference was found among plyometric training group, combination of weight and plyometric training group and control group on anaerobic capacity and speed. Adjusted post-test mean difference in anaerobic capacity of plyometric training and control groups was 3.92 and combination of weight and plyometric training and control groups was 3.38, which were significant at .05 level of confidence. Adjusted post-test mean difference in speed between plyometric training and control groups was 0.31 and combination of weight and plyometric training and control groups was 0.24 were significant at .05 level of confidence. There was no significant difference between the training groups on selected criterion variables. The findings showed that there was a significant improvement in selected criterion variables after the respective training programmes.

INTRUDUCTION:

Plyometric training is very important in modern sports arena most of the sports require the explosive strength . in order to improve the explosive strength coaches train the sports men by Plyometric exercise. It is combination of both speed and strength it results in explosive power, in volleyball, high jump, Kabaddi, football goalkeeper etc. will need the explosive strength.

METHODOLOGY

- 45 college male students were selected studying B.P.E. degree course in Annamalai University.
- Divided into three groups – Group – I (n = 15) underwent plyometric training
- Group – II (n = 15) underwent combination of weight and plyometric training.
- Group – III (n = 15) acted as control.
- Training period – 3 days / week for thirteen weeks.
- Pre- and post-test were conducted one day prior and after the training period.
- Criterion variables selected were anaerobic capacity and speed.

STATISTICAL TOOL

- ANCOVA was used as statistical tool
- Since three groups were involved, the Scheffé *S* test was used as post-hoc test to find out the difference between the training groups and control group.
- The level of significance was fixed as 0.05 level of confidence

TABLE 1. Analysis of Covariance and ‘F’ ratio for Anaerobic Capacity and Speed of Plyometric Training Group Combination of Weight and Plyometric Training Group and Control Group

Adjusted Post-test Mean on Anaerobic Capacity				
Plyometric Training Group	Weight and Plyometric Training Group	Control group	Mean Difference	Confidence interval at .05 level
100.91	100.37		0.54	0.811
100.91		96.99	3.92*	0.811
	100.37	96.99	3.38*	0.811
* Significant at .05 level of confidence.				

TABLE 2. Scheffe S Test for the Difference between the Adjusted Post-Test Mean of Anaerobic capacity

Adjusted Post-test Mean on Anaerobic Capacity				
Plyometric Training Group	Weight and Plyometric Training Group	Control group	Mean Difference	Confidence interval at .05 level
100.91	100.37		0.54	0.811
100.91		96.99	3.92*	0.811
	100.37	96.99	3.38*	0.811
* Significant at .05 level of confidence.				

TABLE 3. Scheffé S Test for the Difference between the Adjusted Post-Test Mean of Speed

Adjusted Post-test Mean				
Plyometric Training Group	Weight and Plyometric Training Group	Control group	Mean Difference	Confidence interval at .05 level
7.42	7.49		0.07	0.165
7.42		7.73	0.31*	0.165
	7.49	7.73	0.24*	0.165
* Significant at .05 level of confidence.				

RESULTS

- Significant difference was found among plyometric training group, combination of weight and plyometric training group and control group on anaerobic capacity and speed.
- Adjusted post-test mean difference in anaerobic capacity of plyometric training and control groups was 3.92 and combination of weight and plyometric training and control groups was 3.38, which were significant at .05 level of confidence.
- Adjusted post-test mean difference in speed between plyometric training and control groups was 0.31 and combination of weight and plyometric training and control groups was 0.24 were significant at .05 level of confidence.
- There was no significant difference between the training groups on selected criterion variables.
- The findings shows that there was a significant improvement in selected criterion variables after the respective training programmes.

CONCLUSIONS

- Plyometric exercises use explosive movements to develop muscular power, the ability to generate a large amount of force quickly.
- When we mix the training, plyometric training and weight training, the purpose is the enhancement of speed and strength.
- It was concluded from the results, the speed and anaerobic capacity has increased after the respective training programmes significantly.
- When compared with the control group the training groups has significantly differ in both the criterion variables.
- It was also concluded that there was no significant difference between the training groups.

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