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EFFECT OF COMBINED SPEED AND WEIGHT JACKET TRAINING ON EXPLOSIVE POWER AMONG THE ATTAPPADY COLLEGE MALE STUDENTS

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ABSTRACT:

The attempt of the present study is to evaluate the effect of combined speed and weight jacket training on explosive power among the college male students. To achieve the objective of the study, thirty college level male students are randomly selected as subjects from Government College Attappady. Age of the selected students ranged between 18 and 22 years. The subjects (N= 30) are classified into two equal groups of fifteen members each (n=15) strength in random. Group-I went through combined speed and weight jacket training for the duration of twelve weeks as three sessions in a week. Second group is named as Group-II and acted as Control Group, they didn't do any activity apart from their regular routines. Explosive power is taken as a dependent variable for this study and it is measured by employing the standard test tool of standing broad jump test. The data are collected from two groups prior and immediately after the training protocol. Analysis of Covariance (ANCOVA) is used as a tool to find out the significant differences between the Groups. The level of significance is fixed at $P < 0.05$ in all aspects. The result of the study shows that the Combined Speed and Weight Jacket Training Group have a significant improvement on explosive power as compared with the Control Group.

KEYWORDS: Combined speed and weight jacket training, explosive power, standing broad jump.

INTRODUCTION

Training means preparing sports man for superior level of performance. Sport training is the physical, technical, scholarly, psychological and normal preparation of an athlete through physical exercises. It is an entire systemic process of preparation of athletes to the higher levels of athletic performance (Pande, 2002).

Speed is the capacity to attain a high velocity of movement. Faster moving and accelerating trainings will help to condition the neuromuscular system to enhance the firing patterns of fast twitch muscle fibers. Two types of basic speed training are assisted and resisted the speed training. Assisted training or over speed training helps to improve stride frequency and resisted speed training improves the speed-strength and stride length (Baechle & Earle, 2000).

Weight jacket training is one instance when carrying a little extra baggage actually can improve the athlete's physical performance for a wider set of muscle groups. That is because the added weight of these vests creates additional resistance during muscle building, body-weight exercises, and heart-pumping cardio activities – making to expend more energy to attain their fitness goals (www.muscleandfitness.com).

Power can be defined as the force applied, multiplied by the velocity of movement (Knuttgen, 1987). Explosive

power is the one of the main determinant for performance oriented sports activities. Explosive muscle actions are mainly required in throwing, jumping and sprinting activities etc. in addition, sudden bursts of power are needed when rapid change in direction or acceleration during the various sports events (Garhammer, 1993).

METHODOLOGY

The purpose of this investigation was to find out the combined speed and weight jacket training on explosive power among the Attappady college level male students. To achieve this purpose, thirty college level male students studying in different departments of Government Colleges in Attappady, Kerala, were, randomly selected as subjects. Fifteen of them underwent for combined speed and weight jacket training and the control group did not do any special activities. The subjects were ranged the age of 18 and 22years. The training programme was planned for three sessions in a week of selected days as Monday, Wednesday and Friday for the period of 12 weeks. The training schedule was planned with the consultation of experts. Explosive power was identified as a dependent variable for the study and was measured by employing Standing Broad Jump test. The data on explosive power was collected one day prior to the training and immediately after the training programme and the scores were noted in meter. The collected data were statistically examined for the significant differences by using Analysis of Covariance (ANCOVA) test. The level of significance was decided at 0.05 levels in all cases.

RESULTS AND DISCUSSIONS

Table -1
Analysis of Covariance on the Explosive Power Experimental and Control Group

Test		Experiment al Group	Control Group	SOV	SS	df	MS	F
Pre test	Mean	1.75	1.78	B	0.008	1	0.008	1.16
	SD	0.08	0.08	W	0.202	28	0.007	
Post test	Mean	1.84	1.80	B	0.015	1	0.015	2.55
	SD	0.08	0.06	W	0.169	28	0.006	
Adjusted Post test	Mean	1.86	1.79	B	0.032	1	0.032	10.12*
				W	0.086	27	0.003	

(The table value for significance at 0.05 level of confidence with df 1 and 28 and 1 and 27 were 4.20 and 4.21 respectively)

The analysis of covariance on explosive power of the pre, post and adjusted post test mean scores of experimental and control groups were analyzed and is presented in Table 1. The pretest 'F' value on the explosive power was 1.16 being lesser than the table value of 4.20 at 0.05 level of confidence; hence, it can be inferred that there was no significant difference in the pre test data between experimental group and control group. The 'F' value of the post test mean of 2.55 also lesser than the table value of 4.20. But in the case of adjusted post test 'F' value for df 1 and 27 was 10.12. It was more than the table value of 4.21. Hence there was a significant increase in explosive power in the experimental and control groups after the training duration. The pre, post and adjusted post mean values of both the experimental as well as the control group on explosive power are graphically represented in the Figure 1.

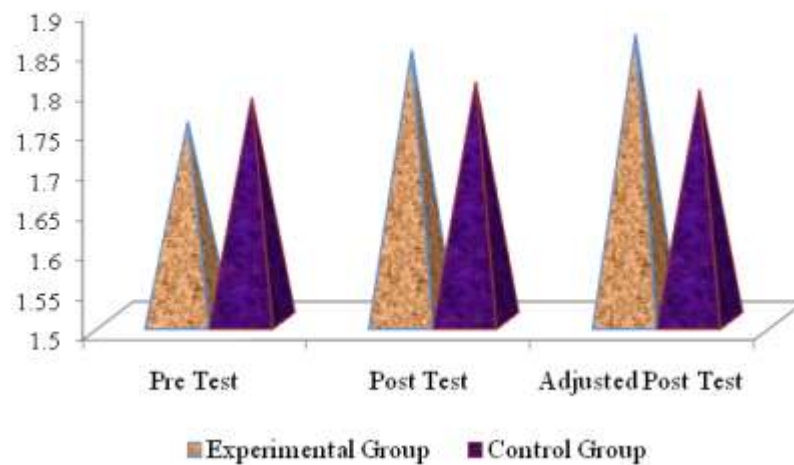


Figure 1: The Pre, Post and Adjusted Post Test mean values of Experimental Group and Control Group on explosive power

Davaran et al, (2014) conducted their study for Karate boys students as subjects and evaluated the speed and plyometric combination works and its role on explosive power. The conclusion of the study pointed out that the speed and plyometric combination training improved the power of the selected subjects. Adibpour et al, (2012) conducted a study to contrast the effect of plyometric and weight related training and its effects on strength and power among the female basketball players. The findings of the study highlight that the weight oriented training influences the leg power among the selected subjects. Manikandan (2014) evaluated the effect of weight oriented training and its role on the strength and power among the selected subjects of handball players from various departments of Annamalai University and reached the conclusion that the training positively influenced the power of the selected subjects. Nelaturi and Kumar (2013) conducted the weight oriented training and its influence on the explosive power among the selected subjects of high school boys. The outcome of the study says that the training considerably helps to improve the quality of explosive strength among the selected subjects. The studies of Singh (2012), Rahimi and Behpur (2005), and Nageswaran (2013) also pointed out that the resistance oriented training improved the strength and power of the selected subjects after the training duration. All these results are presented as the supportive evidence for the present study. This study concludes that the combination of the speed and weight jacket training is one of the best method for improving the quality of explosive power among the selected subjects.

CONCLUSION

It is concluded from the study that the combined speed and weight jacket training were significantly improved the explosive power among the training groups as compare with the control group. Moreover, it can be concluded that the combined speed and weight jacket training is one of the best method for improve the quality of explosive power for the Attappady college male students.

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