



EFFECT OF RESISTANCE TRAINING, SAND BAG TRAINING AND CONTROL GROUP ON SPEED

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Abstract: The purpose of this research was to analyze the resistance training, sand bag training and control group on speed. To achieve this purpose, 45 college players were selected belonging to RISE Krishna Sai Prakasam Group of Institutions, Ongole. Prakasam District, Andhra Pradesh, India. The age group of the subjects ranged between 18 to 22 years. The subjects were selected by using simple random sampling method. The dependent variable for the present study was speed of players. In order to assess the speed of the subjects was assess through 50 meters dash. The data collected from the players were statistically analyzed. The collected data from the three groups prior to and immediately after the experimental treatment son selected dependent variables were statistically analyzed by using the statistical technique of analysis of covariance (ANCOVA). Whenever the “F” ratio for adjusted post-test means was found to be significant, Scheffe”s test was followed as a post hoc test to determine which of the paired means difference was significant. The level of significance was fixed as 0.05. Statistical package for the social sciences (SPSS) was used for the purpose of analyzing the data.

IndexTerms - Resistance training, Sandbag training, players, Speed.

I. INTRODUCTION

Physical conditioning programme provides opportunity for the development and maintenance of physical fitness. It offers an opportunity for the fasciation of normal growth of n child and prevents the reversal factors of the performance such as strength, endurance. flexibility. speed and skill. By undergoing a physical conditioning programme, one experiences a number of changes that makes better performance and foster recovery possible. Through repeated muscular work, strength is gained and as a result one is able to produce more power as there is faster contraction, which means. gain in both power and speed. Conditioning the body through regular exercise enables an individual to meet emergencies more effectively. Training and conditioning arc the best known ways. to prepare the players for efficient perfo1m1ance and healthful living. Efficient performance is possible only through a carefully planned program me of progressive practice which will perfect the co-ordination. eliminate unnecessary movements and accomplish result at the expense of minimum energy as well as conditioning the muscle structure and the circulation

withstand without harming the intensive demands made upon them (Sandhya Tiwari. 2006). Sport Specificity Training is an essential component to high school and collegiate sports. While most strength coaches will implement several concepts such as barbell movements, plyometrics, and calisthenics to attempt to improve athlete development for their respective sports, some tools can be overlooked. In this article, we make the case for the benefits of sandbag training as a tool for high school and college age athletes.

While few coaches disagree that most training concepts are effective, coaches must choose which ones to implement based on certain considerations. For example, the ability to be fast, change direction, and accelerate and decelerate is a necessity that is typically universal to all sports. There are several tools that can be used to accomplish this, but not all are effective for several reasons, one of which is the learning curve. Some athletes may take longer to teach and therefore take a while to work up to sets where there is a significant amount of load to create that conditioned adaptive response (common examples include Olympics movements). Young athletes also sometimes get tired or bored from the constant repetition and patience it takes to learn high-level movements. Some coaches would just rather not risk injury and decide the risk outweighs the reward.

This is precisely where the acute variables and the accessory lifts play a very significant role and you can have your best of both worlds. Implementing the proper accessory lifts and equipment will allow the athlete to learn but also create that training stimulus to incite growth. The sandbag is a staple in my programming because of its low-risk for injury and the fun factor it provides with young athletes. The sandbag allows athletes to utilize triple extension, explosiveness, and pure grit. If the athlete's technique breaks down, there is less risk of injury because of its low impact. Furthermore, the sandbag allows the coach to teach movements you would find in your typical barbell movements without allowing the athlete to not be under as much stress. The instability of sand shifting will also allow for core strength development, as well as challenge the athlete mentally. A pink sandbag loaded up to 75 pounds does not look as heavy as it is; athletes will approach the bag with great confidence (the color is deceiving) but after a few drills, that athlete is quickly humbled.

Resistance training is a form of exercise for the development of strength and size of skeletal muscles. Resistance training also known as weight training or strength training is for everyone. According to the American sports medicine institute is a “specialized method of conditioning designed to increase muscle strength, muscle endurance and muscle power. Resistance training can be performed in a variety of way with resistance machines, free weights like dumbbells and barbells, rubber tubing, or own body weight as in doing pushups, squats or abdominal crunches. Resistance training is a form of exercise intended to increase muscular strength and endurance. It involves exercising muscles using some form of resistance. This resistance could be weights, bands, or even your own bodyweight working against gravity. When doing resistance training—which is sometimes called strength training or weight training—you can focus on specific results, such as joint stability, muscular endurance, increased muscle size, strength, and power.

Methodology

To achieve this purpose, 45 players were selected belonging to RISE Krishna Sai Prakasam Group of Institutions, Ongole. Prakasam District, Andhra Pradesh, India.. The age group of the subjects ranged between 18 to 22 years. The subjects were selected by using simple random sampling method. The dependent variable for the present study was speed of men players. In order to assess the speed of the subjects was done with 50 meters dash. The data collected from the players were statistically analyzed. The collected data from the three groups prior to and immediately after the experimental treatment on selected dependent variables were statistically analyzed by using the statistical technique of analysis of covariance (ANCOVA). Whenever the “F” ratio for adjusted post-test means was found to be significant, Scheffe’s test was followed as a post hoc test to determine which of the paired means difference was significant. The level of significance was fixed as 0.05. Statistical package for the social sciences (SPSS) was used for the purpose of analyzing the data.

Results

The information gathered pretest, posttest and adjusted post test mean on resistance training, sand bag training and control gatherings are given in table I.

Table - I

ANALYSIS OF COVARIANCE OF DATA ON SPEED BETWEEN PRE-TEST, POST-TEST AND ADJUSTED POST-TEST OF RESISTENCE TRAINING AND SAND BAG TRAINING GROUPS AND CONTROL GROUP

	RTG	SBTG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Initial means	7.63	7.61	7.62	BG	0.001	2	0.001	0.66
				WG	0.041	42	0.001	
Final means	7.28	7.27	7.61	BG	1.145	2	0.572	446.14*
				WG	0.054	42	0.001	
Adjusted Final means	7.28	7.27	7.61	BG	1.146	2	0.573	445.92*
				WG	0.053	41	0.001	

* Significant at 0.05 level

Table values required for significance at 0.05 level with df 2 and 42; 2 and 41 are 3.22 and 3.23 respectively.

Results of Speed

An assessment of table - I point out that the pre test means of resistance training, sand bag training and control groups were 7.63, 7.61 and 7.62 respectively. The attained F-ratio for the pre-test was 0.66 and the table F-ratio was 3.22. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 2 and 42. This established that there were no significant difference between the experimental and control groups representing that the course of action of randomization of the groups was ideal while conveying the subjects to groups.

The post-test means of the resistance training, sand bag training and control groups were 7.28, 7.27 and 7.61 respectively. The attained F-ratio for the post-test was 446.14 and the table F-ratio was 3.22. Hence the post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 42. This confirmed that the disparity between the post test means of the focus were significant.

The adjusted post-test means of the resistance training, sand bag training and control groups were 7.28, 7.27 and 7.61 respectively. The attained F-ratio for the adjusted post-test means was 445.92 and the table F-ratio was 3.23. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 41. This established that there was a noteworthy difference among the means owing to the experimental trainings on speed.

Table – II

SCHEFFE'S TEST FOR THE DIFFERENCE BETWEEN THE ADJUSTED POST-TEST PAIRED MEANS OF SPEED

Adjusted Final means			Mean Difference	Required CI
RTG	SBTG	Control Group		
7.28	7.27	---	0.01	0.02
7.28	---	7.61	0.33*	
---	7.27	7.61	0.34*	

** Significant at 0.05 level of confidence*

The multiple comparisons showed in Table II proved that there existed significant differences between the adjusted means of resistance training and control group (0.33), sand bag training and control group (0.34). There was no significant difference between resistance training and sand bag training (0.01) at 0.05 level of confidence with the confidence resistance value of 0.02.

Discussion on Speed

The results presented in table I showed that obtained adjusted means on speed among sand bag training group was 7.27 followed by resistance training group with mean value of 7.28, and control group with mean value of 7.61. The differences among pretest scores, post test scores and adjusted mean scores of the subjects were statistically treated using ANCOVA and the obtained F values were 0.66, 446.14 and

445.92 respectively. It was found that obtained F value on pre test scores were not significant and the obtained F values on post test and adjusted means were significant at 0.05 level of confidence as these were greater than the required table F value of 3.22 and 3.23. The post hoc analysis through Scheffe's Confidence test proved that due to twelve weeks training of resistance training and cross training has improved explosive strength than the control group and the differences were significant at 0.05 level.

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