

Effect of Strength Training on Physical Variable of College Men Cricket Players

Zahoor Ahmad Bhat*, Khursheed Ahmad Naikoo and K Sreedhar

Department of Physical Education, Annamalai University, India

*Corresponding author: Zahoor Ahmad Bhat, Department of Physical Education, Annamalai University, Tamil Nadu, India

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Abstract

The purpose of the present study was to find out the effect of strength training on physical variable of college men cricket players. To achieve the purpose twenty male students (n=20) were randomly selected as subjects and the age were ranged between 18 and 24 years. The selected subjects were randomly assigned into two equal groups such as training group (TG) and control group (CG) for the strengths of fifteen (n=10) each. Experimental training group underwent respective strength training program me for twelve weeks for three days per week and a session on each day. The control group did not involve in any special training apart from their regular activities. The criterion variable arm strength was measured by pull-ups. Analysis of covariance (ANCOVA) was used to analyse the collected data. The results revealed that that the strength training was made significant improvement ($p \leq 0.05$) in arm strength of the selected subjects. The level of confidence was fixed at 0.05 in all cases.

Keywords: Strength training; Arm strength; Cricket players

Introduction

Strength training is the ability of the muscles to repeat identical movement or pressures as to maintain a certain degree of tension over a period of time [1]. Strength training as the capacity of the whole organism is to withstand fatigue under the long lasting exhaustion of strength. Consequently it is characterized by a relatively high ability to express strength together with a faculty of preserve [2].

Strength training exercises is not usually thought as an end in itself, but as means to an end. Strength training may be isometric, iso-kinetic contraction. Strength training is the ability of the muscle to produce a maximum amount of force. It is measured by the ability to perform one repetition of an exercise at maximum resistance. An example of maximum strength would be greatest amount of weight one can lift in the bench press exercise. Strength training has major significance in many sports and sport skills. It is a significant factor in one's ability to put the shot, throw the javelin, create a high velocity tennis serve, throw a fast ball, and many other sport skills.

Arm strength is defined as the maximum velocity of any throw made by a fielder. Everyone knows that the triceps are the largest of the arm muscles. The triceps make up around 50-55% of the total size of the three upper arm muscles, with the remainder dividing up across the biceps and the bronchioles [3]. Arm strength can increased by continuously doing push-ups and pull-ups. Weight training is doing exercise, using resistance (normally weights) to build muscle strength and endurance. In weight training one can use weights like dumbbells, Bar Bells, Pulley Machines or simply

one's own body weight as resistance.

Materials and Methods

The purpose of the present study was to find out the effect of strength training on physical variable of college men cricket players. To achieve the purpose twenty male students (n=20) were randomly selected as subjects from the Department of Physical Education at Annamalai University, Tamil Nadu. The age was ranged between 18 and 24 years. The selected subjects were randomly assigned into two equal groups such as training group (TG) and control group (CG) for the strengths of fifteen (n=10) each. Experimental training group underwent respective strength training program me for twelve weeks for three days per week and a session on each day. The control group did not involve in any special training apart from their regular activities. The criterion variable arm strength was measured by pull-ups. All the subjects were present for more than 90% of the total training session. The strength training is increased by doing chest, shoulders, triceps, biceps, and abs. The collected data were statistically examined by analysis of covariance (ANCOVA). The confidence level was fixed at 0.05 levels, which is appropriate to the present study.

Data Analysis

Mean and Standard deviation were calculated for arm strength of each training group. And the data were analyzed by using analysis of covariance (ANCOVA). Statistical significance was fixed at 0.05 levels.

Results and Discussion

Analysis of covariance on arm strength between the training group and the control group (Table 1)

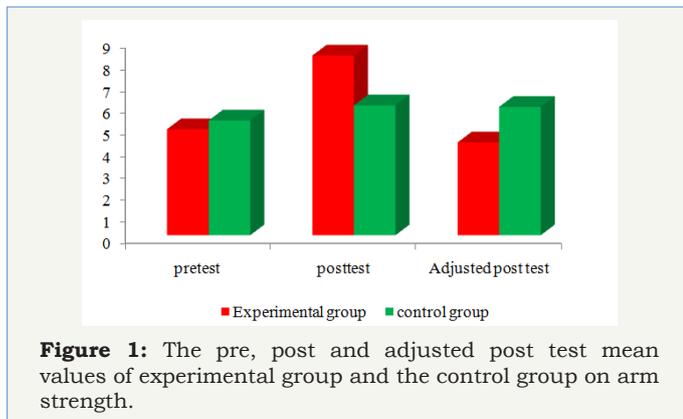
Table 1: Analysis of covariance on arm strength between the training group and the control group.

Test		Training Group	Control Group	SOV	SS	df	MS	F
Pre test	Mean	4.9	5.3	B	0.8	1	0.8	1.1
	SD	0.73	0.94	W	13	18	0.72	
Post test	Mean	8.3	6	B	26.45	1	26.45	47.13*
	SD	0.67	0.81	W	10.1	18	0.56	
Adjusted Post test	Mean	4.29	5.96	B	3.5	1	3.5	5.93*
				W	10.2	17	0.6	

(The table value required for significance at 0.05 level of confidence with df 1 & 18 and 1 & 17 are 4.41 and 4.45 respectively).

*Significant at 0.05 level of confidence

The analysis of covariance on arm strength among experimental and control group were described in table no I. The mean value of arm strength of training and control groups were 4.90 and 5.30. The obtained 'F' value of 1.10 was lesser than the table value of 4.41, there was insignificant among the groups in pre test result of arm strength. The post test means of the groups were 8.30 and 6.0 respectively, and the obtained 'F' value of 47.13 was greater than the table value, and there was a significant difference in arm strength between the training and control groups in arm strength among the male college cricket players. The obtained adjusted post test F value also greater the table value of 4.45 for df 1 and 17 required for significant at 0.05 level. The pre, post and the adjusted post test mean values of the experimental and control groups on arm strength were graphically represented in Figure 1.



Discussion

The result of the present study pointed out that there was a significant difference in arm strength due to strength training.

The current study also utilized 12 weeks programme duration with three sessions and found that arm strength increases due to strength training. Jensen & Fisher [4] pointed out that that the strength training improves arm strength of the cricket players. Young [5] conducted the study that strength training increases the muscle power of the athletes. From the results of the present study and literature, it is concluded that criterion variable arm strength was significantly improved due to strength training.

Conclusion

The result of the study revealed that the training group has significant improvement in arm strength among college male cricket players after the strength training protocol. It was also concluded that the strength training is one of the best training methods for improving the arm strength as well as the physical fitness of young men.

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