



EFFECT OF RESISTANCE EXERCISES ON BICEPS STRENGTH AMONG HOCKEY PLAYERS

Dr. M. Sathish* & Dr. K. Rajeshkumar**

* Anthanakurichi Nadu Street, Thiruvaiyar, Thanjavur, Tamilnadu

** Assistant Professor, Department of Physical Education, Tamilnadu Physical Education and Sports University Chennai, Tamilnadu

Cite This Article: Dr. M. Sathish & Dr. K. Rajeshkumar, “Effect of Resistance Exercises on Biceps Strength among Hockey Players”, International Journal of Scientific Research and Modern Education, Volume 3, Issue 1, Page Number 48-49, 2018.

Copy Right: © IJSRME, 2018 (All Rights Reserved). This is an Open Access Article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract:

The purpose of the study was to find out the effect of resistance exercises on biceps strength among hockey players. To achieve the purpose of the present study, thirty hockey players from Tamilnadu Physical Education and Sports University, Chennai were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into two equal groups at random. The subjects were divided into two equal groups of fifteen players each. Group I acted as Experimental Group (resistance exercises) and Group II acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. The pre-test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences. In all cases 0.05 level of significance was fixed to test hypotheses. The experimental group had achieved significant improvement on biceps strength than the control group.

Key Words: Resistance Exercises, Biceps Strength.

Introduction:

The goal of resistance training, is to "gradually and progressively overload the musculoskeletal system so it gets stronger" and also recommends that resistance training should be progressive in nature, individualized, and provide a stimulus to all the major muscle groups (chest, back, shoulders, arms, abdominals, and legs). They recommend that beginners do one set of eight to 10 exercises for the major muscle groups, eight to 12 repetitions to fatigue, two to three days per week (multiple-set regimens may provide greater benefits if time allows). For older and more frail people (approximately 50-60 years of age and above), they suggest that 10-15 repetitions may be more appropriate (Kraemer et al. 2002).

Methodology:

The purpose of the study was to find out the effect of resistance exercises on biceps strength among hockey players. To achieve the purpose of the present study, thirty hockey players from Tamilnadu Physical Education and Sports University, Chennai were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into two equal groups at random. The subjects were divided into two equal groups of fifteen players each. Group I acted as Experimental Group (resistance exercises) and Group II acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. The pre-test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences. In all cases 0.05 level of significance was fixed to test hypotheses.

Results and Discussion:

Table 1: Computation of Mean and Analysis of Covariance on Biceps Strength on Experimental and Control Groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	9.53	9.66	BG	0.13	1	0.13	0.17
			WG	21.06	28	0.75	
Post Test Mean	14.06	9.73	BG	140.83	1	140.83	89.89*
			WG	43.86	28	1.56	
Adjusted Post Mean	14.03	9.76	BG	928.08	1	928.08	122.24*
			WG	204.98	27	7.59	

* Significant at 0.05 level

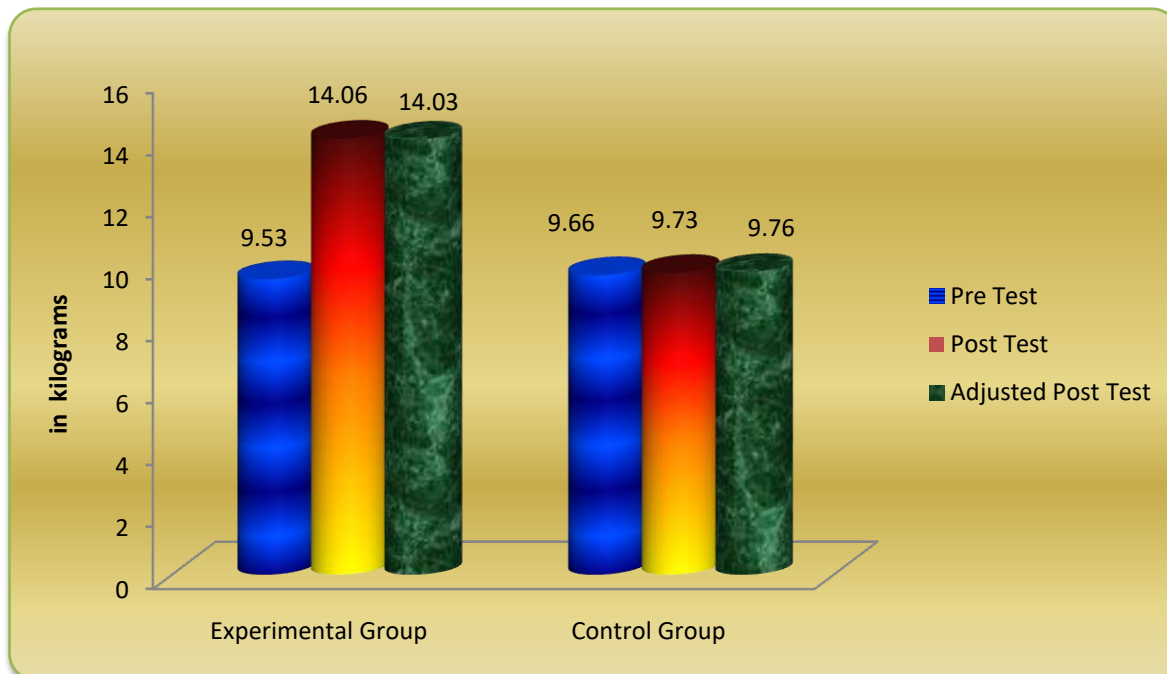
Table value for df 1, 28 was 4.20, df 1, 27 was 4.21

The above table indicates the adjusted mean value of Biceps Strength of experimental and control groups were 14.03 and 9.76 respectively. The obtained F-ratio of 122.24 for adjusted mean was greater than the

table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on Biceps Strength. The above table also indicates that both pre and post-test means of experimental and control groups also differ significantly.

The pre, post and adjusted values of Biceps Strength of both control and experimental groups are graphically represented in the figure 1.

Figure 1: Shows the Mean Values on Biceps Strength of Resistance Training and Control Groups



Conclusion:

The experimental group had achieved significant improvement on biceps strength than the control group.

References:

1. Kell, R. T. (2011). The influence of periodized resistance training on strength changes in men and women. *J Strength Cond Res.* 25(3): 735-744.
2. Kerksick, C. M., Wilborn, C. D., Campbell, B. I., Roberts, M.D., Rasmussen, C.J., Greenwood, M. & Kreider, R.B. (2009). Early-phase adaptations to a split-body, linear periodization resistance training program in college-aged and middle-aged men. *J Strength Cond Res.* 23(3): 962-971.
3. Kraemer, W. J., Ratamess, N.A., & French, D.N. (2002). Resistance Training for Health and Performance. *Curr Sports Med Rep*; 1: 165-71.
4. Lagally, K. M., Cordero, J., Good, J., Brown, D.D., & McCaw, S.T. (2009). Physiologic and metabolic responses to a continuous functional resistance exercise workout. *J Strength Cond Res.* 23(2): 373-379.
5. Sureshkumar. M. (2014). Influence of Explosive Resistance Training on Explosive Strength among Volleyball Players. *International Journal of Recent Research and Applied Studies*, 1 (9), 35-36.
6. Wieser, M., & Haber, P. (2007). The effects of systematic resistance training in the elderly, *Int J Sports Med.* 28(1):59-65.
7. William, J. K., Keijo, H. Robert, U. N., Bradley, C., Nindl, J., Volek, S., Matthew, Mc., Lincoln A. G., Scott E. G., Steven, J. F., Wayne W. C., Margot, P. and William, J. E. (1999). Effects of Heavy-Resistance Training on Hormonal Response Patterns in Younger vs. older men, *J Appl Physiol.* 87: 982-992.