International Journal of Multidisciplinary Research and Modern Education (IJMRME)
Impact Factor: 7.315, ISSN (Online): 2454 - 6119
(www.rdmodernresearch.org) Volume 6, Issue 1, 2020

EFFECT OF RESISTANCE TRAINING ON HAMSTRING STRENGTH AMONG BASKETBALL 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 Training on Hamstring Strength among Basketball Players", International Journal of Multidisciplinary Research and Modern Education, Volume 6, Issue 1, Page Number 57-58, 2020.

Abstract:

The purpose of this study was to find out the effect of resistance training on hamstring strength among men basketball players. To achieve the purpose of the present study, thirty basketball players from Tamilnadu Physical Education and Sports University, Chennai were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into two equal groups. The subjects were divided into two equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 30) were randomly assigned to two equal groups of fifteen men subjects each. The groups were assigned as resistance training and control groups in an equivalent manner. The experimental group participated for a period of six weeks and the post-tests were conducted. After completion of treatment they were tested again as it was in the pre-test on all variables used in the present study. This test was assumed as post-test. Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. It was observed that the six weeks of experimental group have significantly improved hamstring strength of basketball players.

Key Words: Resistance Training, Speed, Basketball Players**.**

Introduction:

Resistance exercise is a type of exercise that has gained popularity over the last decade. Resistance training is any exercise that causes the muscles to contract against an external resistance with the expectation of increases in strength, tone, mass and endurance. The external resistance can be dumbbells, rubber exercise tubing, own body weight, bricks, bottles of water or any other object that causes the muscles to contract. This training works the muscles of the body and is most beneficial when all the ranges of motion are included. The resistance training is done two to three times a week with an average of 8 to 12 repetitions of a series of different resistance based exercises (Cadore et al. 2008).

Methodology:

The purpose of this study was to find out the effect of resistance training on hamstring strength among men basketball players. To achieve the purpose of the present study, thirty basketball players from Tamilnadu Physical Education and Sports University, Chennai were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into two equal groups. The subjects were divided into two equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 30) were randomly assigned to two equal groups of fifteen men subjects each. The groups were assigned as resistance training and control groups in an equivalent manner. The experimental group participated for a period of six weeks and the post-tests were conducted. After completion of treatment they were tested again as it was in the pre-test on all variables used in the present study. This test was assumed as post-test. Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study.

Results and Discussion:

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

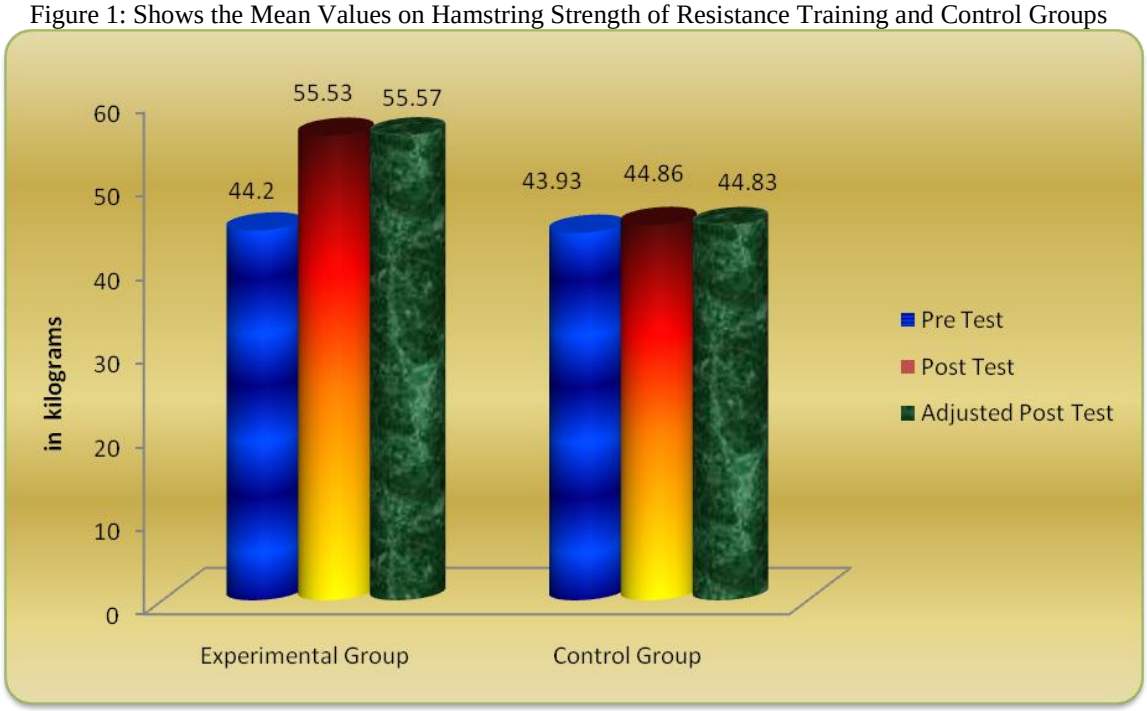
	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	44.20	43.93	BG	0.53	1	0.53	0.06
			WG	243.33	28	8.69	
Post Test Mean	55.53	44.86	BG	853.33	1	853.33	137.74*
			WG	173.46	28	6.19	
Adjusted Post Mean	55.57	44.83	BG	863.18	1	863.18	150.20*
			WG	155.16	27	5.74	

* 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 hamstring strength of experimental and control groups were 55.57 and 44.83 respectively. The obtained F-ratio of 150.20 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 hamstring 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 mean values of hamstring strength of both control and experimental groups are graphically represented in the figure-I.

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



Conclusion:

It was observed that the six weeks of experimental group have significantly improved hamstring strength of basketball players.

References:

1. Bird, S. P., Tarpenning, K, .M. & Marino, F.E. (2005). Designing Resistance Training Programmes to Enhance Muscular Fitness: A Review of the Acute Programme Variables. Sports Medicine. 35(10): 841-851.
2. Bissas, A. I., &Havenetidis, K. (2008). The use of various strength-power tests as predictors of sprint running performance. J Sports Med Phys Fitness. 48(1):49-54.
3. Cadore, E. L., Lhullier, F.L.R., Brentano, M.A., Silva, E.M., Ambrosini, M.B., Spinelli, R., Silva, R,F. & Kruel, L. F. M. (2008). Hormonal responses to resistance exercise in long-term trained and untrained middle-aged men. J Strength Cond Res. 22(5): 1617-1624.
4. Chtara, M., Chaouachi, A., Levin, G, T., Chaouachi, M., Chamari, K., Amri, M. & Laursen, P,B. (2008). Effect of concurrent endurance and circuit resistance-training sequence on muscular strength and power development. J Strength Cond Res. 22: 1037-1045.