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Effect Of Weight Training On Muscular Strength And Muscular Endurance Of Stanley College Of Engineering & Technology For Women Kabaddi Players

Uma Rani Lingala
Physical Director, Stanley College Of Engineering & Technology For Women, Abids,Telangana,India

Dr.D.Hari,
Sports Officer, Department Of Physical Education, Nit Warangal, Telangana, India

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I. Introduction

Sports in the present world has become extremely competitive. It is not the mere participation or practice that brings out victory to an individual. Therefore, sports life is affected by various factors like physiology, biomechanics, sports training, sports medicine, sociology and psychology etcetera. All the coaches, trainers, physical educational personals and doctors are doing their best to improve the performance of the players of their country. Athlete players of all the countries are also trying hard to bring laurels, medals for their countries in International competitions.

Weight Training

Weight training is a common type of strength training for developing the strength and size of the skeletal muscle. It uses the force of gravity in the form of weighted bars, dumbbells or weight sticks to oppose the force the force generated by muscle through concentric or eccentric muscles contraction. Weight training uses a variety of specialized equipment to target specific muscle groups and types of movements.

Statement Of The Problem

The purpose of the study was to find out the Effect of Weight Training on Muscular Strength and Muscular Endurance of Stanley College of Engineering & Technology for Women Kabaddi Players in Hyderabad District

Hypotheses

In light of the preceding discussion and for the purpose of the present investigation, the following were hypothesized.

1. It was hypothesized that weight training would significantly improve muscular strength of Stanly college for women Kabaddi players.
2. It was hypothesized that weight training would significantly improve muscular endurance of Stanly college for women Kabaddi players.

Delimitations

The study was delimited in the following aspects and while interpreting the results. It should be taken into consideration.

1. The study was delimited to 60 women Kabaddi players Stanley College of Engineering & Technology in Hyderabad District
2. The age of the subjects ranged from 18 to 20 years.
3. In this study, the following variables were selected for the study.

1. Muscular Strength
2. Muscular Endurance

Selection Of Subjects

The purpose of the study was to find out the effect of weight training on selected motor ability components, muscular strength and muscular endurance among Stanly College for women B.Tech level Kabaddi

players. To achieve the purpose of this study, 60 women Kabaddi players of Stanley College of Engineering & Technology for Women Kabaddi Players in Hyderabad District were randomly selected. The age of the subjects ranged from 18 to 20 years as per the. The randomly selected subjects were divided into three groups, namely, experimental group I (Low frequency – three days per week), experimental group II (Medium frequency – four days per week) and control group. Thus, in each group 20 collegiate level Kabaddi players were selected.

Statistical Technique

To find out the effects of low frequency and medium frequency weight training on muscular strength and muscular endurance the pre and post test scores were analysed by using ANCOVA statistical technique. When the F ratio was found to be significant, Scheffe's post hoc test was to find out the paired mean significant difference.

Table I

ANCOVA Results On Effect of Low Frequency Weight Training and Medium Frequency Weight Training Compared With Controls on Muscular Strength

	Low Frequency Weight Training	**Medium Frequency Weight Training**	**Control group**	**Source of Variance**	**Sum of squares**	**df**	**Mean Squares**	**Obtained F**
Pre Test Mean	6.85	6.75	6.85	Between	0.13	2	0.07	0.06
				Within	58.85	57	1.03	
Post Test Mean	8.00	8.55	6.80	Between	32.03	2	16.02	32.43*
				Within	28.15	57	0.49	
Adjusted Post Test Mean	7.98	8.58	6.78	Between	33.60	2	16.80	74.05*
				Within	12.70	56	0.23	
Mean Diff	1.15	1.80	-0.05					

Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.16, 2 and 56 (df) =3.16.
*Significant.

As shown in Table II, the obtained pre -test means on Muscular Strength on Low frequency weight training group was 6.85, Medium frequency weight training group was 6.75 was and control group was 6.85. The obtained pre -test F value was 0.06 and the required table F value was 3.16, which proved that there was no significant difference among initial scores of the subjects. The obtained post - test means on Muscular Strength on Low frequency weight training group was 8.00, Medium frequency weight training group was 8.55 was and control group was 6.80. The obtained post -test F value was 32.43 and the required table F value was 3.16, which proved that there was significant difference among post test scores of the subjects. Taking into consideration of the pre -test means and post- test means adjusted post -test means were determined and analysis of covariance was done and the obtained F value 74.05 was greater than the required value of 3.16 and hence it was accepted that there was significant differences among the treated groups. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table II

Table II Multiple Comparisons of Paired Adjusted Means and Scheffe's Confidence Interval Test Results on Muscular Strength

Low frequency weight training Group	Medium frequency weight training Group	Control Group	Mean Difference	
7.98	8.58		-0.60*	0.38
7.98		6.78	1.20*	0.38
	8.58	6.78	1.80*	0.38

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Low frequency weight training group and control group (MD: 1.20). There was significant difference between Medium frequency weight training group and control group (MD: 1.80). There was significant difference between treatment groups, namely, Low frequency weight training group and Medium frequency weight training group. (MD: -0.60).

Table III
ANCOVA Results On Effect of Low Frequency Weight Training and Medium Frequency Weight Training Compared With Controls on Muscular Endurance

	Low Frequency Weight Training	Medium Frequency Weight Training	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained F
Pre Test Mean	33.20	34.00	33.10	Between	9.73	2	4.87	0.17
				Within	1675.00	57	29.39	
Post Test Mean	35.90	37.45	33.45	Between	162.70	2	81.35	4.47
				Within	1037.70	57	18.21	
Adjusted Post Test Mean	36.05	37.07	33.67	Between	121.61	2	60.81	11.25
				Within	302.78	56	5.41	
Mean Diff	2.70	3.45	0.35					

Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.16, 2 and 56 (df) =3.16.
*Significant

As shown in Table IV, the obtained pre -test means on Muscular Endurance on Low frequency weight training group was 33.20, Medium frequency weight training group was 34.00 was and control group was 33.10. The obtained pre -test F value was 0.17 and the required table F value was 3.16, which proved that there was no significant difference among initial scores of the subjects.The obtained post- test means on Muscular Endurance on Low frequency weight training group was 35.90, Medium frequency weight training group was 37.45 was and control group was 33.45. The obtained post -test F value was4.47 And the required table F value was 3.16, which proved that there was significant difference among post test scores of the subjects. Taking into consideration of the pre -test means and post -test means adjusted post- test means were determined and analysis of covariance was done and the obtained F value 11.25 was greater than the required value of 3.16 and hence it was accepted that there was significant differences among the treated groups. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table IV.

Table IV Multiple Comparisons of Paired Adjusted Means and Scheffe's Confidence Interval Test Results on Muscular Endurance

MEANS				Required
Low frequency weight training Group	Medium frequency weight training Group	Control Group	Mean Difference	. C I
36.05	37.07		1.02	1.85
36.05		33.67	2.38*	1.85
	37.07	33.67	3.40*	1.85

*Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Low frequency weight training group and control group (MD: 2.38). There was significant difference between Medium frequency weight training group and control group (MD: 3.40). There was insignificant difference between treatment groups, namely, Low frequency weight training group and Medium frequency weight training group. (MD: -1.02).

II. Conclusions

It was concluded that 12 weeks low frequency weight training and 12 weeks medium frequency weight training significantly improved muscular strength of the school Kabaddi Boys players compared to control group. It was concluded that comparing between low frequency weight training and medium frequency weigh training, medium frequency weight training was significantly better than low frequency weight training in imp[roving muscular strength of school level Kabaddi Boys players.It was concluded that 12 weeks low frequency weight training and 12 weeks medium frequency weight training significantly improved muscular endurance of the school Kabaddi Boys players compared to control group.It was concluded that comparing between low frequency weight training and medium frequency weigh training, there was insignificant difference in improving muscular endurance of school level Kabaddi women kabaddi players

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