EFFECT OF EXTENSIVE AND INTENSIVE INTERVAL TRAINING ON SELECTED FLEXIBILITY AND BACK STRENGTH AMONG VOLLEYBALL PLAYERS

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ABSTRACT

The purpose of the research was to make effect of extensive and intensive interval training on selected flexibility and back strength among volleyball players. The randomly selected (N=60) college men volleyball players were divided into three groups randomly consisting of twenty in each. Before the training pre test was taken for all the groups on flexibility and back strength .Experimental group I underwent extensive interval training, experimental group II underwent intensive interval training for twelve weeks. The control group did not undergo any type of training. At the end of twelve weeks the post test was conducted on selected variables. The difference between initial and final test scores was considered as the effect of respective training on selected criterion variables. To test the significance the obtained data were subjected to statistical treatment using ANCOVA. In all cases 0.05 level was fixed to test the hypothesis of this study.

INTRODUCTION

Every human being participates in some kind of sports activity or physical exercise during the course of his life. This exercise may vary for different individuals. It may be walking, jogging, cycling working in a factory or participation in games and sports. Regular participation in exercise programme markedly influences physical, physiological and mental fitness of an individual.

Life will not be a life without physical activities. Through physical activities alone people were able to survive in earth. The story of evolution throws some light on the nature and type of activities which are an essential part of modern physical activities which are to be fit for day to day existence and to meet the occasional emergencies that arise. What ever may the emergency that trust itself on individuals the human beings have to readjust and carry on.

METHODOLOGY

SELECTION OF SUBJECTS

The subjects taken for the present study were sixty college men volleyball players from different colleges in Andhra Pradesh. The subjects were in the age group of 19 to 25 years with mean age of 21.3 with standard deviation $\pm$ 2.67 years. The subjects were selected on a random basis and were allotted to three groups (experimental group I, experimental group II and control group) by random assignment.

All the subjects were oriented to the purpose of the study and voluntarily involved in the study.

COMPUTATION OF ANALYSIS OF COVARIANCE AND POST HOC TEST

RESULTS ON FLEXIBILITY

The statistical analysis comparing the initial and final means of Flexibility due to Extensive interval training and Intensive interval training among aVolleyball players is presented in Table I

Table I

ANCOVA RESULTS ON EFFECT OF EXTENSIVE INTERVAL TRAINING AND INTENSIVE INTERVAL TRAINING COMPARED WITH CONTROLS ON FLEXIBILITY

	EXTENSIVE INTERVAL TRAINING	INTENSIVE INTERVAL TRAINING	CONTROL GROUP	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARES	OBTAINED F
Pre Test Mean	16.65	17.00	16.10	Between	8.23	2	4.12	2.09
				Within	112.35	57	1.97	
Post Test Mean	18.30	19.00	16.50	Between	66.53	2	33.27	8.57*
				Within	221.20	57	3.88	
Adjusted Post Test Mean	18.24	18.61	16.95	Between	28.27	2	14.13	6.44*
				Within	122.88	56	2.19	
Mean Diff	1.65	2.00	0.40					

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 I, the obtained pre test means on Flexibility on Extensive interval training group was 16.65, Intensive interval training group was 17.00 was and control group was 16.10. The obtained pre test F value was 2.09 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 Flexibility on Extensive interval training group was 18.30, Intensive interval training group was 19.00 was and control group was 16.50. The obtained post test F value was 8.57 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 6.44 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 Flexibility

MEANS				
Extensive interval training Group	Intensive interval training Group	Control Group	Mean Difference	Required . C I
18.24	18.61		0.37	1.18
18.24		16.95	1.29*	1.18
	18.61	16.95	1.66*	1.18

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Extensive interval training group and control group (MD: 1.29). There

was significant difference between Intensive interval training group and control group (MD: 1.66). There was no significant difference between treatment groups, namely, Extensive interval training group and Intensive interval training group. (MD: 0.37).

RESULTS ON BACK STRENGTH

The statistical analysis comparing the initial and final means of Back strength due to Extensive interval training and Intensive interval training among Volleyball players is presented in Table III

Table III

ANCOVA RESULTS ON EFFECT OF EXTENSIVE INTERVAL TRAINING AND INTENSIVE INTERVAL TRAINING COMPARED WITH CONTROLS ON BACK STRENGTH

	EXTENSIVE INTERVAL TRAINING	INTENSIVE INTERVAL TRAINING	CONTROL GROUP	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARES	OBTAINED F
Pre Test Mean	112.40	115.30	110.60	Between	224.93	2	112.467	0.903
				Within	7095.800	57	124.488	
Post Test Mean	123.65	120.40	112.60	Between	1290.033	2	645.02	4.243*
				Within	8664.150	57	152.003	
Adjusted Post Test Mean	123.91	118.60	114.14	Between	954.292	2	477.146	5.24*
				Within	5095.414	56	90.99	
Mean Diff	11.25	5.10	2.00					

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 III, the obtained pre test means on Back strength on Extensive interval training group was 112.40, Intensive interval training group was 115.30 was and control group was 110.60. The obtained pre test F value was 0.903 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 Back strength on Extensive interval training group was 123.65, Intensive interval training group was 120.40 was and control group was 112.60. The obtained post test F value was 4.243 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 5.24 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 Back strength

MEANS				
Extensive interval training Group	Intensive interval training Group	Control Group	Mean Difference	Required . C I
123.91	118.60		5.31	7.57
123.91		114.14	9.77*	7.57
	118.60	114.14	4.47	7.57

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Extensive interval training group and control group (MD: 9.77). There was no significant difference between Intensive interval training group and control group (MD: 4.47). There was no significant difference between treatment groups, namely, Extensive interval training group and Intensive interval training group. (MD: 5.31).

CONCLUSIONS

1. It was concluded that 12 weeks extensive interval training and intensive interval training significantly improved flexibility compared to control group. It was also found that there

was no significant difference between extensive interval training and intensive interval training in altering flexibility of college level Volleyball players.

2. It was concluded that 12 weeks extensive interval training significantly improved back strength compared to control group. It was also found that there was no significant difference between extensive interval training and intensive interval training in altering back strength of college level Volleyball players.

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