IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 12,Iss 1 Jan, 2023

EFFECT OF EXTENSIVE AND INTENSIVE INTERVAL TRAINING ON FLEXIBILITY AMONG ATHLETES

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ABSTRACT

Aim of the study is to find out the effect of extensive and intensive interval training on flexibility among athletes. A pretest-posttest randomized group design was used for this study. The randomly selected (N=60) college men athletes from Andhra Pradesh were divided into three groups randomly consisting of twenty college men athletes in each. Before the training pre test was taken for all the groups on flexibility. 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 flexibility. The difference between initial and final test scores was considered as the effect of respective training on selected criterion variables. to test the significance of the obtained data were subjected to statistical measures using ANCOVA. In all cases 0.05 level was fixed to test the hypothesis for this study.

Key Words: Extensive Interval training, Intensive interval training and flexibility

ISSN PRINT 2319 1775 Online 2320 7876

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INTRODUCTION

Flexibility is a key component of athletic performance, enabling athletes to move efficiently and reduce the risk of injuries. Interval training, known for its effectiveness in enhancing muscular endurance and cardiovascular fitness, can also influence flexibility when applied through different approaches. Extensive interval training focuses on prolonged, lower-intensity intervals, whereas intensive interval training involves shorter, high-intensity bouts.

This study examines the effect of both extensive and intensive interval training on flexibility among athletes. By comparing these training methods, we aim to provide insights into how interval variations impact flexibility and overall athletic performance.

METHODOLOGY

SELECTION OF SUBJECTS

The subjects taken for the present study were sixty college men athletes 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 namely experimental group I, experimental group II and control group by random selection.

SELECTION OF VARIABLES

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Dependent Variables

1. Flexibility

Independent Variable

1. Twelve weeks extensive interval training
2. Twelve weeks intensive interval raining

EXPERIMENTAL DESIGN

A pretest-posttest randomized group design was used for this study. The randomly selected (N=60) college men athletes from Andhra Pradesh were divided into three groups randomly consisting of twenty college men in each. Before the training pre test was taken for all the groups on flexibility. 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 flexibility. 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 measures using ANCOVA. In all cases 0.05 level was fixed to test the hypothesis of this study.

COMPUTATION OF ANALYSIS OF COVARIANCE AND POST HOC TEST

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RESULTS ON FLEXIBILITY

The statistical analysis comparing the initial and final means of Flexibility due to Extensive interval training and Intensive interval training among athletes 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

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 12,Iss 1 Jan, 2023

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 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 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 trained 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

ISSN PRINT 2319 1775 Online 2320 7876

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Multiple Comparisons of Paired Adjusted Means and Scheffe's Confidence Interval Test Results on Flexibility

MEANS				Required . C I
Extensive interval training Group	Intensive interval training Group	Control Group	Mean Difference	
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).

The ordered adjusted means were presented through bar diagram for better understanding of the results of this study in Figure I.

Figure I

BAR DIAGRAM SHOWING PRE TEST, POST TEST AND ORDERED ADJUSTED MEANS ON FLEXIBILITY

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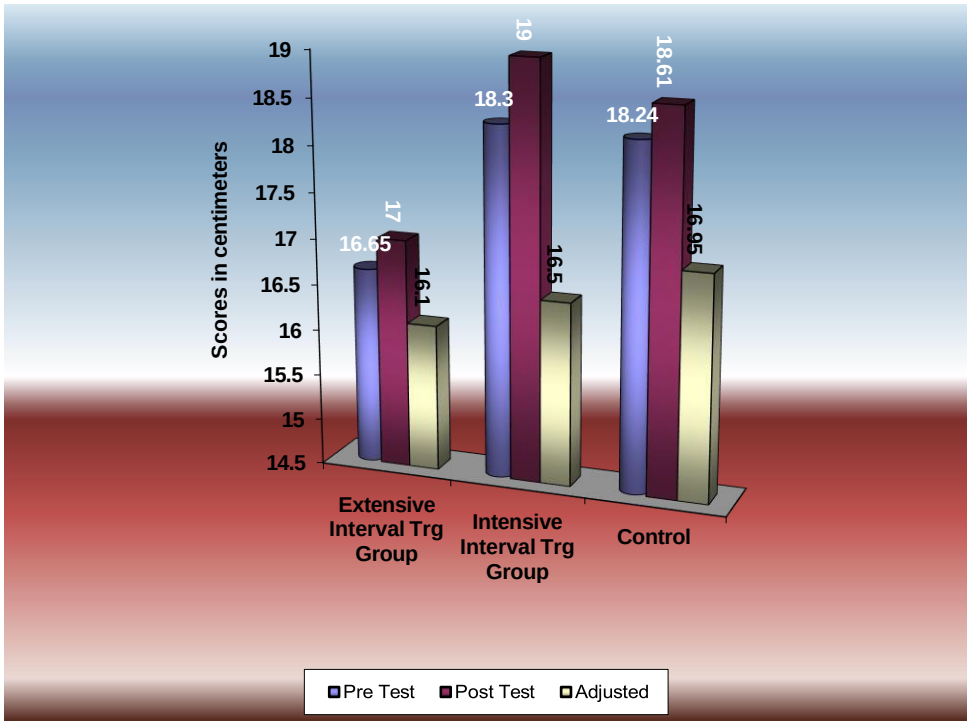

DISCUSSIONS AND FINDINGS ON FLEXIBILITY

The effect of Extensive interval training and Intensive interval training on Flexibility is presented in Table I. The analysis of covariance proved that there was significant difference between the experimental group and control group as the obtained F value 6.44 was greater than the required table F value to be significant at 0.05 level.

Since significant F value was obtained, the results were further subjected to post hoc analysis and the results presented in Table II proved that there was significant difference between Extensive interval training group and control group (MD: 1.29) and Intensive interval training group and control group (MD: 1.66). Comparing between the treatment groups, it was found that there was no significant

ISSN PRINT 2319 1775 Online 2320 7876

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difference between Expermental interval training and Intensive interval training group among athletes.

Thus, it was found that Extensive interval training and Intensive interval training were significantly better than control group in improving Flexibility of the athletes.

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 athletes.

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