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ORIGINAL ARTICLE

EFFECT OF EXTENSIVE INTERVAL AND INTENSIVE INTERVAL TRAINING ON SELECTED PHYSIOLOGICAL VARIABLES AMONG COLLEGE MEN

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Abstract:

The present study was undertaken to examine the influences of extensive interval and intensive interval training on physiological variables of college men. The researcher has selected forty five college men were selected at random from in an around of Pondicherry and their age ranged from 18 to 23 years. The subjects chosen for the study were divided into three equal groups and designated as experimental group 'A' experimental group 'B' and control group 'C'. Extensive interval training (EITG) given to group 'A' Intensive interval training (IITG) given to group 'B' and Control group (CG) 'C' were restricted to participate in any activities. The training was given for a period of twelve weeks on alternative days. The data were collected before and after the training period. The obtained data's were analyzed by analysis of covariance (ANCOVA). The level of significant was fixed at 0.05 levels. Where the 'F' ratio was found significant scheffe's post hoc test was used for find out the significant differences among the adjusted paired mean. The results of the study showed that EITG and IITG are significantly improved than CG group.

KEY WORDS:

Extensive interval run, Intensive interval run, Cardio respiratory endurance, resting pulse rate.

INTRODUCTION

Sports training is a programme of exercise designed to improve the skills and increase the energy capacities of an athletes for a particular events (Edward 1984).Interval training as work or exercise followed by the property of prescribed relief interval(Mathew and Fox 1974). Intensive interval training session the runner have to cover shorter distance but run fast, whereas extensive interval method are medium or large exertion periods with increasing the number of interval and reducing the recovery time. The duration of the recovery periods being half as long as those of the exertion periods. It is important to note that the recovery periods must not result in full recovery.

Physiology is the function of the human body as influence by the influence of physical activity. Cardio respiratory endurance is the capacity of the circulatory-respiratory system to function during sports or physical activates, which requires sustained effort(Safrit 1981).The number of beats of heart and entries per minute is known as pulse rate(Goddie 1964).

OBJECTIVE OF THE STUDY

To examine the impact of Extensive interval and Intensive interval training on cardio respiratory endurance and resting pulse rate.

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HYPOTHESIS

It was hypothesis that there would be a significant improvement in cardiorespiratory endurance and resting pulse rate after the twelve weeks of extensive interval and intensive interval training as compared with control group.

METHODOLOGY

The purpose of this study was to find out the impact of extensive interval and intensive interval training on physiological variables among college men. To achieve the purpose of the studyforty five healthy college men were selected at random from in an around of Pondicherry and their age ranged from 18 to 23 years. The subjects chosen for the study were divided into three equal groups and designated as experimental group 'A' experimental group 'B' and control group 'C'. Extensive interval training (EITG) given to group 'A' Intensive interval training (IITG) given to group 'B' and Control group (CG) 'C' were restricted to participate in any activities. The training was given for a period of twelve weeks on alternative days. The data were collected before and after the training period. To measure Cardio respiratory endurance cooper 12 minute run/walk test (in meters) and resting pulse rate automatic blood pressure monitor (Beats per minutes) were used respectively because of their simplicity and availability.

STATISTICALANALYSIS

The obtained data's were analyzed by analysis of covariance (ANCOVA). The level of significant was fixed at 0.05 levels. Where the 'F' ratio was found significant scheffe's post hoc test was used for find out the significant differences among the adjusted paired mean.

Table- I
Analysis of Covariance for Pre Test and Post Test Data on
Cardio Respiratory Endurance of Experimental Group and Control group

Mean	EITG	IITG	CG	SV	SS	df	MS	'F' ratio
Pre-test								
Mean	2285.00	2281.70	2115.00	B	28344.4	2	141722.22	
S.D	147.53	121.91	542.54	w	4633833.3	42	110329.36	1.28
Post-test								
Mean	2546.70	2430.00	2210.00	B	876777.77	2	438388.88	24.35*
S.D	146.03	126.49	129.14	W	756083.33	42	18001.98	
Adjusted								
Post-test	2534.00	2418.00	2235.00	B	647750.09	2	323875.04	25.13*
Mean				W	528413.13	41	12888.12	

*Significant at 0.05 level
(F-value required to be significant at 2, 42 and 2, 41=3.22 and 3.23)

Table I shows that there is a significant differences on cardio respiratory endurance among three groups such as extensive interval training group (EITG), intensive interval training group (IITG) and control group (CG).Therefore the calculated 'F' value for adjusted posttest 25.13 greater than the tabular value of 2, 41 degree of freedom 3.23. Since the obtain 'F' value is found to be significant Scheffe's test is used as a post hoc test.

Table- II
The Scheffe's Test for the Differences between Paired Mean of Groups On
Cardio Respiratory Endurance

EITG	IITG	CG	MD	CI
2534	2418	-	116*	105.29
2534	-	2235	299*	
-	2418	2235	183*	

*Significant at 0.05 level.

Table-II Reveals that there was a significant difference among paired adjusted post test means between EITG and IITG, EITG and CG & IITG and CG in relation to cardio respiratory endurance.

Figure 1
Showing the Pre-Test Post-Test and Adjusted Post-Test Mean of EITG, IITG and CG on Cardio Respiratory Endurance

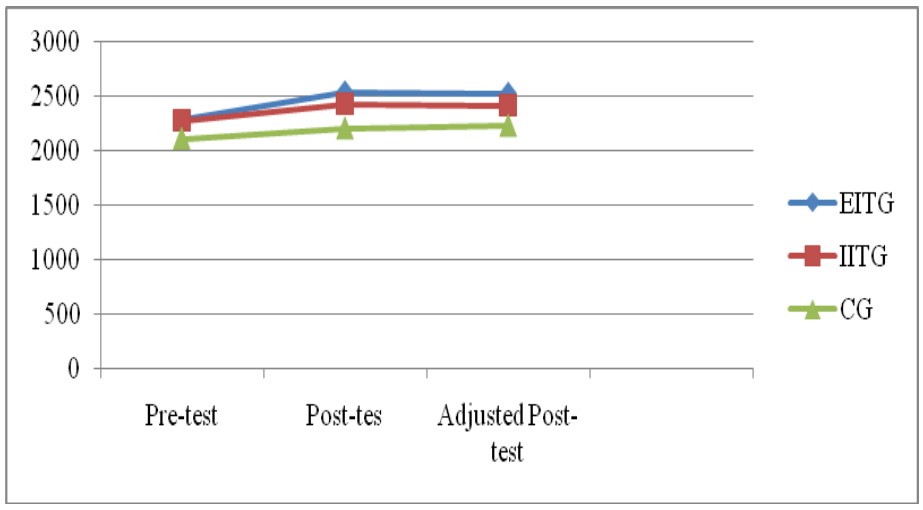


Table- III
Analysis of Covariance for Pre Test and Post Test Data on Resting Pulse Rate of Experimental Group and Control group

Mean	EITG	IITG	CG	SV	SS	df	MS	'F' ratio
Pre-test Mean	68.80	68.90	69.60	B	6.40	2	3.20	0.208
S.D.	3.76	4.58	3.31	w	646.40	42	15.39	
Post-test Mean	65.86	2.97	69.06	B	102.40	2	51.20	5.09*
S.D.	2.97	3.66	2.81	W	422.40	42	10.05	
Adjusted Post-test Mean	66.04	66.04	68.70	B	69.71	2	34.85	11.84*
				W	120.71	41	2.94	

*Significant at 0.05 level
F-value required to be significant at 2, 42 and 2, 41=3.22 and 3.23

Table III shows that there is a significant difference on resting pulse rate among three groups such as extensive interval training group (EITG), intensive interval training group (IITG) and control group (CG). Therefore the calculated 'F' value for adjusted posttest 11.84 greater than the tabular value of 2, 41 degree of freedom 3.23. Since the obtain 'F' value is found to be significant Scheffe's test is used as a post hoc test.

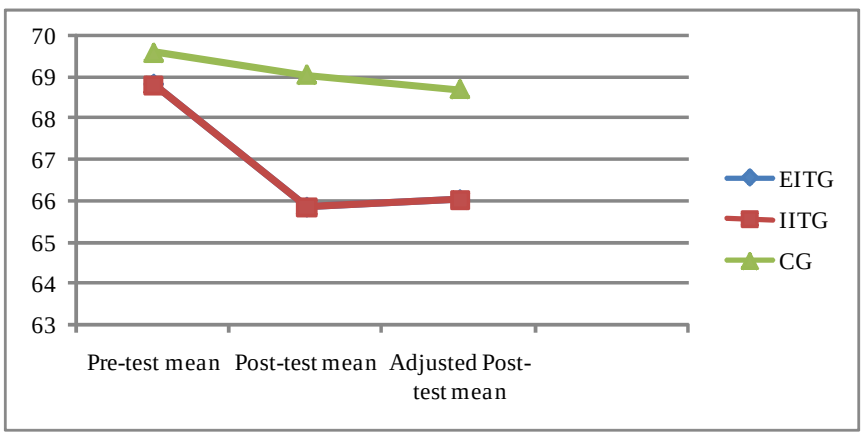
Table- IV
The Scheffe's Test for the Differences between Paired Mean Of Groups on Resting Pulse Rate

EITG	IITG	CG	MD	CI
66.04	66.04	-	000	1.59
66.04	-	68.70	2.66*	
	66.04	68.70	2.66*	

*Significant at 0.05 level.

Table-IV Reveals that there was a significant difference among paired adjusted posttest means between EITG and CG & IITG and CG in relation to resting pulse rate.

Figure 2
Showing the Pre-Test Post-Test and Adjusted Post-Test Mean of EITG, IITG and CG on Resting Pulse Rate



DISCUSSION ON THE HYPOTHESIS

In the hypothesis it was mention thatthere would be a significant improvement in cardiorespiratory endurance and resting pulse rate after the twelve weeks of extensive interval and intensive interval training as compared with control group. Hence the research hypothesis accepted.

DISCUSSION AND FINDINGS

The finding of the study on cardio respiratory endurance and resting pulse rate reveals that the experimental group namely extensive interval training group and intensive interval training group had significantly improved after the twelve weeks of training. Finding of study are in conformity with the following studies Parameswari and Elayaraja (2010), Parpa et al, (2009), Astorino et al., (2012), Satish Sharma and Dalwinder Singh (2012), Karthikeyan R and Karthikeyan P (2011) &Jayasivarajan and Vasanthi (2012).

CONCLUSION

1.Cardio respiratory endurance and resting pulse rate was significantly improved when compared with control group.
2.Extensive interval training group is better than the intensive interval training group in relation to cardio respiratory endurance.
3.There was no significant difference between extensive interval training group and intensive interval training group on resting pulse rate.

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