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Impact of moderate and high intensity aerobic exercise on selected bio motor performance of college men football players

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Abstract
The purpose of the study was to find out the impact of moderate and high intensity aerobic exercise on selected biomotor performance of college men football players. To achieve purpose of this study, 45 football players were selected from Government Boys Degree College Baramulla, State Jammu and Kashmir, India were selected as subjects at random, the age group of the subjects ranged between 17 to 22 years. The subjects were divided into three equal groups of 15 each. Group-I underwent moderate aerobic intensity training, group-II underwent high aerobic intensity training and group-III acted as control subjects, which didn't participate in any special training apart from their regular activities. The following bio motor variables namely balance and coordination performance was selected as criterion variables. All the subjects of three groups were tested on selected dependent variables at prior to and immediately after the training programme. The ANCOVA (analysis of co variance) was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance which was considered as an appropriate. The results of the study revealed that there was a significant improvement on selected biomotor variables such as balance and coordination for moderate aerobic intensity training group and high aerobic intensity training group as compared to control group among college men football players.

Keywords: bio motor, football, balance, coordination, intensity, aerobic exercise

Introduction

Fitness has been defined as how well a person is adapted to and capable of living a certain lifestyle. The athletics obviously have greater fitness than the non-athletes because of his training for a chosen event or events. The law of specificity states that there is a specific response to the specific response will tend to emphasis one or more of the abilities that make up fitness. These abilities are basic and respond well to training. Since these abilities are basic and respond well to training. Since these abilities affect how the body moves they are given the name "biomotor abilities Aerobic fitness refers to the capacity to take in, transport and utilize oxygen, since aerobic fitness involves many important bodily organs and systems like heart, lungs, muscles, respiration and blood circulation etc. It can inform us a lot about the fitness of these components and health in general.

Aerobics' is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements of fitness (Flexibility, muscular strength and cardiovascular fitness). It is usually performed to music and may be practiced in a group setting led by an instructor although it can be done also and without musical accompaniment.

Aerobic simply means 'with air' any exercise is aerobic if the muscle being exercised gets the oxygen needed. Aerobic exercise is an activity that uses large muscle group. This is rhythmic in nature. It is simple and more beneficial. It can be very simple like fast walking a distance for 30 minutes, in 3-5 days a week. It is defined as any repetitive physical activity that is hard enough, to enhance circulatory and respiratory efficiency.

Biomotor performance is an expression used to describe a person's ability to perform efficiently basic skills involving such functional components like speed, agility, power, strength, endurance etc.

Methodology

The purpose of the study was to find out the impact of moderate and high intensity aerobic exercise on selected biomotor performance of college men football players. To achieve purpose of this study, 45 football players were selected from Government Boys Degree College Baramulla, State Jammu and Kashmir, India were selected as subjects at random, the age group of the subjects ranged between 17 to 22 years. The subjects were divided into three equal groups of 15 each. Group-I underwent moderate aerobic intensity training, group-II underwent high aerobic intensity training and group-III acted as control subjects, which didn't participate in any special training apart from their regular activities. The following bio motor variables namely balance and coordination performance was selected as criterion variables. All the subjects of three groups were tested on selected dependent variables at prior to and immediately after the training programme. The ANCOVA (analysis of co variance) was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level

of significance which was considered as an appropriate.

Training programme

For experimental groups, Moderate intensity aerobic training and High intensity aerobic training programme has been given for three days each per week for twelve weeks. Training was given in the morning session. The training session includes warming up and cooling down. Every day the workout lasted for 45 to 60 minutes approximately. During experimental period control group did not participate in any of the special training.

Analysis of the data

The influence of Moderate intensity aerobic training programme and High intensity aerobic training programme on each criterion variables analyzed separately and presented below.

Balance

The pretest and post test data on balance of the moderate intensity aerobic training group, high intensity aerobic training group and control group have been analysed and presented in table 1.

Table 1: Analysis of Covariance for Pre, Post and Adjusted Post Test Data on Balance of Moderate Intensity and High Intensity Aerobic Training Groups and Control Group.

Test		Moderate Intensity Group	High Intensity Group	Control Group	SOV	SS	df	MS	F Ratio
Pre test	Mean	10.94	10.57	10.60	B G	1.23	2	0.62	0.31
	S.D	1.34	1.21	1.63	W G	82.97	42	1.98	
Post test	Mean	12.03	12.66	10.91	B G	23.55	2	11.78	8.12*
	S.D	0.99	0.97	1.56	W G	0.84	42	1.45	
Adjusted Post test	Mean	11.86	12.76	10.99	B G	23.43	2	11.71	30.45*
					W G	15.77	41	0.39	

*Significant at 0.05 level of confidence

(The table values required for significance at 0.05 levels with df 2 and 42 is 3.22 and 2 and 41 is 3.23)

The adjusted post test mean of balance for the moderate intensity aerobic training group is 11.86, high intensity aerobic training group is 12.76 and the control group is 10.99. The obtained 'F' ratio of 30.45 is higher than the table value of 3.23 required for significance at 0.05 levels of df 2 and 41.

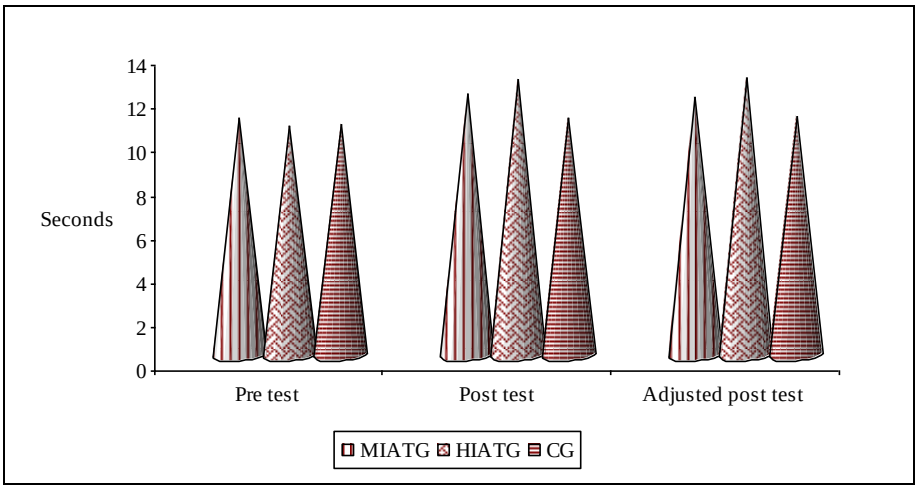

Fig 1: The Pre, Post and Adjusted Post Test Mean Values of Moderate Intensity Aerobic Training Group, High Intensity Aerobic Training Group and Control Group on Balance

Coordination

The pre test and post test data on coordination of the moderate intensity aerobic training group, high intensity aerobic training group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance for Pre, Post and Adjusted Post Test Data on Coordination of Moderate Intensity and High Intensity Aerobic Training Groups and Control Group

Test		Moderate Intensity Group	High Intensity Group	Control Group	SOV	SS	df	MS	F Ratio
Pre test	Mean	17.19	17.47	17.43	B G	0.66	2	0.33	0.16
	S.D	1.31	1.52	1.51	W G	88.04	42	2.10	
Post test	Mean	15.46	15.39	16.93	B G	22.67	2	11.34	4.69*
	S.D	1.27	1.79	1.56	W G	101.49	42	2.42	
Adjusted Post test	Mean	15.62	15.29	16.87	B G	20.79	2	10.40	18.22*
					W G	23.39	41	0.57	

*Significant at 0.05 level of confidence

(The table values required for significance at 0.05 levels with df 2 and 42 is 3.22 and 2 and 41 is 3.23)

The adjusted post test mean of coordination for the moderate intensity aerobic training group is 15.62, high intensity aerobic training group is 15.29 and the control group is 16.87. The obtained 'F' ratio of 18.22 is higher than the table value of 3.23 required for significance at 0.05 levels of df 2 and 41.

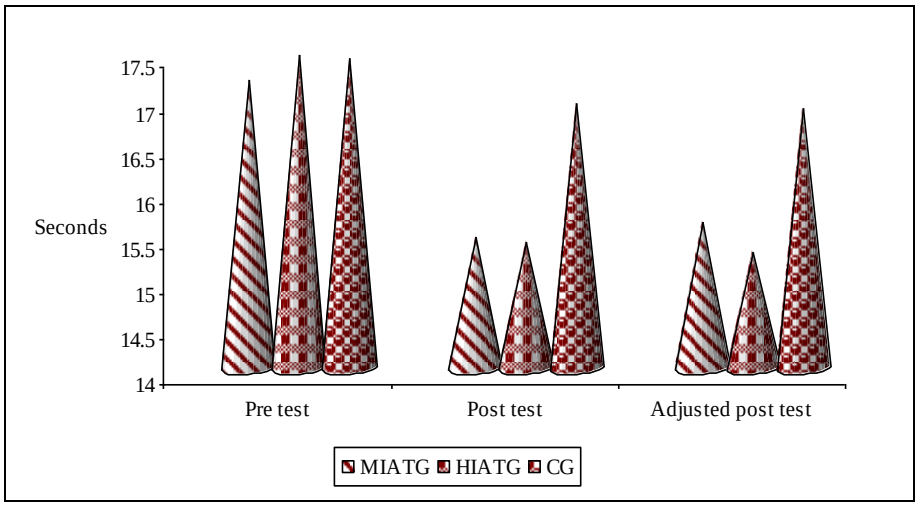

Fig 2: The Pre, Post and Adjusted Post Test Mean Values of Moderate Intensity Aerobic Training Group, High Intensity Aerobic Training Group and Control Group on Coordination.

Conclusion

1. There was a significant improvement on balance for experimental groups as compared to control group.
2. There was a significant improvement on selected biomotor variable such as cooridination for moderate aerobic intensity training group and high aerobic intensity training group as compared to control group.
3. There was a significant difference between Moderate intensity aerobic training programme group, High intensity aerobic training programme and control group on balance and coordination of football players.

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