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Effect of fartlek training on selected bio -motor fitness variable of urban school Kho-Kho players

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Abstract

The purpose of this study was to find out the effect of fartlek training on selected bio-motor fitness variables of urban school kho-kho players. To achieve this purpose 30 urban school kho-kho players, from Government higher secondary school Ganapathi, Corporation higher secondary school, Rathinapuri, Tamil Nadu, India. The subjects were selected by district level kho-kho player's age group from 12 to 15 years. The subject was divided into two equal groups each group namely fartlek training group and Control group. Underwent training programme for the period of twelve weeks, and control group has not under gone any type of training. Investigator selected bio-motor fitness variables were agility and Cardiovascular Endurance the data were collected before and after the training programme. The selected data was statistically analyzed by using dependent 't' test to find out the significant difference between pre and post-test. In all the cases 0.05 level of confidence was fixed to test the hypothesis. The significance of the means of the obtained test results was tested at 0.05 level of confidence. The result of the study reveals that fartlek training group was better than the control group on bio-motor fitness variables.

Keywords: Fartlek training, bio-fitness, agility, cardiovascular endurance

Introduction

Fartlek Training

Fartlek is a Swedish word which means "Speed play". This training method, introduced in the United States in the 1940's is relatively an unscientific adoption of interval and continuous training that is well suited for exercising out-of-doors over natural terrain. With this system, alternate running is done at both fast and slow speeds.

Bio-Motor Fitness

Bio-motor fitness is a term that describes an athlete's ability to perform effectively during sports or other physical activity. (Huang SH, 2007) ^[1].

Statement of the problem

The Present study was to find out the effect of fartlek training on selected bio-motor fitness variables of urban school kho-kho players.

Methodology

Selection of Subjects

The purpose of the study was to find out the effect of fartlek training on selected bio-motor fitness variables of urban school kho-kho players. To achieve this study, 30 urban school kho-kho players were selected from Government higher secondary school Ganapathi, Corporation higher secondary school, Rathinapuri, Tamil Nadu, India. The age of the subject was ranged from 12 to 15 years as per the school records. The selected subjects were divided into two groups. Each group consisted of 15 subjects. Group I named as Experimental group (Fartlek training group) and Group II served as Control Group. The experimental groups underwent Experimental group twelve weeks training, 3 days per week, for 1 hour per day and control group was not involves any specific training. The Bio- motor fitness variables were used for this study agility and Cardiovascular Endurance. Pre-test and posttest were conducted before and training programme respectively.

Hypotheses

It was hypothesized that there may be a significant improvement on selected bio-motor fitness variables (agility and cardiovascular endurance) of urban kho-kho players due to the fartlek training.

Table 1: Selection of the tests

Variables	Test items	Units
Agility	Zigzag run	In seconds
Cardiovascular Endurance	12 min run and walk	In meters

Training Programme

The training in the Fartlek training group was given to the group for a period of twelve weeks as follows

- **Training periods:** 12 weeks

Table 2: Computation of ‘t’ ratio of experimental group and control group on agility

Group	Test	Mean	Std. deviation	Std. error of the mean	‘t’	Table value
Experimental	Pre-test	11.41	0.40	0.10	9.40*	2.14
	Post-test	10.87	0.41	0.10		
Control	Pre-test	11.60	0.54	0.14	0.04	2.14
	Post-test	11.61	0.55	0.14		

*significance at 0.05 level of confidence

From the table II the pretest and posttest mean value of experimental group on agility is 11.41 and 10.87 respectively. The pretest and posttest standard deviation of experimental group on agility is 0.40 and 0.41 respectively. The obtained ‘t’ value of experimental group on agility is 9.40 at 0.05 level of confidence. It was greater than the required table value of 2.14 at 0.05 level of confidence. The pretest and posttest mean value of control group on agility is

- **Training sessions:** 3 days per week
- **Duration of the session:** 1 hour

Statistical procedure

The purpose of the present study was to find the effect of fartlek training on selected bio-motor fitness variables of urban school kho-kho players. The investigator used dependent ‘t’ test to find out the significant difference between pre and posttests. In all the cases 0.05 level of confidence was fixed to test the hypothesis.

Agility

The obtained data on agility of the experimental and control group have been analyzed and the results are presented in table – II

11.60 and 11.61 respectively. The pretest and posttest standard deviation of control group on agility is 0.54 and 0.55 respectively. The obtained ‘t’ value of control group on agility is 0.04 at 0.05 level of confidence. It was lesser than the required table value of 2.14 at 0.05 level of confidence. Finally results of the study shows that the experimental group had significant improvement on agility. The control group had insignificant difference on agility.

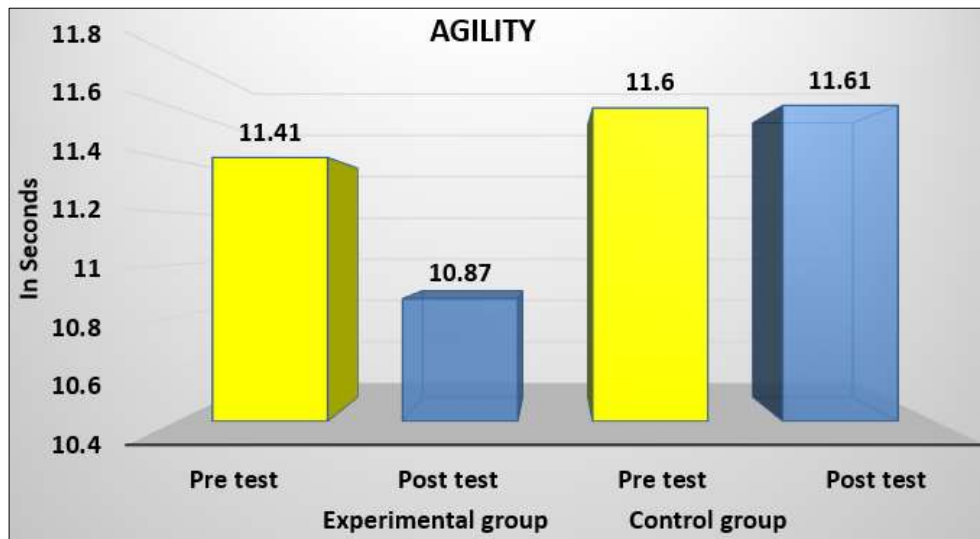


Fig 1: Bar diagram showing the pre and posttest mean value of experimental group and control group on agility

Cardiovascular Endurance: The obtained data on cardiovascular Endurance of the experimental and control

group have been analyzed and the results are presented in table – III.

Table 3: Computation of ‘t’ ratio of experimental and control group on cardiovascular endurance

Group	Test	Mean	Std. deviation	Std. error of the mean	‘t’	Table value
Experimental	Pre-test	1.73	176.58	45.59	6.94*	2.14
	Post-test	1.77	180.61	46.63		
Control	Pre-test	1.76	186.22	48.03	0.96	2.14
	Post-test	1.63	166.18	58.52		

*significance at 0.05 level of confidence

From the table III the pretest and posttest mean value of experimental group on cardiovascular Endurance is 1.73 and 1.77 respectively. The pretest and posttest standard deviation of experimental group on cardiovascular Endurance is 176.58 and 180.61 respectively. The obtained 't' value of experimental group on cardiovascular Endurance is 6.94 at 0.05 level of confidence. It was greater than the required table value of 2.14 at 0.05 level of confidence. The pretest and posttest mean value of control group on cardiovascular Endurance is 1.76 and 1.63

respectively. The pretest and posttest standard deviation of control group on cardiovascular Endurance is 186.22 and 166.18 respectively. The obtained 't' value of control group on cardiovascular Endurance is 0.96 at 0.05 level of confidence. It was lesser than the required table value of 2.14 at 0.05 level of confidence. Finally results of the study shows that the experimental group had significant improvement on cardiovascular Endurance. The control group had insignificant difference on cardiovascular Endurance.

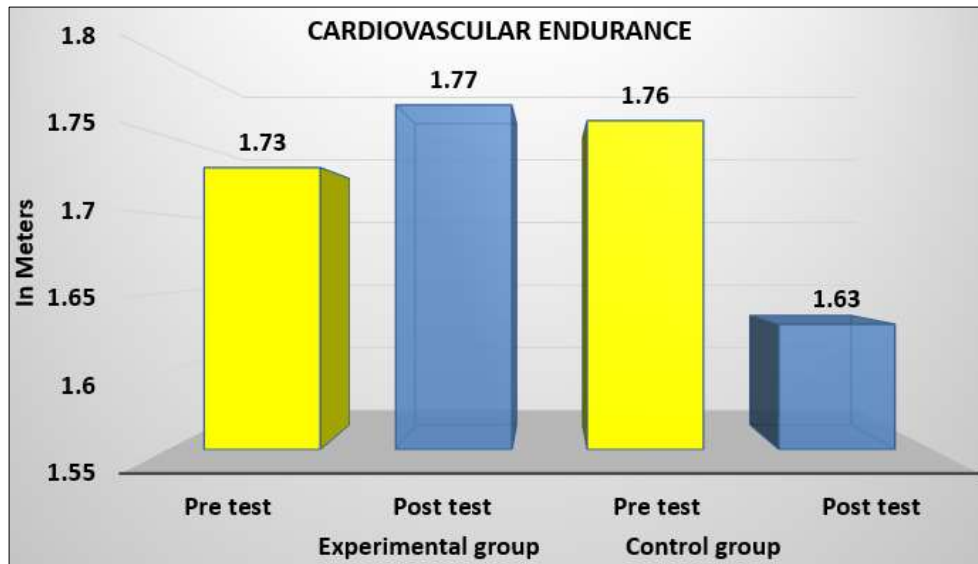


Fig 2: Bar diagram showing the pre and posttest mean value of experimental group and control group on cardiovascular endurance

Discussion on Hypotheses

The hypothesis stated that there may be a significant improvement on selected bio-motor fitness variables (agility and cardiovascular endurance) of urban kho-kho players due to the fartlek training. Finding of the study revealed that there was a significant improvement on selected bio-motor fitness variables namely (agility and cardiovascular endurance). The result of the present study is in accordance with the hypothesis. Hence the hypothesis of the investigator was held true and the hypothesis was fully accepted.

Conclusion

Based on the statistical analysis and the limitation of the study, and results the following conclusions are drawn.

It was concluded that the experimental group had significantly improved on selected bio-motor fitness variables such as agility and cardiovascular endurance.

It was concluded that the control group had insignificant difference on selected bio-motor fitness variables such as agility and cardiovascular endurance.

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