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RESEARCH ARTICLE

EFFECT OF FARTLEK TRAINING ON SELECTED PHYSICAL FITNESS AND SKILL PERFORMANCE VARIABLES AMONG INTERCOLLEGIATE LEVEL HOCKEY PLAYERS

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ABSTRACT

Introduction: Fartlek is a great training tool. Fartlek means "speed-play" and is very effective in increasing a runner's speed and endurance. Fartlek is a relatively unstructured type of continuous training that originated in Scandinavia. It is performed over natural terrain. A typical session lasts about 45 min. The route is predetermined, but the pace is varied from fast bursts to jogging and walking, according to the terrain, and the disposition of the runner. Depending on the precise composition, Fartlek training can improve both the aerobic and anaerobic capacity of the athlete. Many coaches use Fartlek training because it provides relief from highly structured types of training. ***Purpose:*** The purpose of this study was to find out effect of fartlek training on selected physical fitness and skill performance variables among intercollegiate level hockey players**.** ***Hypothesis****:* It was hypothesized that there would be significant differences due to fartlek training on selected physical fitness and skill performance variables among intercollegiate level hockey players from baseline to post treatment. It was also hypothesized that experimental group would show significant difference than the control group on selected skill related fitness variables among intercollegiate level hockey players. ***Methodology:*** Thirty women hockey players aged from 18 to 25 years who were represented intercollegiate level were selected as subjects to achieve the purpose of this study. They were dived into two groups of fifteen each. One group underwent the experimental treatment for a period of six weeks on fartlek training and another group acted as control group. The performance in 150 meters sprint was used to measure the speed endurance. The performance in Sit ups was used to measure the muscular endurance. The performance in Henry Friedal Field Hockey skill test was used to measure the ability of pass receiving, fielding and drive while moving. ***Statistical technique:*** The data collected from the subject on selected physical and physiological variables were statistically analyzed by using 't' ratio, 0.05 level of confidence was fixed to test the level of significance. ***Conclusion:*** The study concluded that speed endurance, muscular endurance and ability of pass receiving, fielding and drive while moving, were significantly improved to the influence of farlek training group among intercollegiate school hockey players.

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INTRODUCTION

Fartlek is a great training tool. Fartlek means "speed-play" and is very effective in increasing a runner's speed and endurance (Nicki Anderson, 2011). Fartlek is a relatively unstructured type of continuous training that originated in Scandinavia. It is performed over natural terrain. A typical session lasts about 45 min. The route is predetermined, but the pace is varied from fast bursts to jogging (or walking), according to the terrain, and the disposition of the runner. Depending on the precise composition, fartlek training can improve both the aerobic and anaerobic capacity of the athlete. Many coaches use fartlek training because it provides relief from highly structured types of training (Jesper Bondo Medhus, 2009). Fartlek conditioning can be applied to any form of cardiovascular exercise, and it is also considered one of the greatest endurance exercises.

Used primarily by long distance runners, fartlek training benefits are now being realized in the fitness community as well. Endurance exercises such as fartlek are an outstanding way to burn up some serious calories while improving our cardiovascular stamina. Spanos et al. (2007) determined the effect of two training programs and to compare the changes that occurred in maximum strength (1 RM) and the muscular endurance in three exercises: bench press, frontal pull downs and squat. Participants were 18 average trained and healthy men 20-30 years (M=24,3, SD=0,6) and they were randomly divided into two groups. One group executed circular training (CT, N=9) while the other group (DMG, N=9) was distributed in muscular group training. The total volume and the intensity of training were the same in both groups. The CT group trained 3 times per week accomplishing 1 exercise of 3 sets for each muscular group of the top part of the body and two exercises

for the legs. The DMG group performed 3 exercises of 3 sets for each muscular group. Measurements of maximum strength and muscular endurance were made before the beginning of the program and 12 weeks after the training. The results showed that the two groups presented significant improvement in maximum strength (1 RM) without significant differences in either of the two methods. In muscular endurance the DMG group was better in most exercises, but this increase was not significant. Furthermore it was concluded that when the total volume and the intensity of training were the same, the circular training and the training which was distributed in muscular groups, increased the maximum strength equally. Regarding muscular endurance it appeared that the results were better when the training was distributed in muscular groups.

Statement of the problem: The purpose of this study was to find out the effect of fartlek training on selected physical fitness and skill performance variables among intercollegiate level hockey players.

Hypothesis: The hypotheses formulated in the present study are as follows.

- It was hypothesized that there would be significant differences due to fartlek training on selected physical fitness and skill performance variables among intercollegiate level hockey players from baseline to post treatment.
- It was also hypothesized that experimental group would show significant difference than the control group on selected skill related fitness variables among intercollegiate level hockey players.

METHODOLOGY

Selection of the subjects: The subjects were selected randomly from Alagappa university college of physical education at Karaikudi. Thirty women hockey players aged from 18 to 25 years who were represented intercollegiate level were selected as subjects for the purpose of this study. They were dived into two groups of fifteen each. One group underwent the experimental treatment for a period of six weeks on fartlek training and another group acted as control group.

Selection of variables: The research scholar reviewed the available scientific literature pertaining to the problem from books, Journals, magazines, websites, and research papers. Based on the consideration of feasibility on criteria and availability the following variables were selected.

Physical Fitness Variables

- Speed Endurance
- Muscular Endurance

Skill related variable
Receiving, Ball Control and driving the ball.

Criterian Measures

The criterion measures chosen for testing the hypothesis were as follows.

- The performance in 150 meters sprint was used to measure the speed endurance. The unit of measurement was in seconds.
- The performance in sit ups was used to measure the muscular endurance. The unit of measurement was in numbers.
- The performance in Henry Friedal Field Hockey skill test was used to measure the ability of pass receiving, fielding and drive while moving. The unit of measurement was in seconds.
- An examination of table 2 indicates that the Paired 't' ratios for speed endurance of experimental group was 10.139 . The Paired 't' ratio on speed endurance was found to be greater than the required table value of 2.04 at 0.05 level of significance for 29 degrees of freedom. So it was found to be significant. The Paired 't' ratios for speed endurance of control group was 0.645. The Paired 't' ratio on speed endurance was not found to be greater than the required table value of 2.09 at 0.05 level of significance for 29 degrees of freedom. So it was not found to be statistically significant. Mean values for pre post test differences were shown in the figure.

An examination of table-3 indicates that the Paired 't' ratios for muscular endurance of experimental group was 5.775. The Paired 't' ratio on muscular endurance was found to be greater than the required table value of 2.04 at 0.05 level of significance for 29 degrees of freedom. So it was found to be significant. The Paired 't' ratios for muscular endurance of control group was 0.823. The Paired 't' ratio on muscular endurance was not found to be greater than the required table value of 2.09 at 0.05 level of significance for 29 degrees of freedom. So it was not found to be statistically significant. Mean values for pre post test differences were shown in the figure.

An examination of table 4.5 indicates that the Paired 't' ratios for receiving ball control driving the ball of experimental group was 4.33. The Paired 't' ratio on receiving ball control driving the ball was found to be greater than the required table value of 2.04 at 0.05 level of significance for 29 degrees of freedom. So it was found to be significant. The Paired 't' ratios for receiving ball control driving the ball of control group was 0,911. The Paired 't' ratio on receiving ball control driving the ball was not found to be greater than the required table value of 2.09 at 0.05 level of significance for 29 degrees of freedom. So it was not found to be statistically significant. Mean values for pre post test differences were shown in the figure.

DISCUSSION ON HYPOTHESIS

In hypothesis it is stated that there would be significant difference due to fartlek training on selected physical fitness and skill performance variables among intercollegiate level hockey players from baseline to post treatment. The findings of the study showed that fartlek training group has produced significant and positive influences on muscular endurance, speed endurance, cardio respiratory endurance and receiving ball control and driving the ball level. Hence hypothesis 1 is accepted. In hypothesis 2, it is stated that fartlek training group would show significant difference than the control group on selected skill related fitness variables among intercollegiate level hockey players. The findings of the study showed that fartlek training group has produced significant and positive influences on muscular endurance, speed endurance, cardiorespiratory endurance and receiving ball control and driving the ball level than the control group. Hence hypothesis 2 is accepted.

Table 1. descriptive analysis of pre and post test means of experimental and control group on selected variables

S.No	Variables	Pre Test Mean		Post Test mean
1	Speed Endurance	Experimental group	23.20	21.66
		Control group	22.75	22.68
2	Muscular Endurance	Experimental group	19.60	21.40
		Control group	19.60	19.40
4	Receiving, Ball Control, & Driving The Ball	Experimental group	337.21	327.36
		Control group	365.07	358.93

Table 2. Computation of 't' ratio between the pre test and post test means of speed endurance of experimental group and control group

S.No	Variables	Mean diff	SD	σ DM	't' ratio	Table value
1	SPEED ENDURANCE	Experimental group 1.54	0.588	0.1518	10.139	2.04
		Control group 0.7813	0.48429	0.12107	0.645	

*Significant at 0.05 level

Table 3. Computation of 't' ratio between the pre test and post test means of muscular endurance of experimental group and control group

S. No	Variables	Mean diff	SD	σ DM	't' ratio	Table value
1	MUSCULAR ENDURANCE	Experimental group 1.80	1.20	0.3116	5.775	2.04
		Control group 0.20	0.941	0.234	0.823	

*Significant at 0.05 level

Table 4. Computation of 't' ratio between the pre test and post test means of receiving ball control driving the ball of experimental group and control group

S. No	Variables	Mean diff	SD	σ DM	't' ratio	Table value
1	Receiving ball control driving the ball	Experimental group 4.856	4.34	1.121	4.33	2.04
		Control group 6.140	26.10	6.739	0.911	

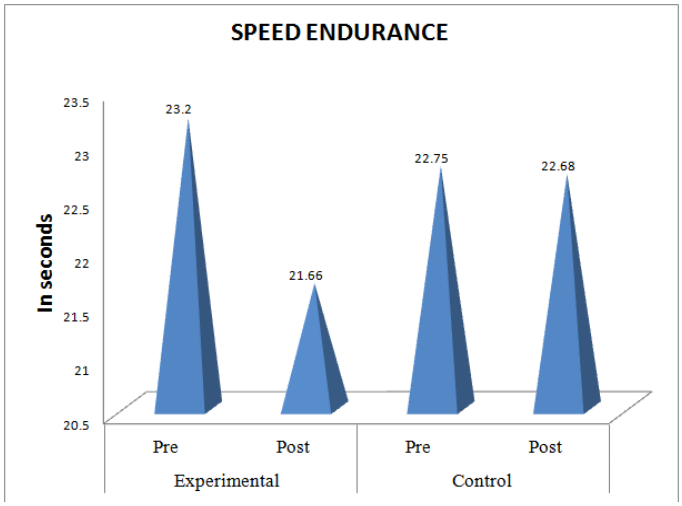

Figure 1. Bar diagram showing the pre mean and post mean of speed endurance of experimental group and control group

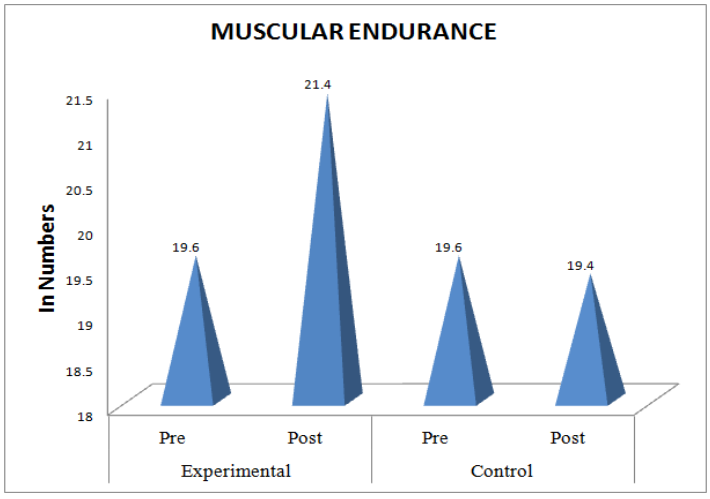

Figure -2. Bar diagram showing the pre mean and post mean of muscular endurance of experimental group and control group

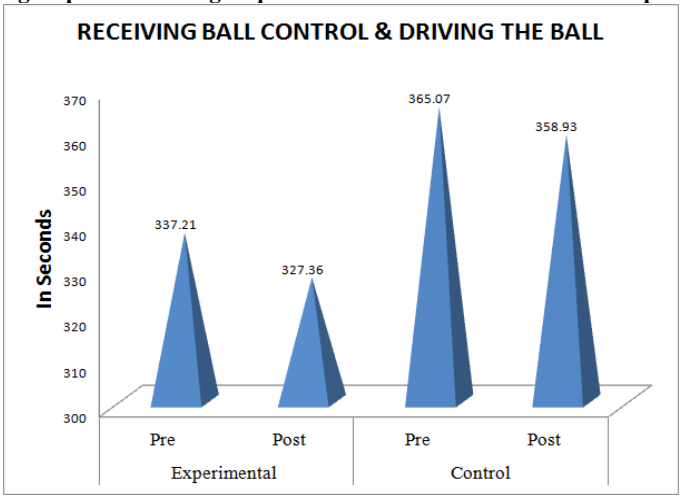

Figure 4.3. Bar diagram showing the pre mean and post mean of receiving ball control driving the ball of experimental group and control group

Conclusion

- It was concluded that the fartlek training group made a significant changes in the selected physical fitness variables: muscular endurance, speed endurance and skill performance variables from base line to post test.
- The control group did not show any significant difference in this study.

REFERENCES

Alborz, S.A., Ravasi, A.R., Nithakhsh, R.N. and Taghibeikzadeh, P.T. 2010. "Study on Three Types of Concurrent, Strength and Endurance Training Load

Changes on the Performance and Mood Indices in the Male Football Players", *Journal of Sports Science and Technology*, Vol.10,No.2,p. 35.

Brain and Budd, Executive Guide to Fitness, Canada: Van Nostrand Reinhold, 1982.

Bupesh, S., Moorthy, K., Sreedhar and Veeramani, S. 2011. "Effect of Training on Performance Related Variables of Footballer", Recent Trends in Yoga and Physical Education, P-183-184.

Chandrabose, A. 1994. "Therapeutic Effect of Yoga Practice on Patients Suffering from Bronchial Asthma", Unpublished M.P.Ed Project, Pondicherry University.

Charles B. Corbin and Buth Linsey, Concept of Physical Fitness with Laboratories, p.9.

William Goddie, 1964. Twentieth Century Dictionar, Mumbai: Allied Publishers,

Wilmore, Jack H. 1977. Athletic Training and Physical Fitness, physiological principles and practices of the conditioning process.

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