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THE EFFECT OF FARTLEK TRAINING AND SAND TRAINING ON THE SELECTED PHYSIOLOGICAL VARIABLES OF INTERCOLLEGIATE PLAYERS OF LARGE AREA GAMES

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Abstract:

The purpose of the study was to find out the effect of fartlek training and sand training on the selected physiologicalvariables ofintercollegiate players of large area games.To achieve the purpose of this study,ninetyintercollegiate players of large area games (Hockey Football and Cricket) were selected from, Coimbatore Institute of Technology, Coimbatore District, Tamilnadu. The subject's age ranged from 18 to 24 years and they were divided into three equal groups namely fartlek training group, sand training group and control group.Thefartlek training group, sand training group underwent training programme for the period of ten weeks, and control group has not under gone any type of training. The data were collected before and after the training programme. The selected data was statistically analyzed by using analysis of co-variance (ANCOVA). The result of the study reveals that was an insignificant difference between fartlek training group and sand training group on the selected physiological variables (vital capacity).

Key Words: Fartlek Training, Sand Training, Football, Cricket, Hockey, Physical Fitness Variables and Cardiovascular Endurance

Introduction:

Sports training is a programme of exercise designed to improve the skills and to increase the energy capacities of an athlete for a particular event. These basic training procedures will serve better when utilized with modifications suited to individuals or a group dealt with. The training programme should look into improving the performance of the athletes and at the same time should prevent possible injury.

Fartlek Training:

Fartlek training improves speed, endurance, race tactics, and also improves ability to rush forward into races and overtake a competitor or knock seconds off your finish time. Fartlek provides a lot of flexibility, high intensity session to push one's limits or a low intensity session, if tapering for a race or easing back into running post-injuries. Fartlek training is playful, playing with speed and saying the word often elicit giggle.

Sand Training:

Sand training is a very unique form of training which can push even the most physically fit athlete to their limits.Sand training may include practice on the beach, a sand volleyball court or a long-jump pit. A sandbox might be too small. One can perform these drills once or twice a week during speed workouts.

Statement of the Problem:

The purpose of the study was to find out the effect of fartlek training and sand training on the selected physiologyvariables of intercollegiate players of large area games.

Significance of the Study:

- The findings of the study will be helpful to make the society to concentrate on fartlek training and sand training.
- The study would provide the scientific base and guidance to the physical education teachers, coaches, and players to understand the effects of fartlek training and sand training.
- The results of the study would add the quantum of knowledge in the area of fartlek training and sand training.
- The study will help prepare a comprehensive training programme by including fartlek training and sand training.

Delimitations:

The study was delimited to the following factors:

- The study was delimited to ninety intercollegiate large area game players (Hockey, Football andCricket) selected from the Coimbatore Institute of Technology, Coimbatore, Tamil Nadu, India.
- The study was delimited to male intercollegiate players only.
- The age group of the subjects ranged from 18 to 24 years.
- The experimental treatment was delimited to 10 weeks.
- The study was delimited to the following selected independent and dependent variables.

Limitations:

The heredity and environmental factors which influence the selected variables have been recognized as limitations.

- The mood of the subjects which prevailed at the time of the training period also was not being under control.
- The subjects' living condition, life style, diet, personal habits, family heredity, and motivational factor were not taken into consideration.
- The subjects' social, economic, and cultural background and their position of play and past training were not taken into consideration.
- The subjects' daily routine work could not be controlled and their possible influence on this result of the study was noted as limitation.
- Apart from the training programme the involvement of the subjects in daily routines was not taken into consideration.

Hypotheses:

On the basis of literature gone through, research finding and the scholar's understanding of the problem, the following hypotheses were formulated.

- It was hypothesized that fartlek training might have a significant difference on the selected physiology variables (vital capacity) of intercollegiate players of large area games.
- It was hypothesized that sand training might have a significant difference on the selected physiology variables (vital capacity) of intercollegiate players of large area games.
- It was hypothesized that there might have a significant difference among the fartlek training, sand training, and control group on the selected physiology variables (vital capacity)of intercollegiate players of large area games.

Methodology:

Selection of Subjects:

The purpose of the study is to find out the effect of fartlek training and sand training on the selected physiology variables ofintercollegiate players of large area games.To achieve the purpose of this study, ninetyintercollegiate players of large area games (Hockey, Footballand Cricket,) were selected from, Coimbatore Institute of Technology, Coimbatore District, Tamilnadu. The subject's age ranged from 18 to 24 years and they were divided into three equal groups namely fartlek training group, sand training group and control group. Thus, each group consisted of thirty subjects.

Table 1: Selection of the Variables and Test Items

Variables	Name of the Test	Unit of Measures
Vital Capacity	Wet Spirometer Test	In Liters

Training Programme:

The selected subjects were divided into three equal groups' namely fartlek training group, sand training group and control group. The fartlek training group and the sand training group underwent the specific training programme in the following manner:

- Fartlek training group - Three days per week (Monday, Wednesday and Friday)
- Sand training group - Three days per week (Tuesday, Thursday and Saturday).
- Daily 60 minutes from 4.30pm to 5.30pm
- Total duration of the training programme was ten weeks.
- The control group was not involved in the whole specific training.

Vital Capacity:

The attained data on cardiovascular enduranceof experimental groups and control group have been evaluated and the results are presented in the following table

Table 2: Significance of Mean Gains / Losses between Pre Test and Post Test Mean Value of Fartlek Training Group Sand Training Group and Control Group on Vital Capacity

Group	Pretest Mean (±SD)	Posttest Mean (±SD)	MD	SE	't' ratio
Fartlek Training Group	3.00	3.37	0.37	0.04	9.25*
Sand Training Group	2.94	3.33	0.38	0.04	9.50*
Control Group	3.02	3.04	0.01	0.04	0.29

* Significant at 0.05 level with degrees of freedom 29, Table value 2.04

Table 2 shows that the pretest and posttest mean values of fartlektraining group on vital capacity is 3.00 and 3.37 respectively. The obtained 't' value of fartlektraining group on vital capacity is 9.25. It is greater than the required table value of 2.04 with df 29. Hence, it is proved that there is a significant difference between pretest and posttest of fartlektraining group on vital capacity.

The pretest and posttest mean values ofsand training group on vital capacity is 2.94and3.33respectively. The obtained 't' value of sand training group on vital capacity is 9.50. It is greater than the required table value of 2.04 with df 29. Hence, it is proved that there is a significant difference between the pretest and posttest of sand training group on vital capacity.

The pretest and posttest mean values of control group on vital capacity is 3.02and

3.04respectively. The obtained 't' value of the control group on cardiovascular endurance is 0.29. It is lesser than the required table value of 2.04 with df 29. Hence, it is proved that there is no significant difference between pretest and posttest of control group on vital capacity.

The mean value of pretest and posttest on vital capacity of fartlek training group and sand training group and control group are graphically represented in Figure 1.

Figure 1: Bar Diagram Showing the Pre Test and Post Test Mean Value of Fartlek Training Group Sand Training Group and Control Group on Vital Capacity

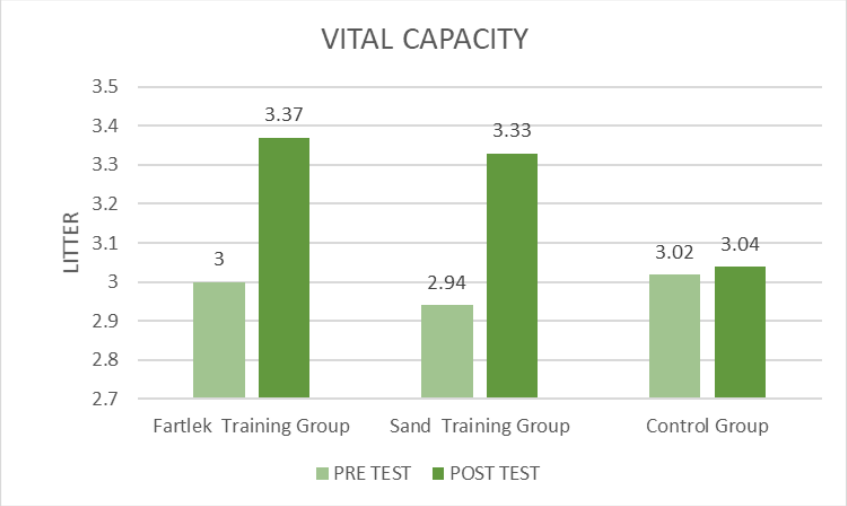


Table 3: Analysis of Covariance of Fartlek Training Group Sand Training Group and Control Group on Vital Capacity

	FTG	STG	CG	Source of Variance	Sum of Squares	Df	Means Squares	F ratio
Pretest Mean	3.00	2.94	3.02	BG	0.102	2	0.051	1.54
				WG	2.843	87	0.033	
Posttest Mean	3.37	3.33	3.04	BG	2.013	2	1.006	45.72*
				WG	1.892	87	0.022	
Adjusted Posttest Mean	3.37	3.32	3.04	BG	1.879	2	0.940	44.76*
				WG	1.783	86	0.021	

* - Significant, (Table Value - 0.05 Level for df 2 & 87 =3.10 & 86 =3.10)
BG- Among Group Means, WG- Within Group Means, df- Degrees of Freedom

Table 3, shows that the pretest mean values of fartlek training group, sand training group and control group on vital capacity are 3.00, 2.94 and 3.02 respectively. The obtained 'F' ratio value for pretest mean of fartlek training group, sand training group and control group on vital capacity is 1.54, which is less than the required table value of 3.10 for significance with df 2 and 87 at 0.05 level of confidence. It has been proved that all the three groups are randomly equal.

The posttest mean values of fartlek training group, sand training group and control group on vital capacity are 3.37, 3.33 and 3.04 respectively. The obtained 'F' ratio value for posttest mean of fartlek training group, sand training group and control group on vital capacity is 45.72, which is greater than the required table value of 3.10 for significance with df 2 and 87 at 0.05 level of confidence.

The adjusted posttest mean values of fartlek training group, sand training group and control group on vital capacity are 3.37, 3.32 and 3.04 respectively. The obtained 'F' ratio value for adjusted posttest mean of fartlek training group, sand training group and control group on vital capacity is 44.76, which is higher than the required table value of 3.10 for significance with df 2 and 89 at 0.05 level of confidence.

The above statistical analysis has proved that there is a significant difference among three groups on vital capacity due to the respectivetraining programme. Further, to determine which of the paired means has a significant difference, the Scheffe's post hoc test has been applied. The result of the follow-up test has been presented in the table 4.

Table 4: Scheffe's Post Hoc Test for the Difference between Adjusted Post-Test Mean of Vital Capacity

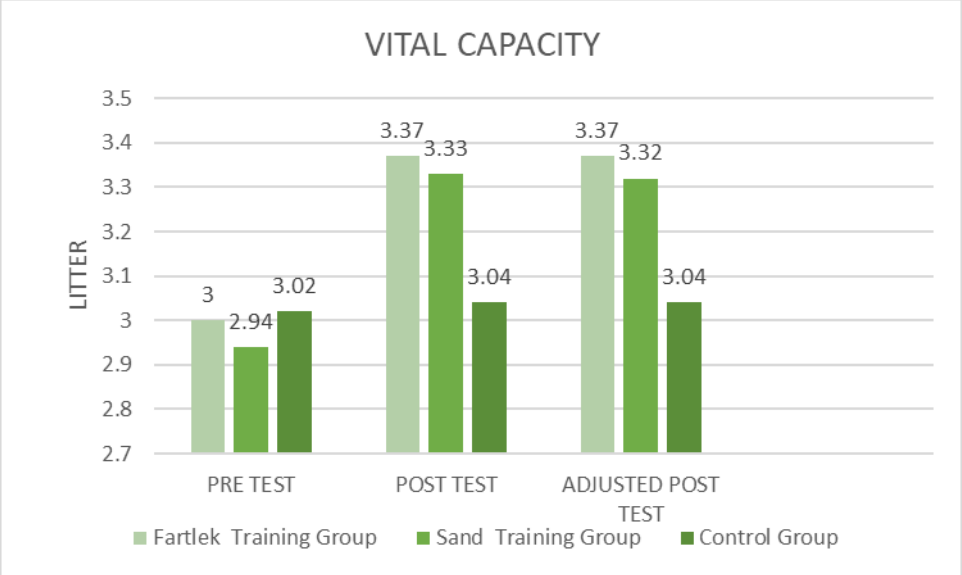
FTG	STG	CG	MD	CI
3.37	3.32	---	0.05	0.09
3.37	---	3.04	0.33*	
---	3.32	3.04	0.28*	

* Significant at 0.05 level of confidence

Table 4 shows that the adjusted posttest mean difference on vital capacity among fartlek training and control groups, sand training and control groups are 0.33 and 0.28 respectively, which is greater than the confidence interval value 0.09 at 0.05 level of confidence. The mean difference on vital capacity among fartlek training and sand training groups is 0.05, which is lesser than the confidence interval value 0.09 at 0.05 level of confidence.

The mean values of pretest, posttest and adjusted posttest on vital capacity of fartlek training, sand training and control group has been graphically represented in the figure 2.

Figure 2: Bar Diagram Showing the Pre Test Post Test and Adjusted Post Test Mean Value of Fartlek Training Group Sand Training Group and Control Group on Vital Capacity



Discussion on Findings:

The purpose of the study was to find out the effect of fartlek training and sand training on the selected physical fitness variables of intercollegiate players of large area games.

The outcomes of the research study revealed that there was a significant difference between pretest and posttest of fartlek training group and sand training groups on the selected physiological variables such as vital capacity. There was an insignificant difference between pretest and posttest of fartlek training group and sand training groups on the selected physiological variables such as vital capacity.

Regarding analysis of covariance, it was observed that there was a significant difference among fartlek training group, sand training group and control group on the selected physiological variables namely such as vital capacity.

It was found that the fartlek training group, sand training group were better than control group on the selected physiological variables such as vital capacity due to the respective training programme. There was an insignificant difference between the fartlek training group and sand training group on all the selected physiological variables such asvital capacity. But fartlek training group showed better in its favor in improving vital capacity than the sand training group.

Conclusions:

Based on the statistical analysis and the limitation of the study and results the following conclusions have been drawn.

- It was concluded that the fartlek training group had significant difference on the selectedphysiological variables such as vital capacity of intercollegiate players of large area games.
- It was concluded that the sand training group had significant difference on the selected physiological variables such as vital capacityof intercollegiate players of large area games.
- It was concluded that the control group had an insignificant difference on the selected physiological variables such as vital capacityof intercollegiate players of large area games.
- It was concluded that the fartlek training group and sand training group were better than the control group on the selected physiological variables such as vital capacityof intercollegiate players of large area games players.
- It was concluded that there was an insignificant difference between fartlek training group and sand training group on the selected physiological variables such as vital capacity. But the fartlek training group showed better trends in its favor in improving the selected physiological variables such as vital capacitythen the sand training group of intercollegiate players of large area games.

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