Effect of Various Training Methods on Speed of Basketball Players

Dr. L.S. Ranawat [1], Bharat Bhushan [2], Hemant Kumar Saini [3], Lakshya Nagar [4]

ABSTRACT

Sports have become an integral part of society. The coaches trainers, all over the world, are aspiring for better results of their trainees, which can be made possible with effective training methods.

The purpose of this study was to compare and find out the effect of various training methods on the speed of Basketball players. The study was delimited to 30 male Basketball players of the age group 14 to 21 years. The subject was selected from SAI Basketball Centre, University of Rajasthan, Jaipur. The subjects were divided into two groups, each with 15 subjects. Groups were classified under Fartlek Training and Interval Training, using random method of selection. The data was collected twice, before and after the training programme. The 50 m dash was used as tool for measuring the speed.

The mean difference in the pre and post test of speed variable was tested for significance by applying 't' test. The result showed that the Interval Training had significant effect on speed component of the Basketball players, as compared to the Fartlek Training.

INTRODUCTION

In the last five decades, sports has gained tremendous popularity, all over the globe. The popularity of sports is still increasing, at a fast pace, and this happy trend is likely to continue further.

In sports and physical education, training may be mentioned as a process of preparation of a sportsman or an individual, based on scientific and pedagogical principles, for higher performance. Specific conditioning programme is normally being planned for the development of certain physiological adaptations, which lead to a greater energy potential within the muscle cells.

In sports today, best performance can only be achieved through a meticulously

1. Executive Director, SAI N.S.N.I.S. Patiala
2. SAI Coach, University of Rajasthan, Jaipur (Raj.) (bharat.vaio@gmail.com)
3. Research Scholar, University of Rajasthan, Jaipur, Rajasthan.
4. Research Scholar, University of Rajasthan, Jaipur, Rajasthan.

planned, executed and controlled training system based on the scientific knowledge, theoretical and methodical fundamentals of sports training. Sports scientists and physiologists have been of the view that human capacity of performance among athletes had its limits in the matter of students' efficiency. But, this belief has been proved false and the barriers of performance have been surpassed by the athletes, as a result of continued improvement in the technique, method of training and coaching (Dabas, 1982).

Interval Training involves repetitions of high speed work followed by periods of activity. This training is quite often practiced by long distance runners; although some, sprinters and Basketball players are using this technique as well. Fartlek, which means 'Speed Play' in Swedish, is a form of conditioning which puts stress mainly on the aerobic energy system, due to the continuous nature of the exercise. Motor ability is one's present innate and acquired ability to perform motor skills of a general and fundamental nature, excluding specialized sports skills. Speed is one of the important components of motor ability.

METHODOLOGY

Sample

The Basketball players of SAI centre, University of Rajasthan, Jaipur, constituted the sampling frame of the study. The investigator randomly selected 30 male Basketball players for the study. In the study, the data was collected twice, of each selected variable, that is, one before the eight-week training programme and one after the training programme.

Tools and Equipments

The 50 m dash test for speed was used for the study, the brief description of which is given below.

Equipment

Stopwatches (at least two) or a single stop watch with a split second time.

Test Administrations

Two lines are marked on the floor 50 m apart. One line is a starting line and the other is the finish line. On the command "go" the subjects start running at their best to reach the finish point at earliest. The signal "go" is accompanied with the downward sweep of the starter's arm to give the visual signal to the timers who stand at finish line.

Scoring

The duration between the starting signal and when the subject crosses the finish line is the score of the test. The time is recorded correct up to the tenth of seconds.

Procedure

The selected thirty (N=30) male Basketball players were divided into two groups constituted of 15 players. Experimental (Fartlek Training) and Experimental (Interval Training). The experimental design for the study is depicted hereafter.

Table-1 : Showing Experimental Design for The Study

Experimental (Group 1) N=15	Experimental (Group 2) N=15
Pre Test	Pre Test
Interval Training (8 weeks)	Fartlek Training (8 weeks)
Post Test	Post Test

INTERVAL TRAINING

The eight-week interval training constitutes the following activities.

Table-2 : Eight-week Interval Training programme.

WEEK	Repetition Distance	Number of Repetition	Load	Intensity	Recovery Period	Distance	Total Distance
First Week	400 meters	8	76-78 sec.	Medium	150 sec.	3200 meters	3200 meters
Second Week	200 meters	16	36-38 sec.	Medium	120 sec.	3200 meters	3200 meters
Third week	300 meters	10	54-56 sec.	Medium	180 sec.	3000 meters	3000 meters
Fourth week	400 meters	4	76-78 sec.	Medium	150 sec.	1600 meters	3200 meters
	200 meters	8	36-38 sec.	Medium	120 sec.	1600 meters	
Fifth week	300 meters	10	54-56 sec.	Medium	180 sec.	3000 meters	3000 meters
Six week	400 meters	6	76-78 sec.	Medium	150 sec.	2400 meters	3200 meters
	200 meters	4	36-38 sec.	Medium	120 sec.	800 meters	
Seven week	600 meters	4	112-114 sec.	Medium	210 sec.	2400 meters	3600 meters
	300 meters	4	54-56 sec.	Medium	180 sec.	1200 meters	
Eight week	800 meters	3	148-150 sec.	Medium	240 sec.	2400 meters	3600 meters
	200 meters	6	36-38 sec.	Medium	120 sec.	1200 meters	

First Week : Stride along the straight and jog the curves at a steady pace. Run 8 laps. Athletes should not feel exhausted. Short strides of 20 seconds require little concentration.

Second Week : 16×200 m with 2:00 minutes interval recovery. The surface may tempt athletes to run faster, hold back to decrease injury potential.

Third Week : 10×300 m, in a slower speed then that of 200's, take a 3:00 recovery. Run two straights and one curve for the repetition, two curves and a straight for the recovery.

Fourth Week : 8×200 m and 4×400 m Athletes need to run slower than the 300 m pace in order to keep going for the extra 100 m Pace should be no faster than 2 miles race speed. Sessions at this modest pace give leg muscles a chance of adjusting to the track surface.

Fifth Week : 10×300 m again, pace judgment will improve with practice, aim to run them fairly even pace.

Sixth Week : 4×200 m and 6×400 m with the same jog recovery. Even with a full lap recovery this session is quite hard, aim to maintain

good form for the entire lap assesses athlete in each hundred.

Seventh Week : 4×300 m and 4×600 m

Eighth Week : 6×200 m and 3×800 m

Fartlek Training

- Warm up with a steady jog for 10 minutes.
- Jog for 60 Seconds.
- Run Hard (3 pace) for 90 Seconds.
- Jog for 45 Seconds.
- Sprint for 10 Seconds.
- Jog for 30 Seconds.
- Run backward for 30 Seconds.
- Walk for 30 Seconds.
- Run hard for 60 Seconds.
- Repeat 3 times.
- The above given programme is repeated 3 times.

Analysis of Data

In order to find out the training effect of interval training method on different groups, the statistical technique 't' test was used.

RESULTS

Table-3 : Mean and SD of Pre and Post Training values 50 meter Dash test.

	Pre Training	Post Training
Interval Training	7.073±0.075	7.009±0.053
	7.143±0.129	7.136±0.120

Table-4 : Mean, Standard Deviation and 't' value of speed variable.

Group	N	Mean Difference	Std. Deviation	't' VALUE	df	Sig. (2 Tailed)
Group 1	15	.6400	.03602	6.882	14	.000
Group 2	15	.00667	.02944	.877	14	.395

* Level of Significance at .05

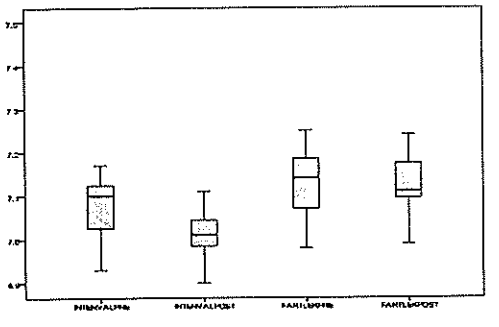

Figure 1 : Difference between both the groups on the level of significances.

CONCLUSION

Table 3 and Figure 1 show the effect of both the training methods, on speed of Basketball Players.

From the Tables and graph presentation, we can conclude that Interval training is more significant in increasing speed of Basketball players, as compared to the Fartlek Training, as obtained 't' value is 6.882, which is significantly higher as compared to the second group.

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