International Journal of Academic Research and Development
ISSN: 2455-4197
Impact Factor: RJIF 5.22
www.academicsjournal.com
Volume 2; Issue 5; September 2017; Page No. 142-145

The effect of fartlek training on speed and endurance of physical education students of Annamalai University

Sameer Bashir, Bilal Ahmad Hajam
PhD Scholar, Department of Physical Education and Sports Sciences, Annamalai University, Tamil Nadu, India

Abstract
The purpose of the present study was to investigate the effect of Fartlek training on, speed and endurance among physical education students of Annamalai University. To achieve the main purpose of the study, 40 male students were selected from Annamalai University which serves as subjects and their age group is between 18 to 25 years. The selected subjects were divided into two groups, experimental group and control group. 20 male student were selected from each group which serves as subjects. The experimental group goes through special Fartlek training practices, for six weeks which was considered adequate to show changes if any. The control group was not given any special training programmer apart from their regular activities. The physical variables which were examined during the study were speed and endurance. All the data which was collected during training programmer were examined by analyzing "t" test to find out whether any significance difference is found between the means of pre and post-test score of both groups within the period of six weeks of Fartlek training programmer. The level of confidence was fixed at 0.05.

Keywords: fartlek training, training programme, speed endurance

Introduction
Fartlek is Swedish word which means *"speed play"*. Fartlek training "is simply defined as periods of fast running intermixed with periods of slower running. Fartlek is a form of road running or cross country running in which the runner, usually solo, varies the pace significantly during the run. It is usually regarded as an advanced training technique, for the experienced runner who has been using interval training to develop speed and to raise the anaerobic threshold. However, the 'average' runner can also benefit from a simplified form of Fartlek training, to develop self-awareness and to introduce variety into the training program. If you exercise aerobically, Fartlek training can provide an effective change of pace for your routine. Fartlek training is a form of interval training that allows you to vary the length of your intervals, depending on how you feel. It is an efficient form of training that can condition you for many sports. If you are beginning an exercise program or adding Fartlek training to an existing program, consult with your health care provider. Most forms of aerobic exercise feature repetitious movements. Over a period of time, this can cause you to lose interest. Fartlek training allows you to add an endless variety of intervals to your aerobic workouts, which helps to keep you stimulated. For example, if you are a jogger, you could add two minutes of running for every five minutes you jog. During your next workout, you could add 30 seconds of sprinting, for every six minutes you jog. You could combine all three levels of intensity, by alternating jogging for seven minutes, with running for two minutes, and then sprint for the final 200 yards of your workout. Fartlek has grown into a popular method of training used by runners to provide an enjoyable and constructive alternative to simply pounding the streets with no purpose and plan. Fartlek – speed play, is essentially a training session that comprises some speed [effort] change and at the same time as enjoying the session. It is similar but unlike interval training. Interval training is more disciplined and precise in its training goal. Fartlek is not as demanding and can be incorporated to suit one's needs. As the foregoing Fartlek training definition describes, it's a very effective cardiovascular interval training protocol where you can easily customize your own workouts. It's used around the world to help endurance athletes compete at their peak. Whether you're preparing for your first marathon or any other long distance race, this training method is for you! Not only is it highly effective for endurance runners, but it's also very useful for athletes in many other sports as well! Football, track and field, rugby, basketball, and many others can greatly benefit from this training technique. However, you don't have to be a competitive athlete to use Fartlek training! If you're looking for a unique way to lose weight or to just get in the best shape of your life, then this training protocol is for you as well! Switching from a fast to a slow tempo will easily allow you to take it easy during certain parts of your session and also to turn it up a notch when necessary. This is very important for exercise adherence and to also keep things fresh and interesting! It should come to no surprise that virtually everyone can benefit from a well-designed Fartlek training session.

Speed
Speed is the ability of an athlete to move as fast as possible, through the optimal range of motion, in a deliberate and intentional manner, in a particular direction. Speed is not just measured on how fast a person is either; there are several

components of measurement that give a complete picture of an athlete's speed.

Endurance

"Endurance is conserved to be the capacity of an individual to sustain movement or effort over a period

Purpose of the Study

The purpose of the present study was to investigate the effect of selected Fartlek training on speed and endurance among physical education students of Annamalai University.

Methodology

For this study forty male students of Annamalai university were selected which serves as subject. All subjects were informed about the nature of the study and their consent was obtained to cooperate till the end of the experiment. The subjects were divided in to two groups, experimental group and control group. The age of the students ranged from 18 to 25 years. Experimental group goes through special selected Fartlek training program for six weeks and control group was not given any special training expect from their daily activities. The collected data from the subjects were statistically examined with "t" test to find out the effect of Fartlek training on speed and endurance among physical education students of Annamalai University. The level of confidence was fixed at 0.05. It was conducted that there was a significant improvement.

Experimental procedure of training design

The experimental group goes through the treatment of Fartlek training which was fixed with specific exercise and specified resistance or number of reputations for each exercise, for three complete Fartlek exercises. This group was under this training for three days a week over a period of six weeks. The exercise include in the Fartlek training program were originated and has been slightly modified which are as follows:

Fartlek Training Sessions

1. Long Distance Events (10k, 5k, 3k, Cycling)

- Warm up with a steady jog for 10 minutes
- Run hard, above race pace for 4-5 minutes
- Jog slowly for 1 minute
- Repeat 6-8 times
- Cool down at a steady pace for 10 minutes

2. Middle Distance Events (1500m, 3k, 5k)

- Warm up with a steady jog for 10 minutes
- Run hard, above race pace for 3 minutes
- Jog slowly for 1 minute
- Repeat 6-8 times
- Cool down at a steady pace for 10 minutes

3. Astrand Fartlek (800m)

- Warm up with a steady jog for 10 minutes
- Run hard, above race pace for 75 seconds
- Jog for 150 seconds
- Run hard, above race pace for 60 seconds
- Jog for 120 seconds
- Repeat 3-4 times
- Cool down at a steady pace for 10 minutes

4. Mulit-Sprint Sports (Soccer, basketball tennis etc.)

- Warm up with a steady jog for 10 minutes
- Jog for 60 seconds
- Run hard (3/4 pace) for 90 seconds
- Jog for 45 seconds
- Sprint for 10 seconds
- Jog for 30 seconds
- Run backwards for 30 seconds
- Walk for 30 seconds
- Run hard for 60 seconds
- Repeat 3-4 times
- Cool down at a steady pace for 10 minutes

Administration of the tests

Table 1

S. no.	Tests	Purpose of the Tests	Tools
1	50 yard dash	To find out the speed of the subject	Stopwatch, measuring tape
2	12 Minutes Run Walk.	To find out the endurance of the subject	Track & stopwatch

Results and Discussion

The result of the study were examined by applying "t" test to find out whether any significance difference between the means of pre and post test scores of the both groups after the period of six weeks Fartlek training program and is presented through tables and figures, which are given below. Mean score, standard deviation and t- value of Experimental and Control group students with respect to 50 yard dash, and 12 minute Run-Walk variables:-

Table 2: Shows statistical comparison of Speed between pre-test and post-test of Experimental group is as under:

Group	Mean	SD	T-ratio
Pre-test	7.42	1.35	**0.03**
Post-test	7.40	1.32	

N = 20

From the above table it is observed that the mean of Experimental group students in per-test and post-test is 7.43 and 7.40 respectively. After applying "t" test it is found that the t-ratio is 0.03 which was significant at the 0.05 level of significance.

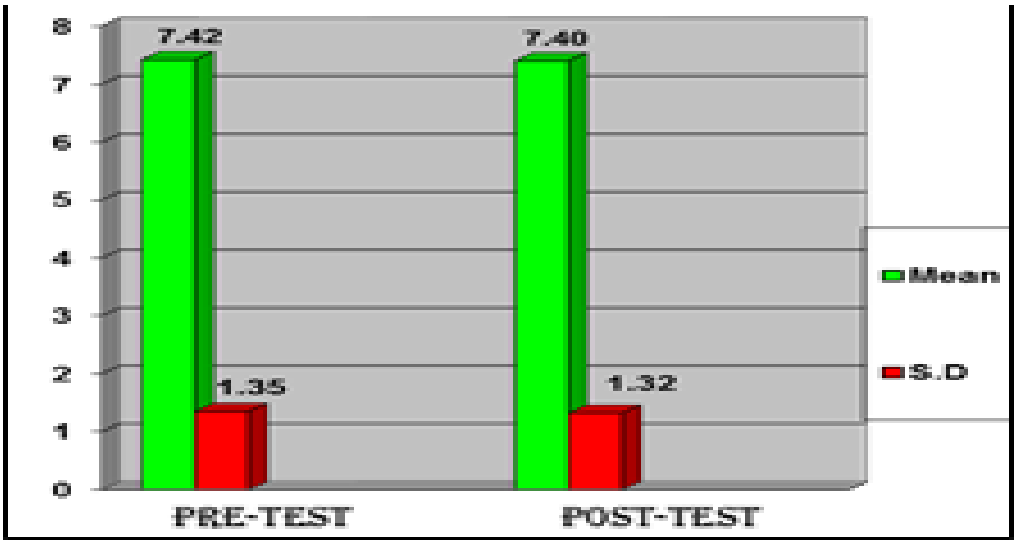

Fig 1: Figure showing the Mean difference of Experimental group students in pre and post-test on Speed

Table 3: Shows statistical comparison of Speed between pre-test and post-test of Control group is as under:

Group	Mean	SD	T-ratio
Pre-test	8.45	2.32	2
Post-test	8.31	2.15	

N =20

From the above table it is observed that the mean of Control group students in per-test and post-test is 8.45 and 8.31 respectively. After applying "t" test it is found that the t-ratio is 2 which was not significant at the 0.05 level of significance.

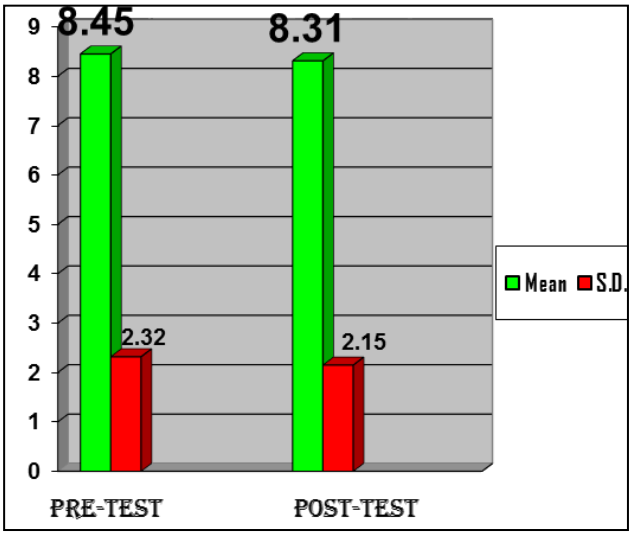

Fig 2: Figure showing the Mean difference of Control group students in pre and post-test on Speed

Table 4: Shows statistical comparison of endurance between pre-test and post-test of Experimental group is as under:

Group	Mean	SD	T-ratio
Pre-test	1851	445.45	0.04
Post-test	1845	423.64	

N = 20

From the above table it is observed that the mean of Experimental group students in per-test and post-test is 1851 and 1845 respectively. After applying "t" test it is found that the t-ratio is 0.04 which was significant at the 0.05 level of significance.

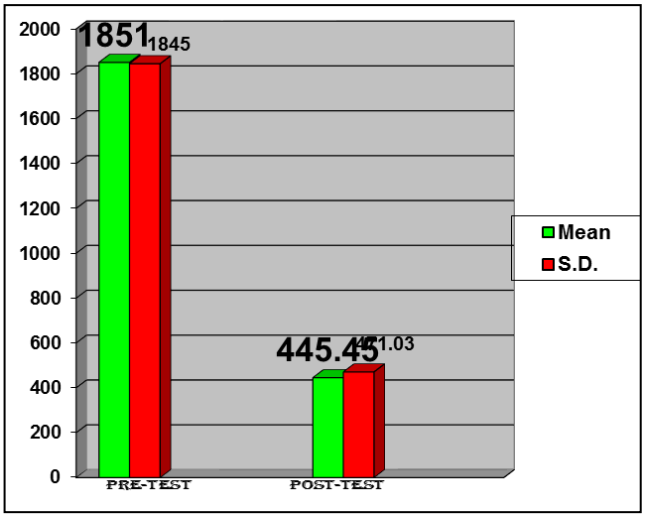

Fig 4: Figure showing the Mean difference of Experimental groupstudents in pre and post-test on Endurance

Table 5: Shows statistical comparison of Endurance between pre-test and post-test of Control group is as under:

Group	Mean	SD	T-ratio
Pre-test	1845	471.03	2.18
Post-test	1530	438.2	

N =20

From the above table it is observed that the mean of Control group students in per-test and post-test is 1845 and 1530 respectively. After applying "t" test it is found that the t-ratio is 2.18 which was not significant at the 0.05 level of significance.

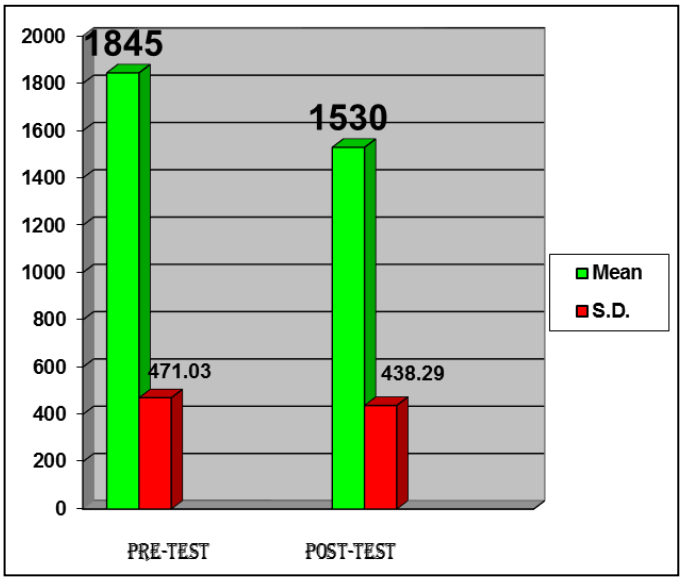

Fig 5: Figure showing the Mean difference of Control group students in pre and post-test on Endurance

Conclusions

Mean, S.D and t- ratio were consumed to evaluate the selected physical variable between control and experimental groups among physical education students. On the bases of statistical result the following conclusions were drawn within the limitation of the study.

1. There was significant effect on speed between control group and experimental group among physical education students.
2. There was significant effect on Endurance between control group and experimental group among physical education students.

References

1. McArdle William D, Katch Frank I, Katch Victor L. Training for Anaerobic and Aerobic Power. Exercise Physiology: Nutrition, Energy, and Human Performance. Lippincott Williams & Wilkins. 1981, 2009. ISBN 978-0-7817-9781-8. Retrieved. 2012, 483
2. Kerkman Jill. What the Fartlek?! Breaking Muscle. Breaking Muscle, 2012. Web. http://breakingmuscle.com/running/what-the-fartlek
3. Barker Jill. Making the leap from lazy jogging to real racing. Vancouver Sun. Archived from the original, 2011.
4. McDonald Lyle. The Ketogenic Diet: A Complete Guide for the Dieter and Practitioner. 1998, 247. ISBN 978-0-9671456-0-0.
5. Schatzle Jr. Joe. Finding Fartlek: The history and how-to of speed play". Running Times Magazine, 2002.
6. Schatzle Jr. Joe Runner's World, Finding Fartlek, 2002.
7. Shaw Jené. Ways to Fartlek. Triathlete.com. Np, 2014. Web. http://triathlon.competitor.com/2014/02/training/9-ways-to-fartlek_51140
8. Bean, Adam. Running With Music. Runner's World & Running Times. Runner's World, 1 Dec. 2010. Web. http://www.runnersworld.com/workout-music/running-music-0.
9. Mackenzie, Brain. "Fartlek Training." BrainMac Sports Coach. Np, 2014. Web. http://www.brianmac.co.uk/fartlek.htm
10. Hutchins, Michael. "What Are the Benefits of Fartlek Training?" LIVESTRONG.COM. LIVESTRONG.COM, 2013. Web. http://www.livestrong.com/article/471208-what-are-the-benefits-of-fartlek-training/
11. Galloway, Jeff. Cross-country Running. Aachen: Meyer & Meyer Sport, 2011.
12. Santos, Larissa. Which Is Better between Running Faster or Longer?. Avenue Form. Retrieved, 2016.
13. Hadfield, Jenny. "What's the Difference Between Fartlek, Tempo, and Interval Runs?" Runner's World & Running Times. Np, 2012. Web. http://www.runnersworld.com/race-training/whats-difference-between-fartlek-tempo-and-interval-runs
14. Rodgers, Bill, and Scott Douglas. The Complete Idiot's Guide to Jogging and Running. New York, NY: Alpha.