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A Study of Effect of Fartlek Training Programme on Selected Physical Fitness Variables and Performance of 1500 Meter Run for Secondary School Children

Mr. Nilesh N. Bansode: Shishuvan ICSE School, Matunga (E)

Introduction:

One may wonder how fit one needs to be an athlete. That depends entirely on the level at which one aspires to play naturally, the higher the level of competition the faster one must be. It has been referred that right man for the right game, should be the approach to derive highest performance. So much of competition exists that the research scholars have felt the need, to improve the performance of the athletes by enhancing their physical training programs like fartlek and interval training. The present study is in relation of the effect of fartlek and interval training program on performance of selected events for boys aged 14-16 year old. Athletics also known as track and field or track and field athletic, is a collection of sports events that involve running, throwing and jumping. However, some older tracks are 440 yards in length, while there are some tracks that are neither oval, non 400m/440y due to geographical considerations. Modern tracks are made with a rubberized surface, while older tracks may be made of dirt or cinders. Tracks normally consist of 6-10 lanes and many include a steeplechase lane with a water pit on one of the turns. This steeplechase pit can be placed either inside or outside the track, making for a tighter turn or a wider turn.

A fast motion is an evenly paced pattern that will develop endurance and at the same time enable the athlete to relax more easily by decreasing internal resistance of the musculature. The key to top-level performance in 800 meters is to find the correct balance of aerobic and anaerobic capacities. It is common that tracks will surround a playing field used for American football, soccer, or lacrosse. This inner field is usually known as the infield and has a surface of either grass or artificial turf. All field events can be contested on the infield. With the exception of the mile run, races based on imperial distances are rarely run on the track anymore since most tracks have been converted from a quarter mile (402.3 m) to 400 meters. However, the IAAF record book (currently held by Hicham El Guerrouj of Morocco for men and Svetlana Masterkova of Russia for women) because of its worldwide historic significance. Men and women do not compete against each other. Women generally run the same distances as men although hurdles and steeplechase. The middle distance events are generally taken to embrace the 800 meter, 1500 meter, 3000 meter, 10000 meter, and steeplechase, so it is importance for the middle distance runner to remember that his/her range of events which benefits from the progressive load principles of training.

Load of intensity of work performed is success in 800 m. running appears to depend largely on individual combination of aerobic and anaerobic training. Experience has shown that emphasis should be placed on the development of the individual athletes dominating factors performance. In general, this means that faster runners are advised to employ intensive training with a reduced load. Running events conducted on a 400 meters track. Sprints events up to and including 400 meters. common events are 60 meters (indoors only), 100 meters, 200 meters and 400 meters.

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Events from 800 meters and 3000 meters, especially 800 meters, 1500 meters mile and 3000meters are included in middle distance events. (Note: In the United States, high school athletes in most sates normally run the 800 meters, 1600 meters and 3200 meters. In few states high school athletes run the 1500 meters and 3000 meters instead of the 1600 meters and 3200 meters.) The basic of specific speed endurance appears to lie in a certain measure of aerobic endurance developed by suitable loading. Although the absolute extent of this loading is low in the endurance athlete the relative extent can be high and may reach 90% in phase 1 of the preparatory period. This type of training improves aerobic capacity and glycogen concentration in red muscle fibers. This has a positive effect not only on speed endurance, but also on the capacity to recover after loadings of sub maximum and maximum intensity. Thus, the athlete will be able to attempt more repetitions at the maximum and near maximum intensities of speed training.

Objectives:

- The purpose of this study is to find out the effect of fartlek training program on the performance of 1500 meters run of experimental group and control group.
- To see the minimum required fitness of athletes and to provide guideline for training procedure for athletes.
- To find out the effect of fartlek training program on fitness parameters.
- To see the effect of fartlek training program on fitness factors of control group and experimental group.
- To compare how far the fartlek training program is effective on fitness variables and also on the performance of 1500 meters run of control group and experimental group .

Hypotheses:

H₁ Fartlek training program may help to improve significantly some of the selected physical fitness variable.

H₂ Fartlek training program may help to improve significantly the performance of 1500 metres run.

Methodology:

The purpose of this study is to gather scientific evidence in connection with the utility of fartlet training programme in improvement of the physical fitness variables and performance of athletes running 1500 meters. In order to achieve the purpose, design of study, selection of subjects, variables, tests, tools, reliability of tools, criterion measure, administration of tests, and the training procedure used are described in this chapter.

Subjects:

If process of learning is new, skills are delayed beyond these years and then it is not possible to achieved highest goal. The age ranging from 08 to 12 years students are considered best for the preparation and later age to participate in various level competitions for exposes and building confidence in athletes.

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Sports and games coaches, Scientist, Physical education teachers, experts in the field of Physical Education and sports, Researches of sports field agreed that to catch the students between 13 years to 15 years and train them to achieve best performance and get the name as outstanding players in that particular sports.

The present study 60 male athletes from the population of about 450 students from Sarvodaya High School were selected as the subjects for the above study.

- **Dependent Variables**

For the study the scholar had selected some of the physical fitness variables and also running performance of 1500 meters as dependent variable. The performance ability of running 1500 meter distance, depends upon some factors like stamina, strength, endurance, speed etc. are considered as dependant variables for the present study.

The performance of 1500 meters run depends upon the following factors:

- 1 Endurance
- 2 Stamina
- 3 Leg frequency
- 4 Leg Power
- 5 Speed of the legs
- 6 Stride length
- 7 Less contact on the ground
- 8 Leg-Hand Coordination
- 9 Overall running ability

- **Independent Variables**

The research scholar had chosen a set of six fartlek exercises such as 300 meters run, 600 meters run, 120 meters run, 200 meters run, 150 meters run and 1000 meters run with different intensities considered as independent variable for the study.

- **Selection of Tests**

As per the previous experiences of coaches and also athletes athlete's performance depends upon Physical fitness Variables and these variables are performance oriented and are depend upon smooth functioning of different system. Systematic fartlek training program keeping these variables in mind helps to improve the Athlete's performance. In most of the athletic events and sports competitions it is the level of the Physical fitness Variables such as Speed, Strength, endurance etc. with which Athlete reaches to his target.

The research scholar had selected and used the test to measure the stride length by means of counting the number of strides for running 200 meters and then divide the distance by the number of strides taken to complete the distance of 200 meters will give the length of strides.

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Following tests were selected to collect data on selected variables.

SR. NO.	TEST ITEM	PERFORMANCE FACTORS
01	Sit Ups Test	Muscular Endurance
02	Vertical Jump Test	Muscular Strength
03	Sit and Reach Test	Flexibility
04	Harvard Step Test	Cardiovascular Endurance
05	1500 Meters Run	Running Performance

• Design of Study:

For the present study the research scholar had selected two groups, which consists of one control group and one experimental group. In the study the control group was not given any type of additional training other than their daily routine, where as the experimental group was used to find out different fartlek training on physical fitness variables, and the running performance ability of Athletes running 1500 meters event.

In both the groups the subjects were 30 in numbers assigned by scholar. The fartlek training was imparted to one group i.e. experimental group and the other group served as the control group. Experimental group was exposed to training with a set of exercise prepared for the specific purpose.

Statistical Analysis:

The data were analysed using the 't' test as suggested by Mc Guigan for significance of differences with and between the control and experimental groups.

Conclusions:

Within certain limitations the present experiment warrants the following conclusions:

- The fartlek training imparted in this study for a period of 8 weeks was useful in improving the over all Fitness and 1500 Meters Run performance as included for experiment.
- Associated fitness variables of school children were also improved significantly as a result of selected fartlek training.

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