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EFFECT OF INTERVAL TRAINING METHOD ON PERFORMANCE OF 200 METER SPRINTERS

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ABSTRACT

Objective

To find out the effect of Interval Training Method on performance of 200 meter Sprinters.

Method

Twenty four male and female students from athletics specialization were selected as subjects for the present study. They were classified into two groups of 12 each. Out of two, one was experimental and another was control group. Group 'A' was designated as experimental group, while 'B' was designated as control group. The treatment was assigned to experimental group only. The training was given for two months, five days a week to the experimental group. The volume of the work was very less for very first week and it was gradually increased from second to the last week of the training programme. The repetitions of 80 mts, 100 mts, 150 mts, 200 mts and 250 mts were given to the experimental group. The number of repetitions was gradually increased from 6 to 10 repetitions. The intensity of work load was set at 70 – 80% for Interval Group. Data were taken at the beginning and at the conclusions of an experimental period of two months. Paired 't' test was applied between pre – test and post – test means of both group in order to find out the improvement in experimental and control group. The level of significance was set at 0.05 levels.

Results and Conclusions

Two months of Interval Training Method was effective for the improvement in 200 meter sprinters in comparison of Control Group.

KEYWORDS: Interval Training Method, Repetitions, Intensity, Speed Endurance

INTRODUCTION

From the earliest time running has been a natural part of man's existence, whether he was catching animals for food or escaping from predators. However, he also began to run for pleasure and then competitively, leading to a desire to improve on his speed or ability to run farther. Athletics is great fun and people of all ages, can enjoy it. Athletic activities can be traced back to the ancient Greeks, who used to take part in games of running, throwing and jumping. Running is the most natural of athletics movements. Children run as part of their play and practically every game requires reserves of stamina and the ability to run fast. Every track event has running as its essence, sometimes alone, sometimes with a team and sometimes between obstacles. Every training and conditioning programme contains an element of running and tests of fitness or physical ability always include running for speed.

Two hundred meters running may requires the speed like short distance sprinter, but by no means and all 100 meters sprinters can completed successfully at 200 meters. In addition to the extra distance, there is also a bend that must be negotiated at top speed. It is not a long 100 meters or a short 400 meters, but in an event of the 200 meters it also needs control, balance and poise.

During the past decade, interval training has become one of the most common methods of conditioning for competition in events requiring physical endurance. It has been used by almost all distance runners during the past 10 years. Many coaches have contributed much of the tremendous improvement in the performance of endurance events in track and field and swimming to the increased use of interval training by athletes of both sex and all ages and abilities.

Interval method is perhaps the most versatile method for improving endurance of various types. In interval method, the exercise is done at relatively higher intensity with interval of incomplete recovery. Interval method is based on the following principal: Work should be done with sufficient speed and duration so that the heart rate goes up to 180 beats/min. After this there should be a recovery period and when the heart rate comes down to 120-130 beats/min, the work should be started again. The training load in interval method, therefore, can be controlled by repeatedly checking the heart rate.

The effect of interval method is determined by the variables of interval method which are as follows:-

- Speed of work
- Duration of work
- Duration of recovery
- Number of repetitions
- Nature of recovery

The research scholar is motivated to take this study to specifically analyze the performance of 200 meters sprinters by interval training method.

MATERIALS AND METHODS

The research scholar conducted a two months training programme to analyze the effects of interval training method on performance of 200 meter sprinters. The subjects were divided into two equal groups of 12 subjects each:

- Interval Group (A)
- Control Group (B)

The training was given five days in a week for the experimental group and no training was given to control group.

ADMINISTRATION OF PROGRAMME

Training Programme for Interval Group (A)

- The volume of the work load was less in the preparatory phase and it was increased gradually.
- The repetitions distances were given of 80 mts, 100 mts, 120 mts, 150 mts, 200 mts, and 250 mts.

- For checking the intensity after each load heart rate was considered as a measure of load. The heart rate was kept between 170 to 180 beats/min.
- When heart rate came down at 120-130 beats/min, the next work load was started again.

The criterion measure chosen for this study was the performance of 200 meters recorded up to higher $1/10^{th}$ of a second. For experimental group, the intensity, recovery and volume were shown in table-1.

Table 1: Load Parameters of Interval Training Method

Method	Intensity	Recovery	Volume
Interval Method	70-80%	Incomplete Recovery or 90-180 sec.	6-10 Repetitions

RESULT OF THE STUDY

In order to find the effect of Interval Training Method on performance of 200 meter sprinters, one tailed 't' test was applied at 0.05 level of significance.

The mean difference of Interval Group and Control Group and their values are presented in table 2.

Table 2: One Tailed 't' Ratio for Interval Group and Control Group

Group	N	Pre - Test	Post - Test	DM	SE_D	't' ratio
Interval Group (A)	12	31.25	29.91	1.34	0.20	6.72*
Control Group (B)	12	31.0	31.1	-0.09	0.38	-0.24

*Significant at 0.05 level

't' value required to be significant at 11 *df* = 2.20

Table 2 clearly revealed that experimental group improved significantly at 0.05 level yielding 't' values of 6.72. Whereas control group did not show any significant improvement indicating 't' value - 0.24. The needed 't' value for significance at 0.05 levels with 11 *df* for one tailed test is 2.20.

The graphical representation for means of experimental and control group are presented in figure 1.

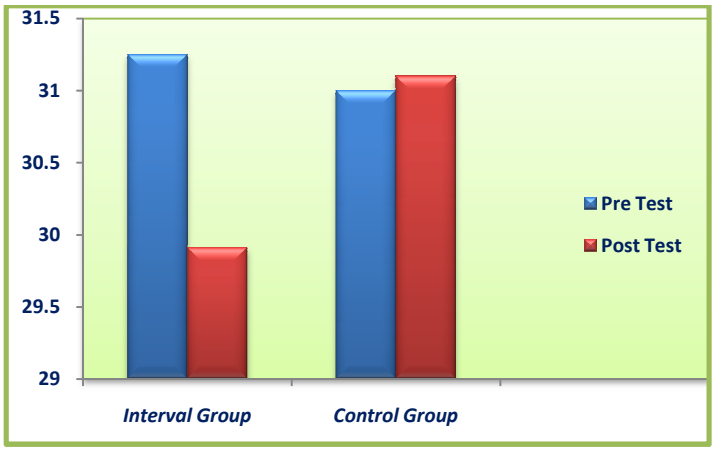

Figure 1

DISCUSSION OF FINDINGS

Analysis of data revealed that the experimental group trained by Interval Training Method improves significantly the performance of 200 meter sprinters whereas the control group did not show any significant improvement. Control group did not show any significant improvement in spite of their regular physical training as physical education students. Such result might have occurred due to the fact that a specific type of speed and speed endurance training was lacking for the control group. It was found that Interval Group significantly superior to the Control Group. This finding clearly indicates that the Interval Training Method is effective for improving the performance of 200 meter sprinters. This finding also give an idea of nature of 200 meters sprint which require speeds, as well as speed endurance and might be one of the causes for this type of findings.

CONCLUSIONS

In conclusion, result of the present study provides evidence that two months of Interval Training Method significantly improve the performance of 200 meter sprinters.

REFERENCES

1. *Anderson, George B. and Johnson, Pamela J. (1980).* ***Physical Fitness Digest****. Illinois: DBI Books.*
2. *Colfer, R. George (1975). Interval Training through Use of the set system."* ***Athletic Journal****. 55: 88.*
3. *Garrett, Henry E. and Woodworth, R.S. (1981).* ***Statistics in Psychology and Education****. Bombay: Vaklls, Feffer and Simons Ltd.*
4. *Gothi, Ekta. (1997).* ***Teaching and Coaching Athletics****. Delhi Publication.*
5. *Noon, T. (1965). "Effects of Speed and over distance Training on Young Runners."* ***Track Technique****. 21: 646.*
6. *Pal, Ramesh. (1986). "Comparative Effects Combination of Different Proportions of Aerobic and Anaerobic Training on Middle Distance Running."* ***Modern Perspectives in Physical Education and Sport Science.*** *(New) Delhi: Haman Publication), pp. 183 – 186.*
7. *Singh, Hardayal. (1991).* ***Science of Sports Training****. New Delhi: D.V.S. Publications.*
8. *Webb. W.W. (1973). "Three Interval Training Programme and their effects on Physiological Variables."* ***Track Technique****. 53:1683.*