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Effect of interval training on the performance of middle distance runners

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Abstract
The purpose of the study was to investigate the effect of interval training on the performance of middle distance runners. In order to accomplish this, 30 men students were selected from graduate and postgraduate courses of Annamalai University.
An initial test was administered on them in the event of 800 M running to know their timings before training. The performance in the initial test was recorded and on the basis of timing they were divided into two equal groups randomly. One group was kept as controlled group which was not given any kind of interval training. The second group was kept as experimental group which was given interval training.
The rest interval given according to the heart rate during recovery during recovery when the athlete acquire 120 beats per minute pulse, he was permitted to do the next repetition. The pulse was checked at the carotid artery in the neck or at the radial artery of the wrist. The pulse has been taken for 10 seconds and was multiplied into six to convert it to one minute. The investigator was convinced with the results that the athletes participated in interval training regularly and sincerely have attained an improvement in their performance.

Keywords: middle distance runners, interval training

Introduction
Sports have a very important role in modern society. It is important for an individual, a group, a nation and indeed the world. Sports performance is the result and expression of the total personality of a sports man. The development of a sports man enabling him to achieve high level of performance is usually concerned in four areas namely physical power, social adjustment, psychological development and physiological efficiency. Different activities make different demands on the organism with respect to circulatory, respiratory, metabolic and neurological and temperature regulating functions.

Test Administration
Middle Distance Performance
Purpose: The purpose of the test was to measure middle distance performance of the subjects.
Equipments: Two stop watches and score sheet.
Procedure: The subjects were asked to stand behind the starting line for the curve start with a clapper. As soon as the clapper is being clapped the subjects were asked to run 2 laps On a 400 M track and finish at the same starting point.
Scoring: The score was the timing that has been taken during the 800 M race. The time that elapsed from the clapper start until individual covers the 2laps distance.

Statistical Procedure
The following statistical procedures were followed to estimate the results and to arrive at conclusion. To test the significance of the effect of interval training, two correlated mean data collected were treated statistically by applying `t` ratio. The following formula was used in this study to compute `t` ratio for control group and `t` ratio for experimental group to estimate separately.
The data collected were analyzed statistically for the understanding of the results. The results presented within study are discussed in this chapter.

Results
The data regarding mean values, mean difference, standard deviation and the obtained‘t’ values are shown in table 1

Table 1: mean, standard deviation, mean difference and ‘t’ values for the scores of the pre-test and post-test of 800 m running.

Groups	Test	Mean In (Seconds)	Standard Deviation	Mean Difference	Obtained ‘T’ Value
Experimental Group	Pre-test	132.68	2.24	4.21	1.01
	Post-test	128.47	2.28		
Controlled Group	Pre-test	135.70	2.21	0.26	0.09
	Post-test	135.44	2.05		

Level of confidence of 0.05 required‘t’ value = 0.361

Table 1 shows that the concern value obtained by the experimental group in pre-test are 132.68 seconds and 128.47 seconds respectively. The mean difference of the experimental group is 4.21 seconds. This shows that the experimental group, by doing interval training has improved their performance by 4.21 seconds. The standard deviation of pre- test and post –

test scores are 2.24 and 2.28 respectively. The obtained 't' value for the experimental group in 1.01 at 0.05 level of confidence.

The obtained mean value for the control group in pre – test and post – test 135.7 seconds and 135.44 seconds respectively. The mean difference for control group in 0.26 seconds. This shows that the control group without doing interval have developed their performance only by 0.26 seconds. The standard deviation of pre - test and post – test scores are 2.21 and 2.05 respectively. The obtained 't' value for control group is 0.09 at 0.05 level of confidence.

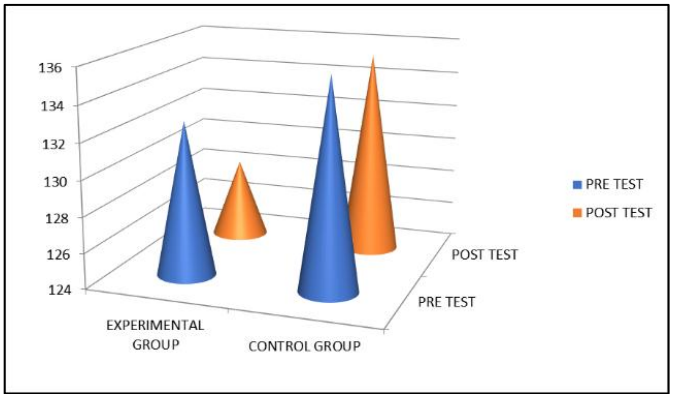

Fig 1: diagram showing mean for the scores of the pre-test and post-test of 800 m running.

Experimental Group

Since the obtained't' value of 1.01 is greater than the table value of 0.361 at 0.05 level of confidence, there will be a significant difference among middle distance runners by doing interval training.

Control Group

Since the obtain 't' value of 0.09 is less than the table value of 0.361 at 0.05 level of confidence, there is no significant difference in performance of middle distance runners without doing interval training.

Discussions

The investigator was convinced with the results that the athletes participated in interval training regularly and sincerely have attained an improvement in their performance. The investigator felt that and middle distance runner could be enhanced with performance by giving proper interval training program.

Thus the outcome of this study was found highly significant and satisfactory as the experimental group, which involved in doing interval training showed greater improvement in their performance than the control group. Thus the hypotheses of this study were proved statistically and systematically.

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