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INTERVAL TRAINING'S EFFECTS ON PARTICULAR PHYSICAL FITNESS VARIABLES AMONG INTERCOLLEGIATE CRICKET PLAYERS

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ABSTRACT:

This study looked into how interval training affected particular aspects of intercollegiate cricket players' physical fitness. A total of thirty male cricket players from SRMV Maruthi College of Physical Education in Coimbatore were chosen and split into two groups at random. Each group had fifteen participants: the experimental group and the control group. For six weeks, the experimental group engaged in a structured interval training program three times a week, while the control group received no extra instruction during this time. Both groups underwent fitness evaluations before and after the intervention. The dependent t-test was used to assess the performance changes. In comparison to the control group, the experimental group demonstrated notable gains in the particular elements of physical fitness, according to the data.

KEYWORDS: Interval training, Cricket, Speed and Agility.

INTRODUCTION

Physical fitness plays a vital role in enhancing sports performance, particularly in skill-demanding and endurance-based games like cricket. Cricket at the inter-collegiate level demands a high level of speed, agility, muscular strength, and cardiovascular endurance to perform optimally throughout matches that can extend over long durations. Traditional training methods are often supplemented with scientifically designed conditioning programs to improve these fitness components. One such effective training method is interval training, which involves alternating periods of high-intensity effort with periods of rest or low-intensity activity.

Interval training has been widely recognized for its efficiency in improving both aerobic and anaerobic capacities, muscular endurance, and overall athletic performance (Gibala et al.,).

It boosts the body's metabolic and cardiovascular reactions, speeds up recovery, and allows athletes to sustain high-intensity workouts for longer. Interval training can be especially helpful because cricket players require frequent bursts of high-intensity exercise, including as running between wickets, diving in the field, and throwing rapid bowling spells.

Few studies have examined the precise effects of interval training on the physical fitness factors that are important for cricket players, particularly at the collegiate level, despite its demonstrated advantages in other sports. Thus, the purpose of this study was to investigate how an 8-week interval training program affected a few physical fitness metrics in intercollegiate cricket players, including speed, agility, explosive power, muscular endurance, and cardiovascular endurance.

METHODOLOGY:

The aim of this study was to investigate how interval training affected male college cricket players' speed and agility, two key aspects of physical fitness. The subjects were thirty physical education students, ages 19 to 25, from Sri Ramakrishna Mission Vidyalaya, Maruthi College of Physical Education, Coimbatore, Tamil Nadu, India. They were split into an experimental group and a control group at random, each consisting of fifteen individuals.

For six weeks, the experimental group engaged in a three-day-per-week interval training program, while the control group continued with their usual physical education curriculum without any extra training. The 50-meter sprint was used to gauge speed (in seconds), while the Illinois Agility Test was used to gauge agility (in seconds). Prior to and during the six-week training session, all participants were given pre- and post-tests on these variables.

Analysis of Covariance (ANCOVA) was used to examine the data and assess the significance of group differences for each of the variables that were chosen. For every statistical test, a significance level of 0.05 was established.

STATISTICAL TECHNIQUES:

The data were analysed using a dependent t-test, also known as a paired t-test, which is suitable for comparing pre-test and post-test scores within the same group. This statistical method was applied to determine whether there were significant changes in physical fitness from pre- to post-intervention for both the experimental and control groups. A significance level of 0.05 was established, with the degrees of freedom for each test set at 1 and 28. The dependent t-test was used to evaluate whether the interval training produced a statistically significant improvement in the experimental group compared to the control group. If the resulting p-value was less than 0.05, the null hypothesis was rejected, indicating a significant effect of the training. On the other hand, a p-value greater than 0.05 suggested that the difference was not statistically significant.

RESULTS:

TABLE – I

COMPUTATION WITH 't' TEST OF SPEED ON EXPERIMENTAL AND CONTROL GROUP ON INTER-COLLEGIATE CRICKET PLAYERS

Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
SPEED	Experimental Group	Pre Test	7.48	0.45	0.25	0.026	9.38*
		Post Test	7.23	0.40			
	Control Group	Pre Test	7.87	0.41	0.67	0.033	0.20
		Post Test	7.88	0.42			

* Significant at 0.05 level, Table value for df 14 was 2.14

Table-I highlights the mean and standard deviation of speed for both the experimental and control groups of intercollegiate cricket players. The experimental group's pre-test and post-test mean scores were 7.48 and 7.23, respectively, with standard deviations of 0.45 and 0.40. The calculated 't' value of 9.38 exceeded the table value of 2.14 at 14 degrees of freedom. In contrast, the control group's mean scores were 7.87 and 7.88, with standard deviations of 0.41 and 0.42, and the 't' value of 0.20 fell below the table value of 2.14. The results suggest that the experimental group showed significant enhancement in speed of interval training on selected physical fitness variables of intercollegiate level cricketers.

FIGURE-1

THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON SPEED OF INTER COLLEGIATE CRICKET PLAYERS

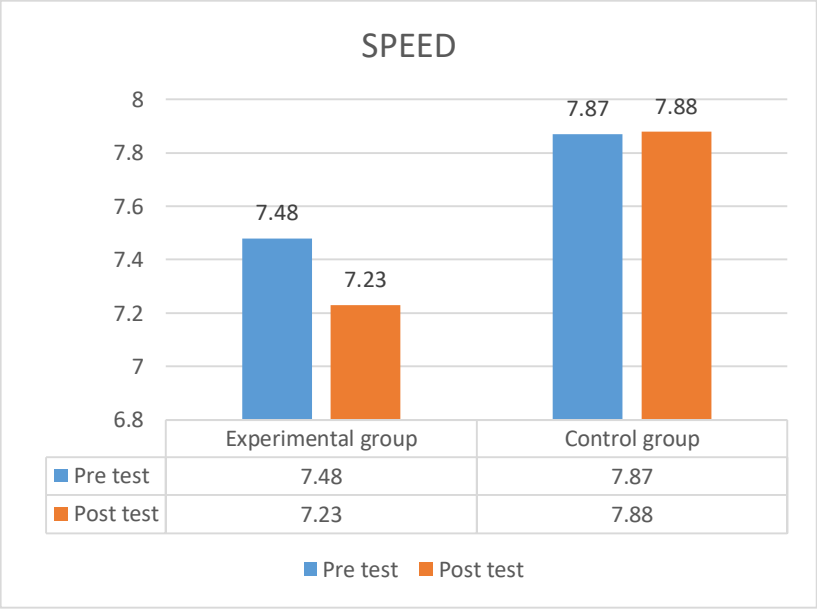


TABLE – II

COMPUTATION WITH 't' TEST OF AGILITY ON EXPERIMENTAL AND CONTROL GROUP ON INTER-COLLEGIATE CRICKET PLAYERS

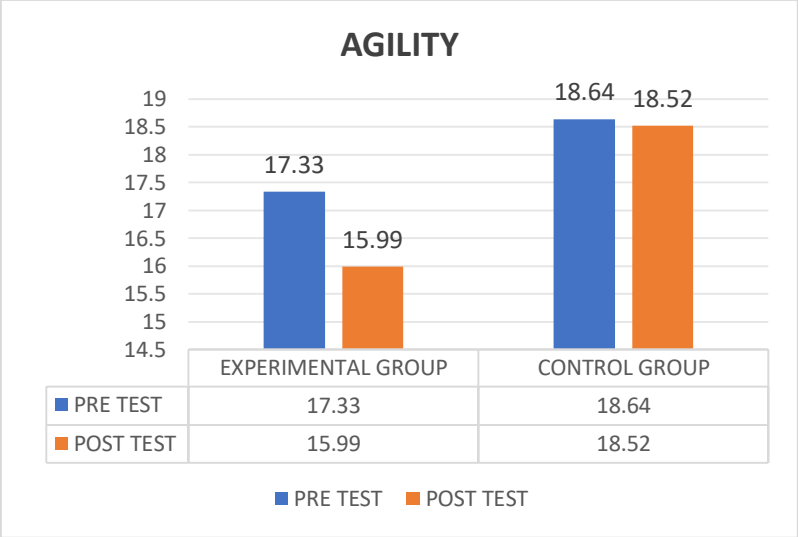
Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
Agility	Experimental Group	Pre Test	17.33	1.16	1.34	0.08	17.06*
		Post Test	15.99	0.96			
	Control Group	Pre Test	18.64	1.30	0.18	0.20	0.58
		Post Test	18.52	1.06			

*Significant at 0.05 level, Table value for df 14 was 2.14

Table-II highlights the mean and standard deviation of agility and for both the experimental and control groups of intercollegiate cricket players. The experimental group's pre-test and post-test mean scores were 17.33 and 15.99 respectively, with standard deviations of 1.16 and 0.96 The calculated 't' value of 17.05 exceeded the table value of 2.14 at 14 degrees of freedom. In contrast, the control group's mean scores were 18.64 and 18.52 with standard deviations of 1.30 and 1.06, and the 't' value of 0.58 fell below the table value of 2.14. The results suggest that the experimental group showed significant enhancement in agility, attributed to interval training intercollegiate cricket players.

FIGURE - II

THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON AGILITY OF INTER COLLEGIATE CRICKET PLAYERS



DISCUSSION ON FINDINGS

The present study investigated the effect of interval training on selected physical fitness variables of intercollegiate cricket players. The result of this study indicated that the interval training improved the physical fitness variables of cricket players.

CONCLUSION

- According to the study's findings, intercollegiate cricket players' physical fitness characteristics differed significantly.
- The study's findings show that the control group's physical fitness characteristics showed an insignificant difference.

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