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## Effect of interval training on physical fitness variables among kabaddi players

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### Abstract

The purpose of the study was to determine the effect of interval training on physical fitness variables in relation to their performance of Baghpat district kabaddi players. For the study a total of forty (N=40) male students were selected from district Baghpat and their age ranged from 17 to 21 years. They were equally divided (n=20) into an experimental and control group. Speed, Agility and Explosive Strength variables were selected for the present study. The pre and post test data pertaining to the respective performance related variable were collected by employing standard test used on both the experimental and control group.

**Keywords:** Interval training, physical fitness variables

### Introduction

A sport is typically defined as any physical activity involving some degree of completion. Some of the common sports include baseball, football, basketball, racing, volleyball, among many other kinds of sports. A person who participates in any sport as a profession is referred to as an athlete. As proved in this essay, while sports are very important in an individual's daily life, it has its share of challenges. According to Forrester (2006), universities and colleges, universities, and colleges have been seen to provide excellent environments where sporting activities can be upgraded. Several programs in these institutions which are offered to students promote the students' abilities and talents in recreational activities and therefore boosting their physical wellbeing. The relationship between involvement in sports and academic work has been seen to be beneficial as it refreshes the mind after classes. Some of the students end up taking sports as their future career. Students who take part in recreational activities such as sports end up being the best in class, and their reasoning abilities are hence faster compared to the rest (Forrester 2006). Besides, emotional wellbeing is constructively related to the extent to which a student participated in sports. In conclusion, sports are crucial in our lives as it helps to improve or physical and mental fitness.

Interval training consists of a series of repeated rounds of exercise, ranging from several minutes to just a few seconds. During each interval you work at a set intensity for a specific period of time or distance (work interval) and follow this with a low intensity recovery period. Interval training programs manipulate the intensity and duration of the work intervals, and the length of the rest periods, to create the desired training responses. A complete interval training program usually comprises several short, alternating periods of both higher and lower intensity exercises. Originally called *Fartlek* (a Swedish term meaning "speed play"), interval training combines alternating short and fast bursts of intense exercise with slower, easier activity. *Fartlek* training was a deliberate attempt to complete more work than continuous training by increasing the intensity of workouts. Interval training has since evolved into a more structured and sophisticated way of fast tracking your fitness training. Unlike *Fartlek* training, which causes a temporary build-up of lactic acid, interval training involves alternating periods of activity and recovery. Recovery is achieved by maintaining movement throughout the entire workout, which facilitates the removal of lactic acid and other waste products. Interval training programs are also designed scientifically and specifically for individual athletes. Physiologists and trainers measure precise periods of activity that match the athlete's sport and current level of fitness.

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For example, the intensity and duration of these periods of activity are usually determined by AT (anaerobic threshold) testing, which also measures the blood-lactate of the athlete during intense exercise.

### Material and Methods

For the study a total number of (N=40) male kabaddi players of baghat district were selected and their age ranged between 17 to 21 years. They were equally divided twenty each in to experimental and control group. Speed, Agility and Explosive strength variables of physical fitness variables were selected. The programme started with fifteen minutes of warm up, sixty minutes of exercises and fifteen minutes of warm down session. The test used for the physical fitness performance variables, for speed 50 mt dash, for agility zig zag run and for explosive strength standing broad jump were selected and they were measured in seconds and centimeter.

### Result

**Table 1:** T-ratio of experimental and control group in relation to speed (50 meter run test) variable

Control factor	Pre test			Post rest			Df	t-ratio
	N	Mean	SD	N	Mean	SD		
Experimental	20	4.40	.15	20	4.31	.13	19	5.98*
Control	20	4.42	.18	20	4.42	.17	19	.11

\* Significant at the 0.05 level of confidence (t.o5 (19) =2.09)

Shows the number of subjects, mean, standard deviation and 't' value of 50 meter run test of control and experimental group. The mean values of experimental group pre and post-test were 4.40 and 4.31 and that of control group pre and post were 4.42 and 4.42. The standard deviation of experimental and control group pre and post were .15, .13 and .18, .17 respectively. The table 1 indicates that, there was a significant difference between the pre and post test scores of 50 meter sprint test of experimental group, since the calculated 't' value of 5.98 is higher than tabulated 't' value of 2.09 at 0.05 level of significance with 19 degrees of freedom. In the case of control group there was no significant difference.

**Table 2:** T-ratio of experimental and control group in relation to agility (zig-zag) variable

Control factor	Pre test			Post rest			Df	t-ratio
	N	Mean	SD	N	Mean	SD		
Experimental	20	10.42	.56	20	10.20	.48	19	6.98*
Control	20	10.47	.47	20	10.46	.42	19	.48

\* Significant at the 0.05 level of confidence (t.o5 (19) =2.09)

Table 2 shows the number of subjects, mean, standard deviation and 't' value of zig-zag agility test of control and experimental group. The mean values of experimental group pre and post-test were 10.42 and 10.20 and that of control group pre and post were 10.47 and 10.46. The standard deviation of experimental and control group pre and post were .56, .48 and .47, .42 respectively. The table 2 indicates that, there was a significant difference between the pre and post test scores of zig-zag agility run test of experimental group, since the calculated 't' value of 6.98 is higher than tabulated 't' value of 2.09 at 0.05 level of significance with 19 degrees of freedom. In the case of control group there was no significant difference.

**Table 3:** T-ratio of experimental and control group in relation to explosive strength (Standing broad jump) variable

Control factor	Pre test			Post rest			Df	t-ratio
	N	Mean	SD	N	Mean	SD		
Experimental	20	52.75	2.30	20	57.35	1.49	19	10.38*
Control	20	53.65	3.15	20	54.05	3.11	19	6.28

\* Significant at the 0.05 level of confidence (t.o5 (19) =2.09)

Table 3 shows the number of subjects, mean, standard deviation and 't' value of standing broad jump test of control and experimental group. The mean values of experimental group pre and post-test were 52.75 and 57.35 and that of control group pre and post were 53.65 and 54.05. The standard deviation of experimental and control group pre and post were 2.30, 1.49 and 3.15, 3.11 respectively. The table 3 indicates that, there was a significant difference between the pre and post test scores of standing broad jump test of experimental group, since the calculated 't' value of 10.38 is higher than tabulated 't' value of 2.09 at 0.05 level of significance with 19 degrees of freedom. In the case of control group there was also significant difference.

### Discussion and Conclusion

Interval training had improved the physical fitness variables in related to baghat district kabaddi players, namely speed, agility and explosive strength. The result of the study seems to be permitting the following conclusions. Participation in six weeks interval training programme resulted in improvement of playing ability and the following performance related variables such as Speed, Agility & Explosive Strength.

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