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Effects of fartlek training and continuous run on selected physical fitness variable among inter collegiate men students

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Abstract
The purpose of the present investigation is to find out the effects of fartlek training and continuous run on selected physical fitness variable among college men students. To achieve purpose of the study, 30 College men students were selected from Alagappa University inter collegiate athletes, Karaikudi. Their age ranged from 18 to 25years. All the subjects had good physical fitness and have been participated in regular college sports activities. There were equally divided into two groups experiment group –I underwent fartlek training and experimental group –II underwent continuous run. The selected subjected were tested on cardio –respiratory endurance and speed endurance. Pre –test was taken before the practices period and post-test was measured after six weeks training period. Statistical technique't' ratio was used to analyse the mean of the pre-test and post test data of experimental groups. The results revealed that there was a significant difference found fartlek training and continuous run.

Keywords: fartlek training, continuous run, cardio–respiratory endurance, speed endurance, pre-test and post-test

Introduction
Continuous running at a steady pace or intensity where the heart rate lies between 130 and 160beats per minute. Cardio-respiratory adaptations, permitting significant functional improvement. The duration such running will be over 30minutes for the young athlete and from 60-120 minutes for the mature. [2]Lower-intensity continuous endurance training. This method is recommended especially for the long distance endurance athlete. Aerobic function resulting from continuous training. Fartlek training, with the speed of successive stretches alternating according to a plan. Training methods based on performance requirements should be implemented. At the simplest level, one might have a slow pace (HR -130 -150 beats /minute) for alternating with a fast pace (HR ˛ 170- 180 beats /minute. This method is used extensively middle distance runner. Fartlek exercise considered as one of the most important training methods that work on developing the player's aerobic and anaerobic capacities Fartlek, a Swedish term that means "speed play," is a form of interval or speed training that can be effective in improving your running speed and endurance. Fartlek running involves varying your pace throughout your run, alternating between fast segments and slow jogs.

Cardio Respiratory Endurance
Cardio respiratory endurance is the ability of the heart and Lungs to absorb transport and utilize oxygen over an extended period of physical exertion. Cardio respiratory fitness are associated with high risk mortality and improvements in fitness. As one of the four primary components of physical fitness role of endurance training. It is an important measure of the overall health and fitness. Cardio respiratory endurance is a function of both genetic potential and physical adaptation. Enacting an aerobic training program can increase endurance by strengthening the heart muscle and increasing long volume. With an enhanced ability to take in oxygen and deliver it to working muscles, the muscles are able to continue activity longer without fatigue.

Speed Endurance
Speed endurance is the ability to prolong the amount of time where a near maximal speed can be maintained. Speed endurance training consisting of exercise bouts at near maximal intensities. During activity such as this, accumulation of blood lactate disturbs the excitation – contraction coupling and cross – bridge formation. Speed endurance training on muscle oxidative capacity. The muscles mechanical properties are disturbed, resulting in a decrease in force production and peak force and velocity. Speed endurance training on performance and muscle adaptations. Speed endurance training can improve the clearance rate of lactate and reduce early lactate formation.

Methodology

The purpose of the present investigation is to find out the effects of fartlek training and continuous run on selected physical fitness among college men students. To achieve purpose of the study, 30 College men students were selected from Alagappa University inter collegiate athletes, karaikudi. Their age ranged from 18 to 25years. All the subjects had good physical fitness and have been participated in regular college sports activities. There were equally divided into two groups experiment group –I underwent fartlek training and experimental group –II underwent continuous run. The selected subjected were tested on cardio –respiratory endurance and speed endurance. Pre –test was taken before the practices period and post-test was measured after six weeks training period.

Selection of Variables

S. No	Varaiable	Test	Score
1	Cardio Respiratory Endurance	12min Copper Run and Walk Test	Meters
2	Speed Endurance	300Mts	Seconds

Statistical technique

't' ratio was used to analyse the mean of the pre-test and post test data of experimental groups. The results revealed that there was a significant difference found fartlek training and continuous run. The't' test was used to analysis the significant difference if any, in between groups respectively. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

Analysis of the data

The significant of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent't' test was used 0.05 levels of confidence.

Table 1: Analysis of t – ratio for pre and post-test Mean Value of Continues run and Fartlek training on cardio respiratory endurance (Cooper 12min run/walk test mean value count in meters)

Groups	Mean		Mean Difference	S.D	Standard & Error	't' ratio
	Pre	Post				
Continuous Run	1996	2201.3	203.3	112.1	26.10	7.2*
Fartlek training	1994	2110.7	114.6	69.88	16.71	6.4*

*Significant at 0.05level degrees of freedom 28, Table value 2.05

The Table-I shows that the mean values of pre-test and post-test of continues training group on cardio respiratory endurance were 1996 and 2201.3 respectively. The obtained 't' ratio was 7.1*, since the obtained 't' ratio was greater than the required table value of 2.05 for the significant at 0.05 level with 28 degrees of freedom it was found to be statistically significant. The mean values of pre-test and post-test of experimental group on fartlek training were 1994 and 2110.7 respectively. The obtained 't' ratio was 6.4* since the obtained 't' ratio was greater than the required table value of 2.05 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between continuous training groups compare better than the fartlek training group in cardio respiratory endurance. It may be concluded from the result of the study that two experimental groups improved in cardio respiratory endurance due to six weeks of continuous training and fartlek training.

Table 2: Analysis of t – ratio for pre and post-test Mean Value of Fartlek training and Continuous run on speed endurance (300Mts test mean value count in seconds)

Groups	Mean		Mean Difference	S.D	Standard & Error	't' ratio
	Pre	Post				
Fartlek training	41.10	39.73	3.379	2.70	.71	4.640*
Continuous run	44.14	42.06	2.362	2.05	.41	4.524*

*Significant at 0.05level, degrees of freedom 28, Table value 2.05.

The Table-II shows that the mean values of pre-test and post-test of fartlek training group on speed endurance were 41.10 and 39.73 respectively. The obtained 't' ratio was 4.650 *, since the obtained 't' ratio was greater than the required table value of 2.05 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The mean values of pre-test and post-test of experimental group on continuous training were 44.14 and 42.06 respectively. The obtained 't' ratio was 4.524* since the obtained 't' ratio was greater than the required table value of 2.05 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between fartlek training groups compare better than the continuous training in cardio respiratory endurance. It may be concluded from the result of the study that two experimental groups improved in speed endurance due to six weeks of fartlek training and physical training.

Conclusion

With the limitation imposed by the experimental conditions was significant better than continuous run in speed endurance due to six weeks training. The continuous run was significant better than fartlek training in cardio-respiratory endurance due to six weeks training.

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