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Influence of intensive interval training on flexibility among college students

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Abstract
The purpose of the present study was to investigate the influence of Intensive Interval training on flexibility among College students. To achieve the purpose of the study forty College students were selected from Alagappa University College of Physical Education, Karaikudi, during the year 2018. The subject's age ranges from 18 to 24 years. The selected players were divided into two equal groups consists of 20 men students each namely experimental group and control group. The experimental group underwent an Intensive Interval training programme for six weeks. The control group was not taking part in any training during the course of the study. Flexibility was taken as criterion variable in this study. The selected subjects were tested on flexibility was measured through sit and reach test. Pre-test was taken before the training period and post- test was measured immediately after the six week training period. Statistical Technique 't' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference is found due to Intensive Interval training given to the experimental group on flexibility when compared to control group.

Keywords: intensive interval training, flexibility and 't' ratio

Introduction
Interval training can also increase the speed or the ability of keeping speed in long term periods in addition to improvement of aerobic ability resulting from the rest periods between the activities (Dupont, G., K. Akakpo and S. Berthoin, 2004) [3].
In continuous method an exercise is done for long time without break or pause. Intensity is low or medium and volume is high in continuous running method. According to Dick (2006) [1], "continuous method stands for steady pace or intensity where the heart rate lies between 130 to 160 beats per minute and duration of running will be over 30 minutes for young athletes". In interval training method, the work is done relatively at high intensity with interval of incomplete recovery. Interval training in endurance events has been well established as a means of increasing performance in both trained and untrained athletes (Laursen and Jenkins, 2002; Laursen, *et al.*, 2002; Stepto *et al.*, 1999) [2].
High-intensity interval training (HIIT) has become a popular training modality in competitive athletes, recreationally-trained individuals, and clinical populations. HIIT consists of repeated bouts of short to moderate duration exercise completed at intensities greater than the anaerobic threshold, interspersed with brief periods of low intensity or passive rest. The salient features of HIIT over constant rate aerobic training (CRT) are shorter training periods and the reported improvements of both oxidative and glycolytic energy systems (Laursen, 2002; Perry, C. G. R, 2008) [2, 4].

Methodology
Statement of the problem
The purpose of the study was to find out the influence of intensive interval training on flexibility among college students.

Selection of Subjects
To achieve this purpose of the study, forty College students were selected as subjects at random. The age of the subjects were ranged from 18 to 24 years.

Design
The selected subjects were divided into two equal groups of twenty subjects each, such as an Intensive Interval training group (Experimental Group) and control group. The experimental group underwent Intensive Interval training for three days per week for six weeks. Control group, which they did not undergo any special training programme apart from their regular physical activities as per their curriculum. The following physical fitness variable, namely flexibility was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable flexibility was measured through sit and reach test at prior and immediately after the training programme.

Statistical tool
The 't' test was used to analysis the significant differences, if any, in between the 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 significance 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 with 0.05 levels as confidence.

Table 1: Analysis of t-ratio for the pre and post tests of experimental and control group on Flexibility Scores in Centimetres

Variables	Group	Mean		SD		Sd Error		df	't' ratio
		Pre	Post	Pre	Post	Pre	Post		
Flexibility	Control	42.50	42.20	2.69	2.59	0.60	0.58	19	1.45
	Experimental	42.45	44.90	2.84	2.86	0.63	0.64		11.60*

*****Significance at .05 level of confidence.

The Table-I reveals that the mean values of pre-test and post-test of the control group on flexibility were 42.50 and 42.20 respectively. The obtained 't' ratio was 1.45, since the obtained 't' ratio was less than the required table value of 2.14 for the significant at 0.05 level with 19 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of the experimental group on flexibility were 42.45 and 44.90 respectively. The obtained 't' ratio was 11.60* since the obtained 't' ratio was greater than the required table value of 2.14 for significance at 0.05 level with 19 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in flexibility. It may be concluded from the result of the study that experimental group improved in flexibility due to six weeks of Intensive Interval training.

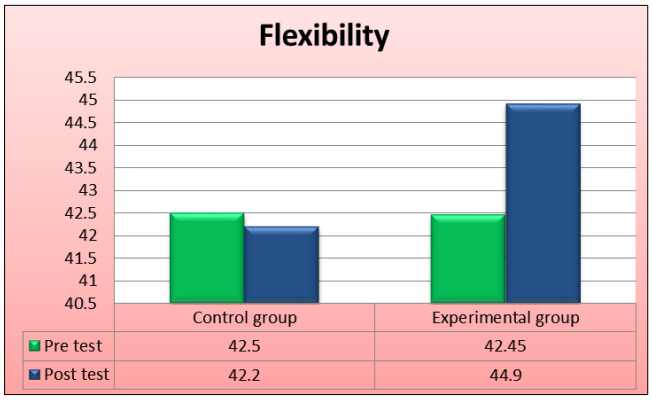

Fig 1: Bar diagram showing the pre and post mean values of experimental and control group on Flexibility Scores in centimetres

Discussions on Findings

The result of the study indicates that the experimental group, namely Intensive Interval training group had significantly improved the selected dependent variable, namely flexibility, when compared to the control group. It is also found that the improvement caused by Intensive Interval training when compared to the control group.

Conclusions

1. There was a significant difference between experimental and control group on flexibility after the training period.
2. There was a significant improvement in flexibility. However the improvement was in favour of experimental group due to six weeks of Intensive Interval training.

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