scores is more than the table value of 2.684 for df 3 and 116 required for significance at .05 level of confidence on speed. The adjusted post-test means on speed of interval sprint, repetition sprint, acceleration sprint and control groups 7.066, 7.049, 7.013 and 7.116 are respectively.

The obtained "F" ratio of 18.672 for adjusted post-test means is greater than the table value of 2.685 for df 3 and 115 required for significance at .05 level of confidence on speed.

The results of the study indicated that there was a significant difference between the adjusted post-test means of interval sprint, repetition sprint, acceleration sprint and control groups on speed. Since, four groups were compared, the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table I-A.

TABLE I-A
SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN PAIRED MEANS ON SPEED (Scores in seconds)

EXP.I	EXP.II	EXP.III	Control Group	Mean Differences	Confidence Interval Value
7.066	7.049	-	-	0.017	0.040
7.066	-	7.013	-	0.053*	0.040
7.066	-	-	7.116	0.050*	0.040
-	7.049	7.013	-	0.036	0.040
-	7.049	-	7.116	0.067*	0.040
-	-	7.013	7.116	0.103*	0.040

* Significant at .05 level of confidence.

The table I (A) shows that the mean difference value between Interval sprint and acceleration sprint, interval sprint and control group, repetition sprint and control group, acceleration sprint and control group 0.053, 0.05, 0.067 and 0.103 respectively on speed which were greater than required confidence interval value 0.040 at .05 level of confidence. Hence, the above comparisons were significant. And also the table shows that the mean difference values between interval sprint and repetition sprint and repetition sprint and acceleration sprint 0.017 and 0.036 respectively on speed which was lesser than the required confidence interval value 0.040 at .05 level of confidence. Hence, the above two comparisons were not significant.

DISCUSSION

The results of the study clearly indicated that there were significant differences found among the selected groups and significant improvement was noticed on selected training programme.

CONCLUSION

After the 12 weeks of training programme acceleration sprint training influenced to a great extent on sprinting performance than the other two trainings and control group. The repetition sprint training also produced enhanced development on the sprinting performance than the interval sprint training and control group. The interval sprint training produced slightest development on sprinting performance. No improvement was found on the control group.

REFERENCE:

- Callister, R., M.J. Shealy, S.J. Fleck, and G.A. Dudley. (1988). Performance adaptations to sprint, endurance and both modes of training. J. Appl. Sports Sci. Res. 2:46-51.
- Greenberg, Jerrold S., George B. Dintiman Barbee Myers Oakes,. Physical fitness and Wellness, Human Kinetics pp – 109. (2004)

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CONTENTS

COMPARATIVE EFFECTS OF DIFFERENT SPRINT TRAINING ON ANAEROBIC POWER

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ABSTRACT

The purpose of the study was to find out the effects of different sprint training on anaerobic power. To achieve this purpose, sixty untrained healthy college men students of Madras Christian College, Chennai, Tamilnadu, India were selected as subjects at random and their age were ranged between 18 to 21 years. The selected subjects were divided into four equal groups of thirty subjects each, as experimental group 1, 2, 3 and 4. Group-1 underwent Acceleration Sprinting (AS), Group-2 underwent Repetition Sprinting (RS), Group-3 underwent Interval Sprinting (IS) for three alternate days per week for twelve weeks and Group-4 served as Control group that did not take part in any training. Anaerobic power was selected as criterion variable. All the subjects of four groups were tested on Anaerobic power at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference, if any among the groups. Since, four groups were compared, whenever they obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences, if any. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance. The results of the study indicated that the selected sprint training porgramme produced significant improvement on anaerobic power.

KEY WORDS:

1. Anaerobic Power 2. Acceleration Sprinting 3. Repetition Sprinting 4. Interval sprinting
5. ANCOVA.

INTRODUCTION:

Achieving excellent performances in sprint events is possible only by identifying and careful elimination, as the theory that the functions of inherited nerve and muscle fibers are changed through training is still a controversial one. To improve sprint performances therefore depends on the development of an economical running action through properly planned training, emphasizing technique, relaxation, and gradually increasing the use of power as endurance and mobility improve. Insufficient resistance is often responsible for lack of strength development, suggesting the use of a combination of heavy, medium and light resistances in training. The **Repetition sprinting** involves several repetitions of sprints over distances between 60 and 220 yards at absolute maximum speed. Because the heart beats so fact (around 200 beat/min or higher) during this type of training, a heart expansion stimulus does not normally take place since the heart does not fill to its maximum during the diastolic or resting period. As a result, an increased stroke volume of the heart is not generally produced. Instead, the primary effect of sprint training is the development of the ATP-CP energy system. The **Interval sprinting** consists of sprinting for 50 yards and jogging for 60 yards after each for distances up to 3 miles. In other words, for each 440 yards, the athlete would combine four 50-yards sprints with four 60-yards jogs. Because of early fatigue (generally after the first several sprint), this type of training not only keeps the athlete from running at his or her maximal print speed, but it