

CHAPTER V

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1. SUMMARY

The purpose of the study was to find out the tabata interval methods of various durations on selected physiological variables namely body fat, VO_2 max and resting heart rate and athletic performance variables such as speed, speed endurance, agility, abdominal muscular endurance and arm strength among school students.

For the present study, forty five school students those who represented divisional and state level were selected randomly from the Navbharath Matriculation Higher Secondary School, Ponnaiyah Ramajayam Public Hr. Sec. School and St. Antony's Hr. Sec. School, Thanjavur, Tamil Nadu, India. The age of the subjects ranged between 15-17 years. The selected subjects were divided into two experimental groups: Group I (TTG1) - Tabata Interval Training group with 1: 1 ratio (20 seconds active period : 20 seconds rest period), Group II (TTG2) - Tabata Interval Training group with 1:0.5 ratio (20 seconds active period : 10 seconds rest period) and a control group (CG) with fifteen subjects (n=15) each. The selected criterion variables physiological and athletic performance variables were assessed prior to and immediately after the six weeks of training period by using the standardized tests. The experimental design used in this study was pre and post test random group design involving 45 subjects. The collected data were analyzed by using analysis of covariance (ANCOVA). Whenever the 'F' ratio was found to be significant, Scheffe's test was used as post-hoc test to determine which of the paired means differed significantly. In all cases the criterion for statistical significance was set at 0.05 level of confidence ($P < 0.05$).

5.2. CONCLUSIONS

The current study focuses on tabata interval training with 1 : 1 ratio and with 1 : 0.5 ratio methods on selected physiological and athletic performance variables among school students. The researcher investigated only divisional and state level represented school students and training was designed only for them.

1. Six weeks of tabata interval training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio methods reduced the body fat and resting heart rate among the school students.
2. Tabata interval training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio methods increased the VO₂max level among the school students.
3. The present investigation concluded that tabata interval training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio methods reduced of speed, speed endurance and agility timing among the school students.
4. The findings of the present study indicate that tabata interval training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio methods could increase abdominal muscular endurance and arm strength among the school students.
5. The present study also concluded that tabata interval training with 20 seconds active : 20 seconds rest ratio method was better than the tabata interval training with 20 seconds active : 10 seconds rest ratio method in the development of all the selected physiological and athletic performance variables.
6. Based on the findings of the present study, the investigator concluded that tabata training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10

seconds rest ratio methods are practical approaches for athletes in improving the physiological variables and athletic performance variables if these methods of training are adapted to organise the athletes' needs during training period.

5.3. RECOMMENDATIONS TO THE SOCIETY

1. Since the tabata training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio based methods are identified as the important training, it is recommended to the coaches and physical education teachers to include them in their regular schedule of coaching and training programme.
2. It is proposed to conduct a long-term study where tabata training with 20 seconds active : 20 seconds rest ratio and 20 seconds active : 10 seconds rest ratio based methods are gradually introduced during training.

5.4. RECOMMENDATIONS TO THE RESEARCHERS

The results of the study carried out the following recommendations for further studies in this area.

1. Substantiate the findings in other training settings and for other physical activities/sports and games.
2. The intensity of the training and number of training sessions can be fixed according to the age and gender level of the subjects.
3. The present study thus needs to be strengthened or supported by more relevant research studies.