Chapter-V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

There are different types of training methods for the development of motor abilities of athletes. Understanding these training methods and the effectiveness of the training methods to suit a particular event is a challenging task for any coach or player. This helps coaches and athletes prevent injury and overtraining while trying to maximize their physical ability, and analyze the strengths and weaknesses related to their specific training programs. If one failed to establish correct training patterns for young athletes, unfortunately, goes way back. Hence, the investigator was interested to find out the effects of structured resistance training and varied intensities of weight training on the motor fitness and physiological variables of college men athletes.

Increased muscle strength, power, endurance and size, Increased bone density and strength, Reduced body fat, Increased muscle-to-fat ratio, Boosted metabolism (burning more kilojoules when at rest), Lowered heart rate and blood pressure after exercise, Improved balance and stability, Enhanced performance of everyday tasks, Reduced risk of developing some conditions like diabetes and improve the quality of life are the benefits of weight training and resistance
training. In this way, weight training and resistance training carry over the lot of motor fitness and physiological changes among athletes.

All types of strength training does not produce equal amount of muscle mass (muscle quality) or muscle hypertrophy. The training methodology in this regard had been investigated by the experts. They have found that strength training with a certain type of load leads to best results. The actual mechanism of muscle is, still not clear. Thus, the objective of this research is to assess the motor fitness variables, namely, speed, agility, flexibility, endurance, and physiological variables resting pulse rate, breath holding time and VO₂ Max of college athletes. The effect of structured resistance training and varied intensities of weight training on each of these motor fitness and physiological variables were studied and compared these effects with control group to determine whether these training produce significant changes in selected variables. Under these interventional situations, (a) which of the training method is better than the other one? (b) and to which extent? were the current research focuses on the effects of structured resistance training and varied intensities of weight training on selected motor fitness and physiological variables among college level athletes.

To achieve the purpose, the investigator randomly selected 60 sprinters, who competed at inter collegiate level sports meets representing different colleges in Hyderabad. They were divided into three groups at random again consisting twenty subjects in each group and they were randomly assigned as experimental
group-I (SRT – Structured Resistance Training) and Experimental group-II (VWT – Varied Weight Training) and control group. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=60) were randomly assigned to three equal groups of twenty men sprinters in each group. The groups were assigned as Experimental Groups-I, II and control group respectively. Experimental group-I was assigned as Structured Resistance Training (SRT) and Experimental group-II was assigned as varied weight training (VWT) and control group. The control group was not given any special treatment except of their routine. Pre-tests were conducted for all the subjects on selected motor fitness and physiological variables, namely, speed, agility, flexibility, cardiovascular endurance, resting pulse rate, breath holding time and VO$_2$ max. The experimental groups participated in their respective training protocols for a period of twelve weeks. The post-tests were conducted on the above said dependent variables after the experimental period of twelve weeks for all the three groups. The pre- and post-test scores were statistically analyzed.

5.1.1 Level of Significance

The subjects were compared on the effect of structured resistance training and varied intensities of weight training on selected motor fitness and physiological variables. The differences between means of initial and final scores on selected criterion variables, speed, agility, flexibility, cardiovascular endurance, resting pulse rate, breath holding time and VO$_2$ max, were subjected to
statistical treatment using analysis of covariance (ANCOVA). In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as appropriate.

The results of the study proved that there were significant improvement on selected motor fitness and physiological variables, speed, agility, flexibility, cardiovascular endurance, resting pulse rate, breath holding time and VO₂ max. due to structured resistance training and varied weight training among college level athletes.

5.2 CONCLUSIONS

Within the limitations and delimitations of the study, the following conclusions were drawn.

1. It was concluded that structured resistance training and varied weight training exercises significantly improved motor fitness variable such as, speed of the college level athletes. Comparing between the treatment groups, it was found that structured resistance training was better than varied weight training group.

2. It was concluded that structured resistance training and varied weight training exercises significantly improved motor fitness variable such as, agility of the college level athletes. Comparing between the treatment
groups, it was found that structured resistance training was better than varied weight training group.

3. It was concluded that structured resistance training and varied weight training exercises significantly improved motor fitness variable such as, flexibility of the college level athletes. Comparing between the treatment groups, it was found that structured resistance training was better than varied weight training group.

4. It was concluded that structured resistance training and varied weight training exercises significantly improved motor fitness variable such as, cardiovascular endurance of the college level athletes. Comparing between the treatment groups, it was found that there was no significant difference between structured resistance training and varied weight training groups.

5. It was concluded that varied weight training significantly improved physiological variable such as, resting pulse rate of the college level athletes. Comparing between the treatment groups, it was found that there was no significant difference between structured resistance training and varied weight training group.

6. It was concluded that structured resistance training significantly improved physiological variable such as, breath holding time of the college level
athletes. Comparing between the treatment groups, it was found that there was no significant difference between structured resistance training and varied weight training group.

7. It was concluded that structured resistance training and varied weight training significantly improved physiological variable such as, VO$_2$ max of the college level athletes. Comparing between the treatment groups, it was found that there was no significant difference between structured resistance training and varied weight training group.

5.3 RECOMMENDATIONS

1. The findings of this study proved that structured resistance training and varied weight training significantly improved motor fitness variables of college athletes, hence, it was recommended that the protocols suggested in this study may be followed for athletes for their training.

2. The benefits of structured resistance training and varied weight training may be popularized among athletes and other sports persons.

3. The findings of this study proved that structured resistance training improved motor fitness variables, speed, agility and flexibility of athletes, the findings may be extended to similar other players.

4. Similar research may be conducted among women athletes.