

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 SUMMARY

Physical exercises help a man to possess a high degree of physical conditions. In school there is compulsory activities programme for all girls and boys. So it would be interesting to find out which of the components have better physical fitness. Physical activity causes beneficial changes in the functioning of all internal organs, particularly, the heart, lungs and circulatory system. Studies had proved that exercise is the cheapest preventive medicine and after a period of training there is a slow but consistent reduction in resting heart rate along with an increase in stroke volume. It is a known fact that the slower heart rate and increased stroke volume provide a greater rest for the heart between beats. Zatsiorsky and ,Kraemer, (2006)

Psychological conditioning is the most critical to improve overall ability in an individual. Knowing when to act and being able to do it effectively under pressure distinguishes the great from the ordinary. Regardless of how much the one practices or how well the one conditions himself, only a modest amount of improvement is possible in speed, reflexes, or strength. History gives many examples of players able to achieve greatness despite mediocre physical talent. Usually, however, such successes are due to determination. (Mohan 2005).

A review of scientific studies identified relaxation, concentration, an altered state of awareness, a suspension of logical thought and the maintenance of a self-observing attitude as the behavioral components of meditation. It is accompanied by a host of biochemical and physical changes in the body that alter metabolism, heart rate, respiration, blood pressure and brain chemistry (Lazar et al. 2000). Meditation has been used in clinical settings as a method of stress and pain reduction. Meditation has also been studied specifically for its effects on stress (Davidson, 2003). . The investigator was interested to find out the effects of isolated and combined effect of physical fitness psycho-tonic training on selected physical, physiological and psychological variables among college men students.

To achieve the purpose of this study the investigator randomly selected 120 college men from different colleges in Vellore. The age group of the subjects were between 19 to 25 years. In order to ensure the full cooperation from the subjects, the scholar had a meeting with them and explained the purpose of the study. It was made clear by explanation in order to ascertain that there was no ambiguity among the players regarding the effort, which they had to put in for the successful completion of this investigation. The research scholar reviewed the various scientific literature pertaining to the physical training and psychotonic training on selected physical fitness, physiological and psychological variables from books, journals, periodicals, magazines and research papers. Taking into consideration of feasibility criteria, availability of instruments and the relevance of the variables of the

present study, the physical fitness variables, speed, agility and cardiovascular endurance, physiological variables, resting pulse rate, mean arterial blood pressure and vital capacity and psychological variables, self concept, achievement motivation and anxiety were selected.

Random group design was used for this study. Randomly selected 120 college men students were divided into four groups, namely, physical training group (PG), psychotonic training group (PTG), combined training group (CTG) and control group (CG). Initial levels of the subjects on their physical fitness, physiological and psychological variables were determined using standard tests. The experimental groups were given the respective treatments, namely, physical exercise, psychotonic and combined training for a period of twelve weeks. The control group was not given any treatment. After the experimental period, final scores of the subjects were collected on selected physical fitness, physiological and psychological variables of the subjects.

### **5.1.1 LEVEL OF SIGNIFICANCE**

The subjects were compared on the effect of isolated and combined physical fitness and psychotonic training on selected physical, physiological and psychological variables among college men students. The differences between means of initial and final scores on selected criterion variables, speed, agility, cardiovascular endurance, resting pulse rate, mean arterial blood pressure and vital capacity and psychological variables self concept, achievement motivation and anxiety 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 proved that isolated and combined physical training and psychotonic training significantly altered selected physical, physiological and psychological variables. It was also found that combined training was significantly better than physical exercises on speed, resting pulse rate, vital capacity, achievement motivation and self concept. Isolated psychotonic training was found better than physical training on mean arterial blood pressure and anxiety.

## **5.2 CONCLUSIONS**

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

1. It was concluded that there was no significant difference between isolated physical training and control group in altering physical fitness variable, speed among college men.
2. It was concluded that there was significant difference between isolated psychotonic training and control group in improving physical fitness variable, speed among college men.

3. It was concluded that there was significant difference between combined training and control group in improving physical fitness variable, speed among college men.
4. It was also found that combined training was significantly better than physical training group.
5. It was concluded that there was significant difference between isolated physical training and control group in improving physical fitness variable, agility among college men.
6. It was concluded that there was significant difference between isolated psychotonic training and control group in improving physical fitness variable, agility among college men.
7. It was concluded that there was significant difference between combined training and control group in improving physical fitness variable, agility among college men.
8. It was also found that there was no significant difference among treatment groups in altering physical fitness variable, agility among college men.
9. It was concluded that there was significant difference between isolated physical training and control group in improving physical fitness variable, cardiovascular endurance among college men.

10. It was concluded that there was significant difference between isolated psychotonic training and control group in improving physical fitness variable, cardiovascular endurance among college men.
11. It was concluded that there was significant difference between combined training and control group in improving physical fitness variable, cardiovascular endurance among college men.
12. It was also found that there was no significant difference among treatment groups in altering physical fitness variable, cardiovascular endurance among college men.
13. It was concluded that there was significant difference between isolated physical training and control group in altering physiological variable, resting pulse rate among college men.
14. It was concluded that there was significant difference between isolated psychotonic training and control group in altering physiological variable, resting pulse rate among college men.
15. It was concluded that there was significant difference between combined training and control group in altering physiological variable, resting pulse rate among college men.
16. It was also found that there was no significant difference among treatment groups in altering physiological variable, resting pulse rate among college men.

17. It was concluded that there was no significant difference between isolated physical training and control group in reducing physiological variable, mean arterial blood pressure among college men.
18. It was concluded that there was significant difference between isolated psychotonic training and control group in altering physiological variable, mean arterial blood pressure among college men.
19. It was concluded that there was significant difference between combined training and control group in altering physiological variable, mean arterial blood pressure among college men.
20. It was also found that there was significant reduction in physical training group than psychotonic training group in altering physiological variable, mean arterial blood pressure among college men.
21. It was concluded that there was no significant difference between isolated physical training and control group in altering physiological variable, vital capacity among college men.
22. It was concluded that there was significant difference between isolated psychotonic training and control group in altering physiological variable, vital capacity among college men.

23. It was concluded that there was significant difference between combined training and control group in altering physiological variable, vital capacity among college men.
24. It was also found that there was significant improvement in combined group than physical training group in altering physiological variable, vital capacity among college men.
25. It was concluded that there was significant difference between isolated physical training and control group in improving psychological variable, self concept among college men.
26. It was concluded that there was significant difference between isolated psychotonic training and control group in improving psychological variable, self concept among college men.
27. It was concluded that there was significant difference between combined training and control group in improving psychological variable, self concept among college men.
28. It was also found that there was significant improvement in combined group than physical training group in improving psychological variable, self concept among college men.
29. It was concluded that there was significant difference between isolated physical training and control group in improving psychological variable, achievement motivation among college men.

30. It was concluded that there was significant difference between isolated psychotonic training and control group in improving psychological variable, achievement motivation among college men.
31. It was concluded that there was significant difference between combined physical and psychotonic training and control group in improving psychological variable, achievement motivation among college men.
32. It was also found that there was significant improvement in physical training group than combined group in improving psychological variable, achievement motivation among college men.
33. It was concluded that there was no significant difference between isolated physical training and control group in altering psychological variable, anxiety among college men.
34. It was concluded that there was significant difference between isolated psychotonic training and control group in altering psychological variable, anxiety among college men.
35. It was concluded that there was no significant difference between combined training and control group in altering psychological variable, anxiety among college men.

36. It was also found that psychotonic training was significantly better than physical training group in altering psychological variable, anxiety among college men.

### **5.3 RECOMMENDATIONS**

The results of this research study indicated that physiological and performance adaptations due to physical training, psychotonic training and combined physical training and psychotonic training contributed for selected physical fitness, physiological and psychological variables among college men students compared to control group. Based on the findings the following recommendations are made

1. Physical directors and coaches can give equal importance to psychotonic training along with physical training for all round development of physical, physiological and psychological variables of college men students.
2. It was also recommended to include psychotonic training in the physical education syllabus for college students.

### **5.4 SUGGESTIONS FOR FURTHER RESEARCH**

1. A similar study may be conducted among college women students to find out the effect of isolated and combined physical training and psychotonic training.

2. A study with larger samples may be conducted to support the findings of this study.
3. A study may be conducted among players and athletes to find out the influence of isolated and combined physical and psychotonic training.
4. Similar study may be conducted in greater details to assess changes on biochemical variables along with selected physical, physiological and psychological variables.