Chapter-5

Summary, Conclusions and Recommendations

The previous chapter described in detail the findings of this study after an analysis of the data gathered. This chapter presents the summary of the findings of this research, the conclusions derived from these findings and the researchers’ recommendations for future researches of similar concern.

The chapter is organized in sections covering:

i. Summary

ii. Conclusions of the study

iii. Recommendations of the study
SUMMARY

The world of games and sports is expanding continuously. Progressing sportmen and coaches, not being satisfied to rest on their laurels are making their utmost endeavours to put their best foot forward to attain higher and higher standards through training and exercise. In today’s ever advancing and profession competitiveness, the best performance in sports can be made only through a systematic planned, executed and controlled training system, based on scientific system of sports training. Sports in today’s life plays a very important role in bringing about physical, mental and social growth of nations. The sports scientists and the physiologists have been of the view that human capacity of performances among athletes had its limits in the method of their standards of efficiency. But, this belief has been proved false and the barriers of performance have been surpassed by the athletes as a result of continued improvement in the techniques, methods of training and coaching. As a matter of fact an increase in performance level can only be achieved by exploitation of all the major components i.e. technique-co-ordination, tactics, motor fitness, psychological and physiological qualities of the sportmen. There is a constant endeavour to achieve higher standard of performance. As a result, today’s sports and games demand optimum fitness and the highest degree of performance.

As far as athletics is concerned it is the basic event, which is involved in every period of the history of sports in the shape of running, throwing, and jumping. The ancient Olympic was the oldest sports festival which was held in ancient Greece in the honour of God Zeus. The first event of the ancient Olympic was foot race, which belonged to athletics. Therefore, we can say that athletic is the oldest sports on this earth.

Hence the purpose of this study was to compare the motor fitness components, personality traits and respiratory indices among sprinters, throwers and Jumpers. For the purpose of the present study, One Hundred Eighty (N=180), Male University Level sprinters, throwers and jumpers between the age group of 18-25 years (Mean ± SD: age 20.683±2.02 years, height 5.7449±26.3 m, body mass 76.400±14.3 kg) were selected. The subjects were purposively assigned into three groups:

- Group-A: Sprinters (n1=60)
  - Inter-College (n1a=30) and Inter-University (n1b=30)

- Group-B: Throwers (n2=60)
  - Inter-College (n2a=30) and Inter-University (n2b=30)
- Group-C: Jumpers \((n_3=60)\)
  - Inter-College \((n_{3a}=30)\) and Inter-University \((n_{3b}=30)\)

A feasibility analysis as to which of the variables could be taken up for the investigation, keeping in view the availability of tools, adequacy to the subjects and the legitimate time that could be devoted for tests and to keep the entire study unitary and integrated was made in consultation with experts. With the above criteria’s in mind, the following variables were selected for the present study:

**Motor Fitness Components:**
- Agility
- Balance
- Speed
- Explosive Strength
- Flexibility

**Personality Traits:**
The personality traits scores of the subjects (i.e., Sprinter, Jumper and Thrower) were obtained by using Sixteen Personality factors (16 PF) Questionnaire developed by Raymond B. Cattel (1962).

**Respiratory Indices:**
- Vital capacity (VC)
- Tidal volume (VT)
- Expiratory reserve volume (ERV)
- Inspired reserve volume (IRV)
- Inspiratory capacity (IC)

To determine the significant differences of motor fitness components, personality traits and respiratory indices between Inter-College and Inter-University sprinters, throwers and jumpers, unpaired t-test was employed for data analyses. The data was further subjected to one way Analysis of Variance (ANOVA) to find out the intra-group differences and where the ‘F’ ratio found significant then Post-hoc test Least Significant Difference (LSD) was applied to find out the direction and degree of differences. To test the hypothesis, the level of significance was set at 0.05.
CONCLUSIONS OF THE STUDY
Based on the findings of this study, the following conclusions were drawn:

1. (a) To conclude, it is significant to mention in relation to Motor Fitness Components that insignificant differences occurs between Inter-College and Inter-University Sprinters on the sub variable Agility, Balance and Flexibility. However, the significant differences occur between Inter-College and Inter-University Sprinters on the sub variable Speed and Explosive Strength.

(b) To conclude, it is significant to mention in relation to Personality Traits that insignificant differences occurs between Inter-College and Inter-University Sprinters on the factors A, B, C, G, L, N, O, Q1, Q2, and Q4. However, the significant differences occurs between Inter-College and Inter-University Sprinters on the factors E, F, H, I, M and Q3.

(c) To conclude, it is significant to mention in relation to Respiratory Indices that insignificant differences occurs between Inter-College and Inter-University Sprinters on the sub variable Tidal Volume (VT), Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC). However, the significant differences occur between Inter-College and Inter-University Sprinters on the sub variable Vital Capacity (VC) and Expiratory Reserve Volume (ERV).

2. (a) To conclude, it is significant to mention in relation to Motor Fitness Components that insignificant differences occurs between Inter-College and Inter-University Throwers on the sub variable Balance and Flexibility. However, the significant differences occur between Inter-College and Inter-University Throwers on the sub variable Agility, Speed and Explosive Strength.

(b) To conclude, it is significant to mention in relation to Personality Traits that insignificant differences occurs between Inter-College and Inter-University Throwers on the factors A, B, E, F, G, H, I, L, N, Q2, Q3 and Q4. However, the significant differences occur between Inter-College and Inter-University Throwers on the factors C, M, O, and Q1.

(c) To concludes, it is significant to mention in relation to Respiratory Indices that insignificant differences occur between Inter-College and Inter-University Throwers on the sub variable Expiratory Reserve Volume (ERV). However, the
significant differences occur between Inter-College and Inter-University Throwers on the sub variable Vital Capacity (VC), Tidal Volume (VT), Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC).

3. (a) To conclude, it is significant to mention in relation to Motor Fitness Components that insignificant differences occur between Inter-College and Inter-University Jumpers on the sub variable Agility, Balance and Flexibility. However, the significant differences occur between Inter-College and Inter-University Jumpers on the sub variable Speed and Explosive Strength.

(b) To conclude, it is significant to mention in relation to Personality Traits that insignificant differences occur between Inter-College and Inter-University Jumpers on the factors A, B, F, G, H, I, L, N, O, Q2, Q3 and Q4. However, the significant differences occur between Inter-College and Inter-University Jumpers on the factors C, E, M and Q1.

(c) To conclude, it is significant to mention in relation to Respiratory Indices that insignificant differences occur between Inter-College and Inter-University Jumpers on the sub variable Tidal Volume (VT) and Expiratory Reserve Volume (ERV). However, the significant differences occur between Inter-College and Inter-University Jumpers on the sub variable Vital Capacity (VC), Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC).

4. To conclude, it is significant to mention in relation to Motor Fitness Components that insignificant differences occur among Inter-College Sprinters, Thrower and Jumpers on the sub variable Explosive Strength. However, the significant differences occur among Inter-College Sprinters, Throwers and Jumpers on the sub variable Agility, Balance, Speed and Flexibility.

5. To conclude, it is significant to mention in relation to Motor Fitness Components that insignificant differences occur among Inter-University Sprinters, Thrower and Jumpers on the sub variable Agility and Explosive Strength. However, the significant differences occur among Inter-University Sprinters, Throwers and Jumpers on the sub variable Balance, Speed and Flexibility.

6. To conclude, it is significant to mention in relation to Personality Traits that insignificant differences occur among Inter-College Sprinters, Throwers and
Jumpers on the factors A, B, C, E, F, G, H, I, L, N, O, Q1, Q2, Q3 and Q4. However, the significant differences occur among Inter-College Sprinters, Throwers and Jumpers on the factor, M.

7. To conclude, it is significant to mention in relation to Personality Traits that insignificant differences occur among Inter-University Sprinters, Throwers and Jumpers on the factors A, B, G, L, M, N, Q2, and Q4. However, the significant differences occur among Inter-University Sprinters, Throwers and Jumpers on the factors, C, E, F, H, I, O, Q1 and Q3.

8. To conclude, it is significant to mention in relation to Respiratory Indices that insignificant differences occur among Inter-College Sprinters, Throwers and Jumpers on the sub variable Vital Capacity (VC) and Expiratory Reserve Volume (ERV). However, the significant differences occur among Inter-College Sprinters, Throwers and Jumpers on the sub variable Tidal Volume (VT), Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC).

9. To conclude, it is significant to mention in relation to Respiratory Indices that insignificant differences occur among Inter-University Sprinters, Throwers and Jumpers on the sub variable Vital Capacity (VC), Expiratory Reserve Volume (ERV), Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC). However, the significant differences occur among Inter-University Sprinters, Throwers and Jumpers on the sub variable Tidal Volume (VT).

**RECOMMENDATIONS OF THE STUDY**

Although the investigator has put in his best efforts on the present study, still the topic has a wide scope for further research. Thus, for future research and in the light of the results and conclusions of the study, the following recommendations are made:

1. Physical education teachers and coaches may utilize the findings of the present study by preparing or modifying the existing training schedules for sprinter, throwers and jumpers.

2. The data regarding motor fitness components, personality traits and respiratory indices will help the coaches and trainers to regulate the training programme for elite athletes.
3. Similar study may be undertaken with other variable namely, physical, physiological, anthropometrical, biomedical and biomechanical in addition to the variables chosen in the present study.

4. The study can be broadened by involving players of other games and different performance levels i.e. State, National and International.

5. A similar study may be undertaken using larger sample for overall better consistency of results.