

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

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5.1. SUMMARY

There are numerous factors which are responsible for better performance in sports and games. Body types, body composition, anthropometric and physiological variables play an important role in the selection of individuals for competitive sports for high level performance. In order to physically prepare an athlete or a player for the appropriate level of performance, a sound knowledge of sport physiology is necessary. Coaches and trainers must also be aware of physiological and physical stress and how they manifest themselves in both poor performances and injury. Moreover, they should also possess an understanding of the various stages of the athletes' and players' physical development and through understanding of sport physiology in order to apply them. Coaches need to have enough of such knowledge in order to select their athletes or players. So that they can improve their performance.

The purpose of the study is to compare the selected body composition, anthropometric and physiological variables among elite university men Football, Basketball and Volleyball players. To facilitate the study, thirty seven Football players, thirty three Basketball players and twenty Volleyball players who participated in the All India Inter-University Tournaments in the year 1996-97 were selected as the subjects for the study and their age was between eighteen and twenty five years.

The following anthropometric, body composition and physiological variables were selected and recorded; the age in years;

weight in kilograms; height, lower limb length, upper limb length, calf, humerus, femur, chest, relaxed and flexed arms circumferences in centimetres; body fat and percent fat in percentage; estimated body fat in milligrams; lean body mass in kilogram; sum of six skinfolds in millimetres; ponderal, skeletal index, endomorphy, mesomorphy and ectomorphy in points. Further the physiological variables such as anaerobic power, resting pulse rate and the cardio-respiratory endurance was selected as dependent variables.

The collected data were statistically analysed with one way analysis of variance to find out the significant differences among the players. The level of significance was fixed at 0.05 level of confidence.

The Scheffe's post-hoc test was used to find out the paired mean significance.

5.2. CONCLUSION

Within the limitations of the present study, the following conclusions were drawn.

1. There were no significant differences in age, humerus width, femur width, chest circumference, sum of six skinfolds and endomorphy among university men Basketball, volleyball and Football players.

2. There was significant differences in body weight among university men Football, Basketball and Volleyball players. However, the Football player were heavier than Volleyball and Basketball players, and also the Volleyball player were heavier than the Basketball players.

3. There was significant differences in height among the University men Football, Basketball and Volleyball players. However,

the Volleyball players were taller than Basketball and Football players and also the Basketball players were taller than football players.

4. There was significant difference in sitting height among the university men Football, Basketball and Volleyball players. However, the Basketball players were taller than Volleyball and Football players and also the Volleyball players were taller than Football players.

5. Significant differences were noticed in lower limb length and upper limb length among the university men football, Basketball and Volleyball players. However, the Volleyball players had a longer upper and lower limb length than Basketball and Football players and also the Basketball players had better lower limb length and upper limb length than Football players.

6. Among the university men Football, Basketball and Volleyball players clear cut significant differences were noticed in relaxed arm circumference and calf circumference. However, the Basketball players had a greater relaxed arm and calf circumference than football and Volleyball players. The football players had greater calf circumference than volleyball players.

7. Such significant differences were also found among university men Football, Basketball and Volleyball players in flexed arm circumference. However, the Volleyball players had greater flexed arm circumference than Basketball and Football players. The Basketball players had a greater flexed arm circumference than Football players.

8. There was significant differences among university men Football, Basketball and Volleyball players in ponderal index. However, the Volleyball players had a greater ponderal index than Basketball and Football players. The Basketball players had a greater ponderal index than Football player.

9. Significant differences among university men Football, Basketball and Volleyball players were also observed in skeletal index.

However, the Volleyball players had a greater skeletal index than football and Basketball players. The Football players had a greater skeletal index than basketball players.

10. There was significant differences among university men Football, Basketball and Volleyball players in mesomorphy. However, the Volleyball players had a greater mesomorphy than Football and Basketball players. The Football players had a greater mesomorphy than Basketball players.

11. Similar significant differences among university men Football, Basketball and Volleyball players were noticed in ectomorphy. However, the Volleyball players had a greater ectomorphy than Basketball and Football players. The Basketball players had a greater ectomorphy than Football players.

12. Also significant differences were found among the university men Football, Basketball and Volleyball players in percent fat, absolute fat and lean body weight. However, the Football players had more percent fat, absolute fat and lean body weight than Volleyball and Basketball players. The Volleyball players had more percent fat, absolute fat and lean body weight than Basketball players.

13. There was significant differences among university men Football, Basketball and Volleyball players in anaerobic power. However, the Basketball players had a greater anaerobic power than Volleyball and Football players. The Volleyball players had a great anaerobic power than Football players.

14. It was found that there were significant differences among university men Football, Basketball and Volleyball players in resting pulse rate. However, the Basketball players had a lesser resting pulse rate than Football and Football and Volleyball players. The Football players had a lesser resting pulse rate than Volleyball players.

15. There was significant differences among university men Football, Basketball and Volleyball players in cardio-vascular endurance. However, the Basketball players had a great cardio-vascular endurance than Football and Volleyball players. The Football players had a greater cardio-vascular endurance than Volleyball players.

5.3. RECOMMENDATIONS

On the basis of the findings and conclusions, the following recommendations were made :

1. As the present study has shown that there was significant differences among the university men Football, Basketball and Volleyball players in selected anthropometric, body compositions and physiological variables; it is recommended to take the above factors into consideration, while spotting and nurturing the university Football, Basketball and Volleyball players for better performance in sports and games.
2. Further it is recommended that similar study can be conducted among school boys and girls separately.
3. Similar study may be carried out in professional colleges among men players.
4. Similar study can be done among college women players in hockey, kabaddi, kho-kho etc.
5. Similar research can be made among athletes and players of different age groups.
6. Similar study can be conducted among hilly, coastal and urban area college players.