Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to compare physical and physiological profiles of basketball and handball players.

The subjects for this study were 35 basketball and 35 handball players, who were selected for Junior National Coaching Camp which was conducted at National Institute of Sports, Patiala. The players represented their state in junior national basketball and handball championships. The average age of the subjects were 18.4±1.3 for basketball players and 18.6±1.3 for handball players. The subjects had participated in basketball and handball competitions regularly for a number of years in their respective game.

The selected physical variables considered for study were speed, agility, arm and shoulder strength, arm and shoulder strength endurance, abdominal strength, explosive strength leg, flexibility and
cardio respiratory endurance. The physiological variables selected were pulse rate, blood pressure (diastolic and systolic blood pressure), vital capacity, maximum inspiratory breath holding capacity, maximum expiratory pressure, skinfold measurements (biceps, triceps, supra-iliac, calf and thigh regions) and fat percentage.

The data were collected after employing standard tests and measurement procedures. The data was submitted to 't' test at .05 level of significance 't' required to be significant was 1.984 for 68 degree of freedom.

The 't' ratio indicated statistically significant difference in physical variables of speed (t = 2.00) and abdominal strength (t = 4.069), the basketball players were superior than the handball players, in the above variables.

The 't' ratio indicated statistically no significant difference in physical variables of agility (t = 1.160), shoulder and arm strength endurance (t = 0.518), arm and shoulder girdle explosive strength (t = 0.49), flexibility (t = 0.266), explosive strength of
legs ($t = 0.367$) and cardio-respiratory endurance ($t = 0.32$).

The 't' ratio showed statistically significant differences in physiological variables of vital capacity ($t = 3.87$) and maximum inspiratory breath holding capacity ($t = 4.06$). The basketball players were better than the handball players.

The 't' ratio indicated statistically no significant difference in physiological variables of pulse rate ($t = 0.18$) systolic blood pressure ($t = 0.12$), diastolic blood pressure ($t = 1.09$) and maximum expiratory pressure ($t = 1.85$).

In fat percentage ($t = 2.153$) supra-iliac ($t = 2.498$) and sub-scapular ($t = 2.768$), skinfold measurements 't' ratio indicated statistically significant difference in favour of handball players over the basketball players.

The 't' ratio showed statistically no significant difference in skinfold measures of biceps ($t = .309$), triceps ($t = 1.726$), calf ($t = 0.527$) and
thigh \( t = 0.617 \) regions between basketball and handball players.

**Conclusions**

On the basis of the results of present investigation the following conclusions were drawn:

1. In speed and abdominal strength, basketball players are superior than the handball players.

2. In agility, arm and shoulder strength endurance, arm and shoulder girdle explosive strength, leg explosive strength, flexibility and cardio-respiratory endurance basketball and handball players are equal.

3. In vital capacity and maximum inspiratory breath holding capacity, basketball players are better than the handball players.

4. In pulse rate, systolic blood pressure, diastolic blood pressure and maximum expiratory pressure basketball and handball players have similar profiles.
5. The handball players have more fat percentage in skinfold measurements of sub-scapular and supra-iliac regions than the basketball players.

6. The basketball players and handball players have no difference in skinfold measures of biceps, triceps, calf and thigh regions.

**Recommendations**

In the light of the conclusions draw the following recommendations have been made:

1. A similar study may be carried out with other parameters not used in this study.

2. A similar study may be undertaken using subjects of different games and sports.

3. A similar study may be undertaken using sportsmen of different levels (i.e. senior national and international players).

4. A similar study may be undertaken with respect to women teams in different sports.

5. A similar study at different stage of training or coaching, such as pre-competition season etc. may be done.
6. A physiological profile may be prepared at different levels of achievements.

7. An experimental study may be undertaken to compare the effect of basketball and handball, as well as, other sports on body fat percentage.

8. A study may be undertaken to develop agility test specific to basketball and handball. Such test could then be used to compare the ability of players of these games.

9. A study may be conducted to evaluate various types of abdominal strength of the players of not only basketball and handball but also from other games. Training schedule pertaining to it scores of the players should also be considered in such a study.

10. An experimental study may be undertaken to compare the effects of basketball and handball, as well as other sports on body fat percentage.