CHAPTER - V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

V.1 Summary
Competitive sports today has become a strong societal force touching and influencing everybody's life some way or other. Millions of people participate in sports and outdoor activities of their choice, watch and read about them, spend unbelievable amount on sports related activities and sports materials and equipments. The record breaking performances of the sports persons not only entertain the minds of the millions over the globe but also at the same time have motivated the sports scientists towards serious scientific inquiries.

Sports has emerged as a discipline not merely to discuss performance, techniques or records but also to study it as a means by which greater societal forces may be analysed and through which various problems may be remedied.

Application of science and technology has greatly influenced modern sports. Sports performances are reaching to newer heights. Success in sports performance today is not only a chance. Based on the knowledge of modern sports sciences, scientific principles of training and coaching and application of sophisticated modern testing and measuring techniques, it has now become possible to predict the performance of the athletes at different levels of competitions.

In the present study, the researcher has made an attempt to identify some selective physical, physiological, anthropometric and psychological factors which may be helpful in the process of
selection and predicting basketball playing ability of the University level basketball players.

The significance of the study lies in the fact that the results of the study would help the physical educationists, sports persons in general and basketballers in particular, coaches and physical trainers, sports scientists in the process of selection, planning and scheduling the training programme for preparing the basketballers for different level competitions. Another reason why the researcher has chosen this study is that very little work has been taken up in our country to identify the predictive factors which help in spotting the probable basketballers followed by designing the training and coaching programmes to gear up them for high level competition.

The present study has been conducted on 70 University level basketball players. The purpose of the study was to investigate some physical, physiological, anthropometric and psychological variables to be identified as predictors of basketball performance at University level. The variables chosen for the study are as follows:

Physical Variables: Speed - $X_{10}$

Flexibility - Trunk - $X_{11}$

Shoulder - $X_{12}$

Agility - $X_{13}$

Explosive Leg Strength - $X_{14}$

Cardio respiratory Endurance - $X_{15}$
Physiological Variables: Haemoglobin content - $X_{16}$
Resting Heart Rate - $X_{17}$
Vital Capacity - $X_{18}$
Blood Pressure - Systolic - $X_{19}$
Diastolic - $X_{20}$

Anthropometric Variables: Arm Length - $X_{27}$
Ponderal Index - $X_{28}$
Crural Index - $X_{29}$
Arm Ratio - $X_{30}$

Psychological Variables: Sports Competition Anxiety - $X_{32}$
Achievement Motivation - $X_{33}$
Sports Self Confidence - $X_{24}$
16 P.F. - $X_{52}$

The criterion measure chosen for the study was the AAHPERD Basketball Skill Test comprising of the following test items:

- Speed Spot Shooting - $X_{1}$
- Accuracy Speed Passing - $X_{2}$
- Controlled Dribbling - $X_{3}$
- Defensive Movement - $X_{4}$

All the tests including the basketball skill test were conducted by the researcher being assisted by his colleagues. Instrumental reliability, tester competency, test reliability and subject reliability were established before actual collection of data in order to ensure reliability.

The data collected on basketball performance by administering the AAHPERD Basketball Skill Test along with physical, physiological, anthropometric and psychological variables were examined by applying Pearson’s Product Moment Correlation to find out the relationship of basketball playing
ability to each of the aforesaid variables separately and Correlation Matrix were prepared. In order to assess the combined effect of all the physical, physiological, anthropometric and psychological variables in basketball performance, the best subsets regression method of multiple regression analysis was used. Multiple Regression Analysis was done to predict basketball playing ability on the basis of the selected physical, physiological, anthropometric and psychological variations. The level of significance was set at 0.05 level in order to check the relationship which was obtained by applying Pearson’s Product Moment Correlation and the Best Subsets Regression Method of Multiple Regression Analysis. The Best Subsets Regression Method of Multiple Regression Analysis was computed through statistical data analysis software called MINITAB for selecting the most contributing variables towards basketball performance.

V.2 Conclusion

Following conclusions were arrived at within the limitations in the conduct of the study.

1. Basketball performance was significantly related to Speed, Trunk Flexibility, Agility, Explosive Leg Strength and Cardio Respiratory Endurance.

2. A significant relationship was found between basketball performance and the Physiological variables like Haemoglobin Content, Resting Heart Rate, Vital Capacity, Systolic and Diastolic Blood Pressure.

3. Basketball performance had a significant relationship with Arm Length, Ponderal Index, Crural Index and Arm Ratio.

4. Basketball performance was significantly related to Sports Competition Anxiety, Achievement Motivation, Sports Self
Confidence (Trait as well as State) and composition of 16 P.F.

5. Out of six physical variables chosen for the study, Explosive Leg Strength was identified as the most significant predictor variable contributing to basketball performance.

6. Out of five physiological variables selected for the study, Vital Capacity and Systolic Blood Pressure were identified as the most significant predictor variables contributing to basketball performance.

7. Out of four Anthropometric variables chosen for the study, Arm Length was identified as the most significant predictor variable contributing to basketball performance.

8. Out of five psychological variables selected for the study, Sports Self-Confidence (trait) was identified as the most significant predictor variable contributing to basketball performance.

V.3 Recommendations
Considering different aspects of the present study following recommendations may be made for undertaking further studies.

1. The present study has been conducted on the University level male basketballers age ranging between 20 and 25. Similar study may be conducted on male subjects of other age groups.

2. It would be interesting to note the findings of similar research studies done on the basketballers participating in or preparing for district level, state level, national level and international level competitions.

3. The present study has been carried on male university level basketballers. Similar studies may be conducted on the
female basketballers of various age groups participating in or preparing for different level competitions.

4. Interesting findings may be available if similar studies are conducted on both male and female basketballers residing in different regions of the country.

5. Similar studies may be taken up using variables other than those selected for the present study in order to investigate their relationship to basketball performance.

6. The Physical, Physiological, Anthropometric and Psychological variable chosen for the present study may be employed to other games to find out their relationship to performance of those games.

7. Similar research works may be undertaken to see whether different results come out in the measurement of the variables chosen for the present study by applying highly sophisticated measuring tools other than those used in this study.

8. Further studies in the similar line may be taken up to upgrade the prediction equation of the present study, if any, so that the newly formulated theoretical model (prediction equation) can be effectively used for the future basketballers with a view to both identifying talents and also to finding their training adaptability.