CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The summary of the research study, the conclusions drawn based on the results and the recommendation for future studies are presented below.

Prediction and explanation of scientific factors can be justified as the most important aspect of applied researches. Prediction of an event that is to take place or prediction at top-level players can be determined accurately to a greater extent by taking a number of measures in various skills and parameters specific to a particular game.

The purpose of the study was to predict handball playing ability from selected anthropometric, physical, physiological, psychological and performance variables of interuniversity handball players. To achieve the purpose of the study, the investigator selected 100 inter university handball players from players participated in interuniversity tournaments held in 2007-2008 at Acharya Nagarjuna University, Guntur, Andhra Pradesh. The subjects selected were in the age group between 17 to 25 years.

In this study, the handball playing ability was predicted from 100 inter-university handball players with the help of selected predictor variables such as
height, hand span, arm length, arm girth, hand grip strength, leg strength, speed, endurance, agility, vital capacity, resting pulse rate, mean arterial blood pressure, breath holding time, anxiety, aggression, achievement motivation, self confidence, passing, shooting, jump shot right wing and jump shot left wing. The handball playing ability was determined by subjective rating by three experts and was used as the criterion variable. The backward selection in multiple regression method was used to determine the prediction equation (Thomas and Nelson, 1990).

5.1.1 LEVEL OF SIGNIFICANCE

The handball playing ability of the inter university handball players were predicted from selected anthropometric, physical fitness, physiological, psychological and performance variables in this study. The selected criterion variable, handball playing ability were predicted from predictor variables, height, hand span, arm length, arm girth, hand grip strength, leg strength, speed, endurance, agility, vital capacity, resting pulse rate, mean arterial blood pressure, breath holding time, anxiety, aggression, achievement motivation, self confidence, passing, shooting, jump shot right wing and jump shot left wing. The backward selection in multiple regression method was used to determine the prediction equation (Thomas and Nelson, 1990). In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as appropriate.
The investigator explained to the subjects about the purpose of the study and the test administration procedure. Practice trials were conducted to help the subjects understand the method of testing.

The constant 'a' obtained for the regression equation was -44.778. The beta weights for the ten selected variables were 3.936 for hand span, 0.48 for arm length, -0.878 for speed, -0.002 for vital capacity, -0.554 for anxiety, -0.117 for aggression, 0.743 for achievement motivation, -0.384 for self confidence, 1.005 for jump shot right wing, 0.718 for jump shot left wing. Thus, the obtained equation for predicting handball playing ability of the inter university handball players was:

\[ Y^1 = 3.936 X_1 + 0.486 X_2 - 0.878 X_3 - 0.002 X_4 - 0.554 X_5 - 0.117 X_6 \\
+ 0.743 X_7 - 0.384 X_8 + 1.005 X_9 + 0.718 X_{10} - 44.778 \]

Where \( Y^1 \) = the predicted score

\( X_1 = \text{Hand Span} \)

\( X_2 = \text{Arm Length} \)

\( X_3 = \text{Speed} \)

\( X_4 = \text{Vital Capacity} \)

\( X_5 = \text{Anxiety} \)

\( X_6 = \text{Aggression} \)

\( X_7 = \text{Achievement Motivation} \)

\( X_8 = \text{Self Confidence} \)

\( X_9 = \text{Right Wing Shot} \)

\( X_{10} = \text{Left Wing Shot} \)

\( a = -44.778 \) (constant)
5.2 CONCLUSIONS

Based on the limitation and delimitation of the present research study, it was concluded that:

1. The handball playing ability could be best predicted from following anthropometric variables hand span and arm length.

2. The handball playing ability could be predicted from physical variable speed.

3. The handball playing ability could be predicted from physiological variable vital capacity.

4. The handball playing ability could be predicted from psychological variables, anxiety, aggression, achievement motivation and self-confidence.

5. The handball playing ability could be predicted from performance variables, jump shot right wing and jump shot left wing.

6. The variables, height, arm girth, hand grip strength, leg strength, endurance, agility, breath holding time, resting pulse rate, mean arterial blood pressure, passing and shooting were not good predictors for handball playing ability.
5.3 RECOMMENDATIONS

The results of this study proved that handball playing ability can be successfully predicted through the equation obtained. It was recommended that this equation may be utilised to predict the handball playing ability of the handball players.

The predicted equation may be utilized for selection of handball players by coaches and physical education directors.

5.4. SUGGESTIONS FOR FURTHER RESEARCHES

Based on the results and conclusions of the study, the following recommendations were drawn:

1. This study could be conducted with more number of predictor variables, so that more meaningful predictor variables may be selected on the regression equation to predict the handball playing ability.

2. This study has shown that hand span, arm length, speed, vital capacity, anxiety, aggression, achievement motivation, self confidence, jump shot right wing and jump shot left wing are the important predictors of handball playing ability. Hence, it was suggested that the coaches and players can concentrate more on these variables for improving their performances.
3. The contribution of similar other psychological variables such as self concept, stress and other important psychological variables could be used to predict the handball playing ability.

4. This study may also be conducted on school boys.

5. Similar research study could be conducted on other team and individual sports and games.

6. The prediction equation determined in this research investigation could be used to select handball players at inter-university level.

7. Inter University players, coaches and physical education teachers could use this prediction equation to determine the handball playing ability.