CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF THE STUDY

Physical Education and Sports has now become a vital part of the educational process as it prepares an individual for real life. Stimulation of the basic principles of science, physical education and sports has become a subject of scientific research and volleyball is no exception. Volleyball has developed into a highly competitive sports which requires high level development of physical, physiological, psychological and great stamina besides perfection in skills of the game.

To achieve excellence in volleyball there are several key components that play a prominent role in physical performance. Since volleyball is a dynamic sport, which measures power, agility, coordination, muscular endurance and cardio-respiratory endurance could all play a factor in performance. Mental toughness is a common term used in sport atmospheres, and it is usually linked with some evaluation of performance. This study will provide support for the assumptions of coaches, athletes, and other sport professionals that mental toughness is important for successful performance in sport. Because this research examines the relationship between successful game performance with physical, physiological, psychological (mental toughness) and anthropometric variables of volleyball players, the results will attempt to shows that players who have physical, physiological, psychological and anthropometric measurements will achieve consistently better on the skill/game performance in the court.
The researcher made an attempt to find out the relationship of volleyball game performance with physical, physiological, psychological and anthropometrical variables among college men volleyball players. To achieve the purpose of the study, one hundred thirty men college level volleyball players were selected randomly from various colleges who have participated in intercollegiate Competition under the V.T.U. jurisdiction. The age of the subjects ranged from 18-25 years.

The following variables were selected for this study such as game performance from selected fundamental skills i.e. serve, pass, attack and block, the physical fitness variables such as abdominal strength, muscular power, flexibility, agility, speed, muscular endurance, coordination, the physiological variables such as systolic and diastolic blood pressure, cardiovascular endurance and lung capacity, psychological variable such as mental toughness with dimensions of anthropometrical like variables standing height, body weight, arm length, arm span, leg length, circumferences are arm girth, thigh girth and calf girth and muscle bone and fat such as body fat percentage.

The data collected has been tabulated and analyzed with the help of statistical techniques viz., mean, standard deviation, coefficient of correlation, multiple correlation and regression equation to develop the prediction equations for assessing the game performance of volleyball players. The researcher also found the significant differences in the selected variables among volleyball players with different play position.

The present study consists of one dependent variable, namely game performance of volleyball players, and twenty independent variables. To determine the relationship between dependent variable and independent variable
Pearson product moment correlation was used. For the computation of multiple regression analysis was selected on the basis of coefficient of correlations with performance of skill efficiency of volleyball players. The One-way Analysis of Variance (One-way ANOVA) was used by the researcher to find out the significant difference in the physical, physiological, psychological and anthropometrical variables among volleyball players with different play position. The significant was set at 0.05 level of confidence. In case of significant F ratio obtained, Scheffe’s post hoc test was applied to test the significant differences between the ordered paired means. The Multiple Correlation and Multiple regression equations were computed to find out the effects of selected physical, physiological, psychological and anthropometrical variables for the prediction of game performance of volleyball players. In all the cases 0.05 and 0.01 level of significance was fixed to test the hypotheses.

5.2 CONCLUSION

The following conclusion were drawn from the present study:

1. There was significant relationship between game performance and physical fitness variables of abdominal strength, muscular power, flexibility, agility, speed, muscular endurance and coordination volleyball players in each variable

2. There was significant relationship between game performance and the combined effect of abdominal strength, muscular power, flexibility, agility, speed, muscular endurance and coordination of volleyball players.
3. There was significant relationship between game performance and physiological variables of Cardiovascular Endurance and Lung Capacity of volleyball players in each variable.

4. There was no significant relationship between Game Performance and systolic and diastolic blood pressure of volleyball players.

5. There was no significant relationship between game performance and the combined effect of systolic and diastolic blood pressure, cardiovascular endurance and lung capacity of volleyball players.

6. There was significant relationship between game performance and reboundability, ability to handle pressure, winning concentration ability, self confidence and goal setting of volleyball players in each variable.

7. There was significant relationship between game performance and the combined effect of reboundability, ability to handle pressure, winning concentration ability, self confidence and goal setting of volleyball players.

8. There was significant relationship between game performance and standing height, body weight, arm length, arm span, leg length, thigh girth, calf girth and body fat % of volleyball players in each variables.

9. There was no significant relationship between game performance and arm girth of volleyball players.

10. There was significant relationship between game performance and the combined effect of standing height, body weight, arm length, arm span, leg length, arm girth, thigh girth, calf girth & body fat percentage of volleyball players.
11. There was a significant difference in the abdominal strength among spikers, setters and allrounders of volleyball players. There was significant difference exists in abdominal strength among spikers & setters and setters and allrounders and insignificant difference exists between spikers and allrounders of volleyball players. It was concluded that allrounders have greater abdominal strength than spikers and setters.

12. There was a significant difference in the muscular power among spikers, setters and allrounders of volleyball players. There was significant difference exists in muscular power between spikers and setters of volleyball players and an insignificant difference exists between setters & allrounders and spikers and allrounders of volleyball players. It was concluded that spikers have greater muscular strength than allrounders and spikers.

13. There was a significant difference in the flexibility among spikers, setters and allrounders of volleyball players. There was a significant difference exists in flexibility among spikers & setters and setters & allrounders and insignificant difference exists between spikers & allrounders of volleyball players. The spikers have greater flexibility than allrounders and setters.

14. There was a significant difference in the agility among spikers, setters and allrounders of volleyball players. There was significant difference exists in agility between spikers and setters and insignificant difference exists between setters & allrounders and spikers & allrounders of volleyball players. It was concluded that spikers have greater agility than allrounders and setters.
15. There was a significant difference in the speed among spikers, setters and allrounders of volleyball players. There was significant difference exists in speed between spikers & setters and spikers & allrounders and insignificant difference exists between setters & allrounders of volleyball players. It was concluded that spikers have greater agility than setters and allrounders.

16. There was no significant difference in the muscular endurance among spikers, setters and allrounders of volleyball players.

17. There was a significant difference in the coordination among spikers, setters and allrounders of volleyball players. There was significant difference exists in coordination between spikers & setters and spikers & allrounders and insignificant difference exists between setters & allrounders. It was concluded that spikers volleyball players have greater coordination than allrounders and setters.

18. There was no significant difference in the systolic BP among spikers, setters and allrounders of volleyball players.

19. There was no significant difference in the cardiovascular endurance among spikers, setters and allrounders of volleyball players.

20. There was no significant difference in the lung capacity among spikers, setters and allrounders of volleyball players.

21. There was a significant difference in the rebound ability among spikers, setters and allrounders of volleyball players. There was significant difference exists in reboundability between spikers & setters and insignificant difference exists between setters & allrounders and spikers
& allrounders of volleyball players. It was concluded that spikers have greater reboundability than allrounders and setters.

22. There was a significant difference in the ability to handle pressure among spikers, setters and allrounders of volleyball players. There was significant difference exists in ability to handle pressure between spikers & setters and insignificant difference exists between setters & allrounders and spikers & allrounders of volleyball players. It was concluded that spikers have greater ability to handle than allrounders and setters.

23. There was no significant difference in the winning concentration ability among spikers, setters and allrounders of volleyball players” is accepted.

24. There was a significant difference in the self confidence among spikers, setters and allrounders of volleyball players. There was significant difference exists in self confidence ability between spikers & setters and insignificant difference exists between setters & allrounders and spikers & allrounders of volleyball players. It was concluded that spikers have better self confidence ability than allrounders and setters.

25. There was a significant difference in the goal settings among spikers, setters and allrounders of volleyball players. There was significant difference exists in goal settings ability between spikers and setters and insignificant differences exists between of setters & allrounders and spikers & allrounders. It was concluded that spikers have better goal settings ability than allrounders and setters.

26. There was a significant difference in the mental toughness among spikers, setters and allrounders of volleyball players. There was significant
difference exists in mental toughness between spikers and setters and insignificant difference exists between setters & allrounders and spikers & allrounders of volleyball players. It was concluded that spikers have greater mental toughness than allrounders and setters.

27. There was a significant difference in the standing height among spikers, setters and allrounders of volleyball players. There was significant difference exists in standing height among spikers & setters; setters & allrounders; and spikers & allrounders significant differences exists of volleyball players. It was concluded that spikers have greater standing height than allrounders and setters.

28. There was a significant difference in the body weight among spikers, setters and allrounders of volleyball players. There was significant difference exists in body weight setters & allrounders and spikers & allrounders and insignificant difference exists between spikers and setters of volleyball players. It was concluded that allrounders have greater body weight than setters and spikers.

29. There was a significant difference in the arm length among spikers, setters and allrounders of volleyball players.” significant difference exists in arm length between spikers & setters and spikers & allrounders and insignificant difference exist between setters & allrounders. It was concluded that spikers have greater arm length than allrounders and setters.

30. There was no significant difference in the arm span among spikers, setters and allrounders of volleyball players” is accepted.
31. There was a significant difference in the leg length among spikers, setters and allrounders of volleyball players. There was significant difference exists in leg length between spikers & setters and setters & allrounders and insignificant differences exists between setters & allrounders of volleyball players. It was concluded that spikers have greater leg length than allrounders and setters.

32. There was no significant difference in the arm girth among spikers, setters and allrounders of volleyball players” is accepted.

33. There was a significant difference in the thigh girth among spikers, setters and allrounders of volleyball players. There was significant difference exists in leg length between spikers & allrounders and an insignificant difference exists between spikers & setters and setters & allrounders of volleyball players. It was concluded that spikers have greater leg length than allrounders and setters.

34. There was a significant difference in the calf girth among spikers, setters and allrounders of volleyball players. There was significant difference exists in calf girth between spikers & setters and setters & allrounders and insignificant difference exists between setters & allrounders of volleyball players. It was concluded that spikers have greater calf girth than allrounders and setters.

35. There was a significant difference in the body fat percentage among spikers, setters and allrounders of volleyball players. There was significant differences exists in body fat percentage between spikers & setters and spikers and allrounders and insignificant difference exists
between setters & allrounders of volleyball players. It was concluded that allrounders have higher body fat percentage than setters and spikers.

36. There was a significant difference in the game performance among spikers, setters and allrounders of volleyball players. There was significant difference exists in game performance between spikers & setters and spikers & allrounders and insignificant difference exists between setters & allrounders of volleyball players. It was concluded that spikers have best game performance than allrounders and setters.

37. The coordination is the best predictor of game performance of volleyball players among the studied sample followed by mental toughness, leg length and agility. The other variables abdominal strength, muscular power, flexibility, speed, muscular endurance, systolic, blood pressure, diastolic blood pressure, cardiovascular endurance, lung capacity, standing height, body weight, arm length, arm span, arm girth, thigh girth, calf girth and body fat percentage did not enter the equation.

From the study it was concluded that there was a significant relationship of physical, physiological and psychological variables with game performance of volleyball players. The results conclude the said variables were influenced to improve the game performance of volleyball players.

Past studies have shown certain characteristics to be advantageous to players, including greater height, greater vertical jump, greater mass, greater upper body strength and lower body fat %. However, each study compared the variables to some measure of playing ability and not to the skill performance. Volleyball player can have high overall playing ability but be weak in one specific skill. Identifying those factors that are characteristic to high
performance in a certain skill may provide a focus for improvement in that skill. Once weaknesses are revealed, the player may then concentrate on improving the factors that lead to high performance in that skill. Interventions that manipulate threat assessments among low mentally tough sportspersons have the potential to facilitate better emotional and coping responses, which ultimately may enhance sport performance. Developing Mental Toughness contains practical guidance on delivering techniques that will radically improve sportsperson’s abilities to control the effects of stress and pressure. Mental toughness is having the natural or developed psychological edge that predicts Athletes success. Exposure hard conditions (competition; exercise) can develop Mental Toughness. Various factors such as time situation; competitive experience; age; activity level; nature of sport and individual differences…have important roles in shaping and creating good mental skills.

5.3 RECOMMENDATIONS:

With the help of the results derived from the present study, the following recommendations are made:

1. The result of this study was of great interest to physical educators, coaches and to the players, as they would be able to assess the physical, physiological, psychological and anthropometrics variables for efficient game performance.

2. The findings of the study were great value in designing and administering fitness programs for those who need such attention.

3. The result of the study also helped to assess the comparative standards of different sports persons.
4. The results also helped the physical educators to set the norms for the selection of volleyball players.

5. Similar studies may be conducted on different games of college players.

6. It may be recommended to carry out similar studies with national/international players.

7. It is recommended that a longitudinal study may be conducted to see if high scores on physical, physiological and skill performance variables act as limiting factors in a game of volleyball.

8. It is recommended that special efforts should be made to develop Volleyball game especially in colleges to train, budding sports performance in volleyball.

9. A similar study may also be undertaken utilizing the functional variables in addition to the variables chosen in this study.

10. It is recommended that more intensive research may be undertaken in other sports where the criterion used for measuring success is the game performance.