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A COMPARATIVE STUDY OF AEROBIC, ANAEROBIC CAPACITY AND MOTOR PERFORMANCE OF VOLLEYBALL PLAYERS OF DIFFERENT UNIVERSITIES IN RAJASTHAN

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ABSTRACT

Volleyball is the most popular game in world. The purpose of the study was to evaluate aerobic, anaerobic capacity and motor performance of volleyball players of different universities in rajasthan. The study is the 84 Volleyball Players. The study is restricted to 18-25 year age group. Standard Statistical tolls were used for the generalized. the level of significance was at 0.05 level. The Raw scores in convert to T-Scores used in this study.

KEY WORD:- Aerobic, Anaerobic Capcity, Moter Performance and volleyball players.

INTRODUCATION

The purpose of this study was to examine aerobic, anaerobic capacity and motor performance of volleyball players of different universities in rajasthan the statistical analysis of data and discussion of the results has been presented in this chapter. The Motor performance (power, Agility, Speed, nelson hand reaction time, Balance) and Physiological Variables (Aerobic capacity, Anaerobic capacity) were collected and 84 male Volleyball players from different universities i.e. University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V. University,

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Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner and Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur of Rajasthan Volleyball players.

OBJECTIVE OF THE STUDY

To find out the aerobic, anaerobic capacity and motor performance of different

universities volleyball players.

HYPOTHESIS

1. There was significant difference between Aerobic and Anaerobic capacities of the Volleyball Players of different Universities.

2. There was significant difference between motor performances of the volleyball

players of different Universities.

STATEMENT OF THE PROBLEM

The purpose of the investigation is a Comparative study of Aerobic , Anaerobic Capacity and motor performance of volleyball players of different universities in rajasthan.

DELIMITATION

The study is delimited to the volleyball players of different Universities in Rajasthan.

The study is delimited to the 84 Volleyball Players.

The study is restricted to 18-25 year age group.

The Study is further delimited to Aerobic capacity, Anaerobic capacity and following Motor Performances.

a) Power

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b) Speed

c) Agility

d) Reaction Time

e) Balance

LIMITATION

1. Participation in different physical activities might be considered as the limitation of the study.

2. Non-availability of sophisticated instruments might be considered as the limitation of the study.

3. Certain factors like diet, daily routine life style, social back ground etc. which may affect the result of the study, could not be controlled.

DEFINITION & EXPLANATION OF THE TERMS

AEROBIC CAPACITY

Aerobic work can be defined as the work in which the amount of oxygen taken in and used by the body is sufficient to provide the necessary energy for the performance of the task. The body's ability to process oxygen is a combination of lung capacity, the size of the capillaries, the pumping action of the heart and transfer of oxygen from red blood cells to target tissues.

ANAEROBIC CAPACITY

Anaerobic work can be defined as the work in which the amount of oxygen that the body can supply is less than the amount necessary to perform the task. Anaerobic work can be performed

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only for short periods of time, since an oxygen debt is incurred and there is a build up of lactic acid in the blood stream.

MOTOR PERFORMANCE

POWER

Ability to release maximum muscular force in an explosive manner in the shortest duration, is known as muscular power.

SPEED

The rapidity of muscle movement or the rate of change of body movement is known as muscular speed. Literally speed is measured by dividing distance by time in short runs.

AGILITY

The ability to perform a series of explosive power movements in rapid succession in opposite direction, zigzag running or cutting moments is agility.

REACTION TIME

Reaction Time is the time elapsed between the giving of stimulus and the initiation of the response to it.

BALANCE

The ability to hold the body positions in comparatively less stable positions, is known as body balance.

SIGNIFICANCE OF THE STUDY

Most of the researchers have to ascertain the best, the easiest and most profitable and economical methods of selecting the players in order to get the best performance from them. There are various

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factors which play significant role in achieving success in Volleyball. Many researchers have said about the demands of above mentioned game but scientific investigations have not been undertaken in India to prove the worth of various demanding parameters in volleyball game.

1. The finding of the study will provide criteria for selecting talented athletes for competitive success.

2. The study will help the physical education teachers and coaches by way of informing them about aerobic and anaerobic capacity with motor performance that athletes require.

3. The study helps to find out the aerobic, anaerobic capacity and motor performance of different sports at Universities level.

4. The finding of the study will provide a guideline for future research investigators to compare with Volleyball Players.

RECOMMENDATIONS

In the light of the results of this work, the following recommendations can be made:-

1. The present study to be strengthened by more extending studies on the factors influencing sports career, influence of Physical variables & Physiological Variables on performance and impact of, over the performance of combat sports-person.

2. This study may be taken for male and female national and International Volleyball players.

3. This study may be conducted on team games.

4. Similar study may be conducted on Senior, Junior & sub-junior Volleyball players at district, state, and national level.

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CONCLUSION

- Variability exists between Aerobic capacity of the seven universities namely i.e.,University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V.University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner andJagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players.Above table shows that significant difference is found in Aerobic capacity of the differentUniversities Volleyball as obtained F-ratio value (6.58). The required F-ratio to be significantat .05 level with (6, 77) degree of freedom.

- That variability exists between Anaerobic capacity of the seven universities namelyi.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota,J.N.V. University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikanerand Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players.Above table shows that there is significant difference in Anaerobic capacity of the differentUniversities Volleyball players as obtained F-ratio value (11.76).

- Variability exists between Power of the seven universities namely i.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V. University,Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner and Jagadgur Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players. Above table shows that significant difference is found in Power of the different Universities Volleyball players as obtained F-ratio value (5.603).

- It was evident, that variability exists between Agility of the seven universities namely i.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V. University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner and

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Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players. Above table shows that significant difference was found in Agility of the different

Universities Volleyball players as obtained F-ratio value (5.128).

- It was evident that variability exists between Speed of the seven universities namely i.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V. University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner And Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players.Above table shows that significant difference was found in Speed of the different Universities Volleyball players as obtained F-ratio value (5.27).

. • It is evident from table that variability exists between Balance of the seven universities namely i.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota, Kota, J.N.V. University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University, Bikaner and Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyball players. Above table shows that significant difference is found in Balance of the different Universities Volleyball players as obtained F-ratio value (2.59).

- It was evident, that variability exists between Reaction Time of the seven universities namely i.e., University of Rajasthan, Jaipur, M.D.S. University, Ajmer, University of Kota,Kota, J.N.V. University, Jodhpur, M.L.S. University, Udaipur, Maharaja G.S. University,Bikaner and Jagadguru Ramanandacharya Rajasthan Sanskrit University, Jaipur Volleyballplayers. Above table shows that insignificant difference was found in Reaction Time of the different Universities Volleyball players as obtained F-ratio value (1.61).

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