

Research Article

Physical Anthropometrical Psychological and Performance of Volleyball Players in Telangana Universities - A Field Study

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Abstract

The purpose of this study is, among all the psychological, anthropometrical, psychological, performance variables in rank on the performance wise of players, anthropometrical variables such as height and arm length how they play a significant and essential role in Volleyball players. In this paper, we focused on psychological variables such as speed (50 mt run in sec), Arm strength and arm strength, anthropometrical such as Height and arm length, psychological variables such as self confidence and aggression, performance variables such as service, spiking, and blocking. From the analysis, results and discussions, it was observed that players who are taller and having more self confidence than others shown high performance in case of psychological variables, anthropometrical variables etc. Also In the study, finally, among all variables, in rank and on the performance wise, anthropometrical variables such as height and arm length plays a significant role.

Keywords: Physical fitness; Speed; Endurance; Arm length; Self confidence; Aggression; Service; Spiking; Blocking ANOVA test

Introduction

Now a day Sports, Physical education Volleyball sport have gained tremendous popularity all over the globe. Motivated by this fact, in sports and Physical education a study is making on Physical Anthropometrical Psychological and Performance of Volleyball players in Universities of Telangana region, India. From earlier studies such as Bose M [1], conducted an analytical study of physical and performance variables, of university and state men Hockey players, playing and different playing surfaces. Sabu S [2] conducted a study on Comparative Analysis of selected physical and psychological characteristics of men soccer players playing at different field of positions Angyan et al. [3], measured the trends in prevention oriented physical education. The process of this study was to measure selected anthropometrical characteristics, motor abilities and cardio respiratory function of medical students Quarrie et al. [4] conducted a study on anthropometrical and physical performance characteristics of New Zealand Rugby players of different ages and both sexes Bossone et al. [5] conducted a study on cardiovascular responses to exercise in elite ice hockey players. High performance ice hockey requires unique strength and endurance, which are facilitated by training However, Mc Carthy and Kelly [6] conducted a study on aggression, performance variables and anger self-report high hockey players. This study partially replicated a former one showing a relationship

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between aggression and performance among hockey players Gabbett and Georgieff [7]. The aim of his study was to determine whether physiological, anthropometric, and skill test results could discriminate between junior volleyball players of varying ability. In their study Anthropometric and physiological characteristics on Indian inter-university volleyball players. The purpose of this study was of two-folds, firstly, to evaluate the anthropometric profile of Indian inter-university volleyball players and, secondly, to search the correlation of body mass index, % body fat, hand grip strength (right dominant) and Vo2 max with other anthropometric characteristics studied understanding of the physical and psychological aspects of athletes will provide useful information and guidelines which may be helpful to coaches and athletes. Therefore the present study may provide some significant contribution in the following aspects. In section-II, we present methodology, some numerical results discussed in section-III. Finally conclusions are given section IV.

Materials and Methods

In the section, the procedure adopted for the selection of subjects, selection of variables, collection of data and statistical techniques to be employed for the analysis of the data have been described. To conduct this study altogether 96 of University men volley ball players were selected as subjects, who participated in the central zone inter university volleyball competition held at Gwalior during the year 2013 representing their respective universities were chosen as subjects. The age of the players was between 18 to 28 players. As per the game formation in volley ball there are six zones namely zone I, zone II, zone III, zone IV, zone V, zone VI, 16 players were selected as subjects. The players were selected from the 8 universities detailed team below from each zone i.e., Osmania University - Hyderabad, Kakatiya University - Warangal, Shathavahana University - Karimnagar, Jawaharlal Nehru Technological University - Hyderabad, Telangana University - Nizamabad, Palamuru University - Mahabubnagar, National Institute of Technology - Warangal, Mahatma Gandhi University - Nalgonda.

Selection of variables

In this study selected physical variables, anthropometric variables, psychological variables and performance variables which were considered as the essential components for the game of volleyball. The Selection of variables in the study are: Physical Variables: (i) Speed (ii) Endurance and (iii) Arm Strength; Anthropometrical Variables: (i) Height (ii) Arm Length; Psychological Variables: (i) Self-confidence (ii) Aggression; Performance Variables: (i) Spiking (ii) Blocking (iii) Serving. This study was intended to analyze and compare the physical characteristics, (speed, endurance and arm strength), anthropometrical variables (height and arm length), psychological variables (self confidence and aggression) and performance variables (spiking and trapping) of university men Volleyball players playing at different field positions namely, (Blocking, Serving, Posing, Setting, blocking (center blocking, side blocking) writers right & left side.

Hypothesis

There may be a significant difference among the spikers and blockers with request and blockers with respect to their physical variables.

1. There may be significant difference among the spikers and blockers with respect to their physical variables.
2. There may be significant difference among blockers and setters with respect to their physical variables.
3. There may be significant difference among spikers and setters with respect to their variables.
4. There may be significant difference among psychological, anthropometric and performance variables.

Results

The section with tabulation, analysis of data and results of a study, we interpret discusses and focused on physical variables such as speed (50 mt run in sec), Endurance and arm strength, anthropometrical such as height and arm length, psychological variables such as self confidence and aggression, performance variables such as service, spiking, and blocking. The results pertaining to the hypotheses and their discussions were presented.

In this analysis for a better understanding of the physical fitness related Physiological, anthropometrical, and performance variables among Volleyball players of selected universities in Telangana region. Mean, Standard Deviation, test for means t-value, and ANOVA techniques were taken up and p-values are considered in this study and employed separately for all variables. This entire Statistical Analysis work done by SPSS-17.0.

Table 1: Comparison of Mean \pm SD Scores among Volley Ball Players of Universities in Telangana Region.

Variables	OU	KU	SU	JNTU	MGU	TU	PU	NITW	p-value
Speed (m)	6.36 \pm 0.05	7.02 \pm 0.22	7.06 \pm 0.03	7.11 \pm 0.06	7.13 \pm 0.13	7.16 \pm 0.13	7.17 \pm 0.12	7.26 \pm 0.03	0.02
Endurance (mt)	3087.50 \pm 71.11	2991.67 \pm 104.08	2862.50 \pm 891.66	2762.50 \pm 190.84	2750.0 \pm 175.81	2658.33 \pm 205.42	2629.17 \pm 163.01	2608.33 \pm 114.48	0.003
Arm Strength (cm)	19.25 \pm 2.42	18.00 \pm 2.13	17.83 \pm 1.59	17.75 \pm 2.26	17.58 \pm 1.98	17.42 \pm 2.27	16.17 \pm 2.12	15.33 \pm 1.87	0.0045
Height (cm)	184.92 \pm 5.98	179.58 \pm 4.4	175.33 \pm 4.38	173.92 \pm 3.03	173.75 \pm 1.66	173.67 \pm 1.44	173.58 \pm 1.83	173.42 \pm 2.07	0.0023
Arm Length (cm)	78.50 \pm 3.12	76.50 \pm 4.03	76.08 \pm 3.9	75.75 \pm 4.49	75.25 \pm 5.12	74.92 \pm 4.72	74.75 \pm 4.43	74.42 \pm 4.23	0.022
Self-Confidence	31.08 \pm 1.68	29.08 \pm 1.56	28.33 \pm 2.57	27.50 \pm 2.11	27.42 \pm 2.15	27.33 \pm 2.81	27.25 \pm 2.34	26.67 \pm 2.46	0.003
Aggression	16.75 \pm 1.54	15.42 \pm 1.44	14.92 \pm 1.83	14.50 \pm 1.73	14.25 \pm 1.29	14.17 \pm 1.27	13.92 \pm 1.98	13.83 \pm 1.99	0.004
Service	11.83 \pm 0.39	11.00 \pm 0.74	10.50 \pm 0.8	10.25 \pm 0.62	10.17 \pm 0.83	9.92 \pm 1.88	9.92 \pm 0.67	9.75 \pm 0.97	0.003
Blocking	11.17 \pm 0.94	10.67 \pm 1.07	10.00 \pm 1.35	9.75 \pm 1.22	9.75 \pm 1.06	9.67 \pm 1.07	9.58 \pm 1.31	9.50 \pm 1.31	0.0011
Spiking	72.33 \pm 1.37	69.92 \pm 1.51	69.50 \pm 1.78	69.33 \pm 1.83	69.33 \pm 1.83	69.17 \pm 1.75	69.08 \pm 1.73	69.00 \pm 1.65	0.01

From the Table 1, it shows that there is a significance of speed test on the Volley ball players among all the universities, clearly OU players shows more significance than all other universities in the region the players since p value is 0.02. Endurance test, clearly OU players shows more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players since p value is 0.003. Similarly, arm strength test SU player's shows significance in the region. Thus it can be inferred that there is a significant difference among all the Players since p value is 0.0045. The Table reveals that there is a significance of height test on the Volley ball players among all the universities, clearly OU players shows more significance than all other universities in the region since p value is 0.0023.

There is a significance of arm length test on the Volley ball players among all the universities, clearly OU player's shows more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players. The Table reveals that there is a significance of self confidence test on the Volley ball players among all the universities, clearly KU players shows more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players.

The table reveals that there is a significance of aggression test on the Volley ball players among all the universities, clearly TU players show more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players.

From the table, in case of service test, among all the universities, clearly OU players show more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players. The Table reveals that there is a significance of spiking test on the Volley ball players among all the universities, clearly OU players shows more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players. Also in blocking test on the Volley ball players among all the universities, OU players show more significance than all other universities in the region. Thus it can be inferred that there is a significant difference among all the Players since p value is 0.01.

Conclusion

Following, Section III, we draw some conclusions in support of primary source data tabulation, results analysis and discussions. Thus we observed that players who are taller and having more

self confidence than others shown high performance in case of psychological variables, anthropometrical variables etc. In this study, finally among all the psychological variables, anthropometrical, psychological, performance variables in rank on the performance wise of players, anthropometrical variables such as Height and arm length plays a significant and essential role.

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