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A STUDY ON SELECTED ANTHROPOMETRIC VARIABLES IN VOLLEYBALL GAME

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ABSTRACT

The objective of the study was to know the selected anthropometric variables in Volleyball Game. The selection of subjects, variables and statistical procedure were explained. 24 Volleyball Players were randomly selected from Dr. Rammanohar Lohia University, Ayodhya (U.P) inter collegiate competition in the session of 2021-2022. The subjects were belonged the age group of 18 to 25 years. The anthropometric variables of height, weight, arm length and leg length variables were selected in the present study. All the obtained data from tests and measurements were recorded and then by using Microsoft Excel 2010 software and Pearson correlation coefficient were calculated. In results of our study it is found that in this analysis of significant relationship of selected anthropometric variables to volleyball skill. Anthropometric variables standing height, arm length and leg length was significant relationship with respective game. All anthropometric variables don't have any significant relationship with game skill.

Keywords: Selected Anthropometric Variables & Volleyball Game.

INTRODUCTION

Anthropometry simply stated consists of making external measurement of human body. These measurements may be either objective or subjective. Commonly used is associating physical performance with body build (Philip and James, 1979). In his

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study (Cureton, 1951) has concluded that all round athletic ability is characterized by wide shoulder width compared to hip width. Davenport's Crural Index, is a valuable guide for the selection of individual build in an agility pattern for bony leverage. Higher values of leg length/trunk length indicated agility types. Ability to putting and throwing is indicated by relatively greater height and arm span etc.

Garary, Levine and Carter after an intensive study of Anthropometric Measurements of Olympic Athletes concluded that top level performance in particular event demands particular type of body size and shape, other aspect being similar. They established strong relationship between the structure of an athlete and the specific task (event) in which he excelled.

OBJECTIVE OF THE STUDY

The objective of the study was to know the selected anthropometric variables in Volleyball Game.

DESIGN OF THE STUDY

24 Volleyball Players were randomly selected from Dr. Rammanohar Lohia University, Ayodhya (U.P) inter collegiate competition in the session of 2021-2022. The subjects were belonged the age group of 18 to 25 years. The anthropometric variables of height, weight, arm length and leg length variables were selected in this study. AAHPERD Skill Test included attacking test, blocking test, receiving test and running

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test which have appropriate validity and reliability. All the obtained data from tests and measurements were recorded and then by using Microsoft Excel 2010 software and Pearson correlation coefficient were calculated.

STATISTICAL TECHNIQUE

Pearson's product moment correlation was used as a tool to find out the relationship of selected anthropometric variables with volleyball skill. The level of significance was set at 0.05 and Microsoft Excel 2010 software was used for statistical analysis.

RESULTS AND DISCUSSIONS

Table No: I
Table showing the Mean and Standard Deviation of selected Anthropometric Variables

Variables	Mean	SD
Standing Height	1.651	0.063
Body Weight	58.467	5.370
Arm Length	74.413	7.064
Leg Length	42.267	1.534
Attacking Test	17.667	3.086
Receiving Test	194.267	6.713
Blocking Test	11.600	2.530
Running Test	19.533	1.767

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Table No: II

Table showing the Co-efficient of selected Anthropometric Variables

Variables	Correlation Co-efficient (r)
Standing Height	0.738*
Body Weight	0.040
Arm Length	0.572*
Leg Length	0.760*

Table No: III

Table showing the Coefficients of selected Anthropometric Variables

Variables	Correlation Co-efficient (r)
Standing Height	0.594*
Body Weight	-0.188
Arm Length	0.569*
Leg Length	0.839*

*Significant at .05 level of confidence

After analysis the study showed that, the relationship of selected anthropometric variables with game skill. All the obtained correlation values other than body weight variable were above the table value of 0.541. In this analysis standing height, arm length and leg length were significant relationship with attacking skill. Among the anthropometric variables leg length was found the highest relationship with game skill (r = 0.760). The other anthropometric variables height (0.738) and arm length (0.572) also significant relationship with skill. Body weight variable are not significant relationship with ability.

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Table study also revealed that the relationship of selected anthropometric variables with skill. All the obtained correlation values other than body weight variable were above the table value of 0.541. In this analysis standing height, arm length and leg length were significant relationship with throwing skill ability. Among the anthropometric variables leg length was found the highest relationship with their playing ability (r = 0.839). The other anthropometric variables height (0.594) and arm length (0.569) also significant relationship with skill ability.

CONCLUSIONS

From the above results and discussions the following conclusions were drawn:-

By the light of the results of our study it was found that in this analysis of significant relationship of selected anthropometric variables with volleyball skill ability. Anthropometric variables standing height, arm length and leg length was significant relationship with subjects playing ability and there is no significant relationship with body weight. All anthropometric variables don't have any significant relationship with playing ability.

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