ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Correlations of Selected Anthropometrical and Psychological with Playing Ability among Volleyball Players

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Received 8th March 2016, Accepted 1st May 2016

Abstract

The purpose of the study was to find out the correlations of selected anthropometrical and psychological variables among volleyball players. To achieve the purpose, seventy two volleyball players were randomly selected from various colleges in Tamilnadu state, India and their age ranged from 17 to 25 years. The subjects had the past playing experience of at least three years in volleyball and only those who represented their respective college teams were taken as subjects. In this study, the volleyball playing ability was predicted from three hundred and eighteen volleyball players selected with the help of predictor variables such as the Anthropometrical variables namely – body weight, thigh girth, calf girth, hand length, chest girth: Psychological variables namely – cognitive anxiety, Somatic Anxiety, Self Confidence. The playing ability which was taken as the performance factor was subjectively assessed by three qualified volleyball coaches. The present study consisted of one dependent variable, namely playing ability of volleyball players and eight independent variables. Collected data was subjected to statistical analysis as explained below. The inter - relationship among the selected physical and anthropometrical variables and the volleyball playing ability, were computed by using Pearson product moment correlation coefficients. The results revealed that an Inter – relationship exists significantly between the anthropometrical and psychological variables among volleyball players. The results revealed that the calf girth, hand length, cognitive anxiety and self confidence having significant correlation with Volleyball playing ability.

Keywords: Volleyball, Anthropometric, Psychological, Correlations.

Introduction

Volleyball is played in more than sixty countries and more than sixty million people. In Eastern Europe, Asia and South America top games draws crowds, the size of which rival those at volleyball matches. Volleyball is considered as a top level competitive sport in more than twenty countries. The game of Volleyball was invented in 1895 by William G Morgan who worked for the Y.M.C.A in Holyoak, Massachusetts. His early form of the game was designed to provide mild exercise for large groups of businessmen. This original game was very simple any number of players batted a basketball bladder backward and forward over a tennis net which was fixed at a height of six feet. Since then the game has developed and spread worldwide. The main reason of its popularity was it can be played indoors and outdoors, need little space compared to other games, and it can be played by both sexes and over a considerable age range. Play can be tremendously varying standards from a purely recreations level on the beach and in the park, through all levels of clubs and school level competitions, right up to international level.

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Materials and Methods

The purpose of the study was to find out the correlations of selected anthropometrical and psychological variables among volleyball players. To achieve the purpose, seventy two volleyball players were randomly selected from various colleges in Tamilnadu state, India and their age ranged from 17 to 25 years. The subjects had the past playing experience of at least three years in volleyball and only those who represented their respective college teams were taken as subjects. In this study, the volleyball playing ability was predicted from three hundred and eighteen volleyball players selected with the help of predictor variables such as the Anthropometrical variables namely – body weight, thigh girth, calf girth, hand length, chest girth: Psychological variables namely – cognitive anxiety, somatic anxiety, self confidence. The playing ability which was taken as the performance factor was subjectively assessed by three qualified volleyball coaches. The present study consisted of one dependent variable, namely playing ability of volleyball players and eight independent variables. Collected data was subjected to statistical analysis as explained below. The inter - relationship among the selected physical and anthropometrical

variables and the volleyball playing ability, were computed by using Pearson product moment correlation coefficients.

Results

Table I. Descriptive statistics of playing ability in volleyball from selected physical and anthropometrical variables among volleyball players

S.No	Variables	Range	Minimum	Maximum	Mean	SD (±)
1	Body Weight	23.30	56.50	79.80	67.96	5.18
2	Thigh Girth	44.65	42.35	87.00	62.35	10.28
3	Calf Girth	7.20	31.12	38.32	34.99	1.87
4	Hand length	4.53	18.38	22.91	21.22	0.82
5	Chest Girth	19.34	75.01	94.35	83.47	5.10
6	Cognitive Anxiety	3.00	20	23	20.54	2.41
7	Somatic Anxiety	5.00	18	23	19.25	3.29
8	Self Confidence	8.00	24	32	28.54	1.77
9	Playing Ability	4.00	5.00	9.00	7.45	1.09

Table – I showed the descriptive statistics – Range, Minimum, Maximum, Mean and Standard deviation of playing ability in volleyball from selected anthropometrical and psychological variables and the playing ability among volleyball players. The present study attempted to link the coaches rating as measure of playing ability in volleyball from selected anthropometrical and psychological variables among volleyball players. Pearson's product moment correlation analysis was made and results were presented in Table – II.

Table II. Inter-correlation of selected variables with the paying ability in volleyball among volleyball players

S.No	C.R	V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8
V_1	0.04	1							
V_2	0.08	0.43**	1						
V_3	0.13*	0.51**	0.12*	1					
V_4	0.15*	0.22**	0.30**	0.20**	1				
V_5	0.03	0.10*	0.23**	0.17**	0.63**	1			
V_6	0.69**	0.04	0.03	0.08	0.11*	0.06	1		
V_7	0.09	0.51**	0.22**	0.05	0.04	0.25**	0.02	1	
V_8	0.27**	0.47**	0.19**	0.38**	0.08	0.11	0.06	0.33**	1

The result proved that the selected variables calf girth (r = 0.13), hand length (r = 0.15), cognitive anxiety (r = 0.69) and self confidence (r = 0.27) were significantly correlated with the volleyball playing ability and were greater than the required table 'r' value of 0.11 to be significant at 0.05 level. And there was no significant relationship between the volleyball playing ability and body weight (r = 0.04), thigh girth (r = 0.08), chest girth (r = 0.03) and somatic anxiety (r = 0.09).

Conclusion

1. The results revealed that an Inter – relationship exists significantly between the anthropometrical and psychological variables among volleyball players.
2. The results revealed that the calf girth, hand length, cognitive anxiety and self confidence having significant correlation with Volleyball playing ability.

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