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DEVELOPMENT OF EQUATION TO PREDICT THE VOLLEYBALL PLAYING ABILITY ON BASIS OF SKILLS

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ABSTRACT :

Purpose of the present study was to identify the skill who can best predict the volleyball playing ability. for the purpose of study fifty male Volleyball players was selected purposely from different sports hostels and colleges of UP i.e. Lucknow and Gorakhpur Sports College, Allahabad and Dewaria Sports Hostel. The age of subjects was 16 to 22 years. To predict the playing ability, serving, setting, volleying and passing was selected as predictor variables. To measure the skills AAHPER Volleyball skill test was used while playing ability was measured by panel of three experts on ten point rating scale. Data was collected from respective sports hostels and colleges from prior permission of incharges/coaches by proper explained and demonstrated of test to the subjects and required trial was provided before final effort/attempt. Descriptive statistics, Pearson product moment correlation and linear regression (step method) was used at 0.05 level of significance. Findings revealed that volleying, setting and serving abilities are significantly correlated with playing ability. Where regression model suggest that only serving and volleying are appropriate to cause maximal variance in volleyball playing ability.

KEYWORDS : *Step method.*

INTRODUCTION

Sports performance is the sum of numerous factors which can vary from individual to individual, even if ultimately they achieve similar results in competition. Deficient person can be compensated for being superior technique, inadequate sprinting speed by superior endurance or inferior technique by aggressiveness. A few centimeters and fraction of seconds decide between record performances, victory or defeat in tough international competitions; for this reason it is very important to identify and fully realize each individuals potential.

Dirix and Knuttgen (1988) advocated that it has become a necessity to identify and select a future elite athlete right in childhood or early adolescence. It takes many years of intensive and regular training till an international sports performance level is achieved. The children who are selected for elite sports activities require suitable conditions, sports facilities, equipment of high quality, rational life style, the guidance of expert sports physicians and well educated and experienced coaches. Such conditions can be created for selected children at the right age to get the quality of performance. Therefore, the correct identification of selection and placement of young talent is becoming an important and challenging task everywhere in the modern competitive sports world.

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makes many years of intensive regular training till an international sports performance level is achieved. The children, who are selected for elite sports activities require suitable conditions and sports facilities equipment of high quality, a rational style of life and the service of experts including a sports physician, a well educated and experienced coach etc. Such conditions can be created for selected children only. Therefore, the correct identification, selection and placement of young talents are becoming important every where.

On the basis of above mentioned facts, it is considered worthwhile to investigate the appropriate playing skill as predictors for performance of volleyball young guns. Moreover, the present study would high light some of the important skills which may have to bear in mind while looking for the selection of talented volleyball players and also to develop these components through the systematic training program.

OBJECTIVES OF THE STUDY:

- To find out the status of players in relation to Volleyball skill
- To find out the relation of Volleyball skill with volleyball playing ability
- To identify the effect of skill on Volleyball playing ability

METHODOLOGY:

To achieve the purpose of present study fifty male Volleyball players was selected purposely from different sports hostels and colleges of UP i.e. Lucknow and Gorakhpur Sports College, Allahabad and Dewaria Sports Hostel. The age of subjects was 16 to 22 years. To predict the playing ability, serving, setting, volleying and passing was selected as predictor variables. To measure the skills AAHPER Volleyball skill test was used while playing ability was measured by panel of three experts on ten point rating scale. Data was collected from respective sports hostels and colleges from prior permission of incharges/coaches. Purpose of test was explained and test was demonstrated to the subjects and required trial was provided before final effort/attempt. Descriptive statistics was used to determine the characteristics of data and to know the status of players. Pearson product moment correlation was used to find out the relationship of skill with Volleyball playing ability, while to identify the suitable skill that effect more to Volleyball playing ability linear regression (step method) was used at 0.05 level of significance.

Findings

Table: I

Statistics	Volleying	Setting	Passing	Serving	Playing Ability
Mean	53.897	5.051	4.512	16.666	6.397
Median	54.000	5.000	5.000	16.000	6.500
Mode	50.000	5.000	5.00	12.000	6.000
Std. Deviation	4.621	1.904	1.603	4.509	1.225
Skewness	-.428	-.486	-.065	.185	-.190
Std. Error of Skewness	.378	.378	.378	.378	.378
Kurtosis	.693	-.545	-.425	-.670	-.380
Std. Error of Kurtosis	.741	.741	.741	.741	.741
Range	23.000	7.000	7.000	18.000	5.000
Minimum	40.000	1.000	1.000	8.000	4.000
Maximum	63.000	8.000	8.000	26.000	9.000

Findings of Table-I is revealed that data is not skewed, where value of Std. Error of Skewness is within acceptance level. While data is normally distributed because values of mean, median and mode for all the

selected variables are also almost lieng on each other. Values of standard deviation were also within the limit, not more than half of mean value. This showed that there was not much variance in scores.

Figure: I

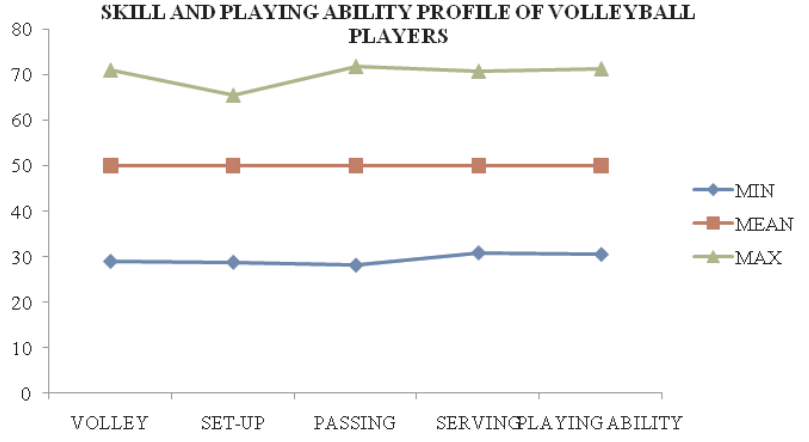

Figure: I reveal that value of all the selected variables are within the acceptable range.

Table: II
Relationship of Independent Variables (skills) with Dependent Variable (Volleyball Playing Ability)

S. No.	Independent Variable	Dependent Variable	Coefficient	Sig.
1.	Volleying	Volleyball Playing Ability	.388	**.016**
2.	Setting		.419	**.008**
3.	Passing		.173	.291
4.	Serving		.553	**.000**

Table –II revealed that volleying, setting and serving skill is significantly related with playing ability, where obtained coefficient values for these skills 0.388, 0.419 and 0.553 is significant at 0.05 level of significance. While passing skill is not significantly related with playing ability, where coefficient value 0.173 is not significant at 0.05 level of significance.

Table: III
Model Summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F-ratio	Sig.
1	0.636	0.405	0.372	0.971	12.243	0.00

1. Predictors: (Constant), Serving and Setting

This regression model revealed that selected predictor variables are significantly related with Volleyball playing ability where R represents the multiple correlation between all the predictor variables and the criterion variable. Thus the obtained multiple correlation value is found significant, where obtained R (0.654) > 0.05.

R2 represent the total amount of variance accounted for in the criterion variable by the predictor variables. Thus, the amount of variance is 40.5 %.

Adjusted R2 is a reduced value for R square which represent the actual variance in criterion variables due to predictors. Therefore the actual variance is 37.2 %.

Obtained F value revealed that regression model is significant or not for prediction. Obtained F value 12.243 is significant at 0.05 level, which means that regression model cause variance in criterion variable and

significant for prediction.

Table: IV
Standardized Coefficient Table for Predictor Variables of Volleyball Playing Ability

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
		Beta	**Beta**		
1	(Constant)	3.141		4.642	0.000
	Serving	.133	.489	3.722	0.001
	Setting	.207	.321	2.446	0.019

Volleyball Playing Ability = 3.141 + Serving (0.133) + Setting (0.207)

Table–IV revealed that values of regression coefficients is positively affecting the dependent variable, means increase in value of serving and setting will lead to increase in volleyball playing ability at rate of respected coefficient value. Beta value reflects the relative importance of predictor variable and from table it is clearly evident that serving skill has more effect in comparison to setting on volleyball playing ability. t value indicates the significance of predictor variable in model and t value of both the predictor variable is significant at 0.05 level hence both variables are contributing to increase the playing ability.

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