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## AN ANALYSIS ON THE EFFECT OF PHYSICAL FITNESS AND PSYCHOLOGICAL FACTORS ON SERVICE AND REPEATED VOLLEY PERFORMANCE OF COLLEGIATE MEN VOLLEYBALL PLAYERS OF BALLARY AND BIDAR DISTRICTS

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### ABSTRACT

Volleyball has developed into a highly competitive sport which requires a high level of physical and psychological fitness. The game at high level of competition requires quick, sudden movement and fast reactions. Volleyball matches have no time limit and matches can last several hours if the teams are evenly matched and for this the player has to be very sound physically as well as psychologically (Sandhu, 1989).



**KEYWORDS:** Volleyball , physical and psychological fitness.

### INTRODUCTION

Toyoda (1971) stressed the point that basic motor abilities are closely related to the performance of volleyball skills. Several attempts have been made to identify specific motor performance abilities and anthropometric characteristics that would correlate highly with individual volleyball playing ability and team success (Shondell, 1972; Jackson; 1971; Disch and Disch, 1978).

Scates (1976) argued that service is not a matter of merely putting the ball into play. A well developed service technique puts the opposing team on the defensive. Accurate placement, unpredictable movement and high velocity of the ball or a combination of these factors are crucial elements for an effective service.

Ibrahim and Gwari (2011). A study of achievement motivation of low and high level volleyball players. The aim of the study was to examine the relationship of sports achievement motivation of volleyball players. A group of (N=50) male subjects divided into two groups (N=25 high performers) and (N=25 low performers) were selected for this study from rural games mela held at Mendhar tehsil of Jammu and Kashmir state. Their age range of the subjects was 25 to 30. It was hypothesized that there may be significant differences with regard to achievement motivation among low and high performers. The „t□ test was used to analyze data. The achievement motivation scale by Kamlesh (1990) was used to assess the differences among the low and high performers. The level of  $p < .05$  was considered significant. Results indicated that significant relations were found between high/low performers.

On the basis of the result of the present empirical investigation it is concluded that significant relations were found between sports achievement motivation and low and high performance of volleyball players. These results may be corroborated with the findings of Rathee and Singh (2011) they observed that the differences between the two performance levels i.e., national and international have been found to be 73 significant. These results provided evidence that high achievement motivation is an important factor that distinguishes high level performers (Butt and Cox, 1992).

Verma, Rana and Singh (2011). To develop physical profile of Kabaddi players: The descriptive study. The purpose of study was to develop the physical profile of Kabaddi players. 100 male Kabaddi players were selected from west zone Inter University championship as the subjects of the study. Their age ranged between 18 to 23 years. Keeping the feasibility in mind speed, agility and explosive power had been selected for this study. Speed and agility were assessed by administering 50 yard dash and the performance was recorded in seconds and shuttle run respectively.

To determine for the explosive power, standing board jump was used and the reading was recorded in meters. To develop the physical profile of Kabaddi players, descriptive analysis was applied. The results of study indicates that in case of 50 yard dash, standing broad jump and shuttle run Kabaddi players were having average in scores. In case of standing broad jump kabaddi players scored above average.

It was concluded that west zone university kabaddi players were average in speed and shuttle run and in case of standing broad jump were above the average. In this light of the findings, it was concluded that west zone university kabaddi players were having average timing in speed. It was concluded that west zone university kabaddi players scored average in agility. And it was also concluded that west zone university kabaddi players scored above the average in explosive power.

### OBJECTIVES OF THE STUDY:

The following are the major objectives of the study.

1. To analyze the effect of physical fitness parameters on the service and repeated volley performance of collegiate men Volleyball players of Ballary and Bidar districts.
2. To analyze the effect of psychological factors on the service and repeated volley performance of collegiate men Volleyball players of Ballary and Bidar districts.
3. To assess the relationship between the physical fitness parameters, psychological factors and service and repeated volleys performances of men Volleyball players of Ballary and Bidar districts.

### MATERIALS AND METHODS:

#### Design of the Study:

For the present investigation, the investigator used comparative design for assessing the effect of physical fitness and psychological factors on Russel Lange's volleyball test performances of collegiate men Volleyball players. For making the study quantitative the data is collected through multiple mechanisms. This enhances cross checking of the data and thereby ensures reliability and minimizes variability were seen.

#### Procedures:

On the basis of the available literature, the physical fitness, psychological factors and performance their respective tests were selected. Further, clarification of selection procedures of subjects, the criterion measures, collection of data, design of the study, administrations of tests and statistical tests for the analysis have been explained.

#### Sample for the Study:

The sample selected for the present study are men collegiate Volleyball players ranging 20-25 years of age were selected from Ballary and Bidar districts. A total of 120 samples are selected by simple random sampling procedure.

#### Sample Design:

DISTRICTS	VOLLEYBALL PLAYERS		TOTAL
	High	Low	
Ballary	30	30	60
Bidar	30	30	60
<b>Grand Total</b>	<b>60</b>	<b>60</b>	<b>120</b>

**Tools:**

1. Selected Physical Fitness Tests: 30 Meter Dash, 505 Agility Test, Sit and Reach Test and Vertical Jump Test.
2. Russel-Lange Volleyball Test.
3. Bhargava's Achievement Motive Test
4. Self-confidence Questionnaire (SCQ) developed by M. Basavanna (1971).

**Test Administration:**

The researcher was visited to various Degree Colleges of Ballary and Bidar districts prior to respective level of Volleyball tournaments. The selected physical fitness and psychological tests were administered to men Volleyball players who are going to participate in the respective level of Volleyball tournaments. The researcher was collected the data related to present study as per test procedures. The subjects were divided equally into low and high groups (N=60) of each district Volleyball players. Further Russel-Lange Volleyball Test is administered to low and high groups men Volleyball players of each district. The performances of each group players were noted in the data sheet for further analysis.

**ANALYSIS OF DATA AND INTERPRETATION OF RESULTS:**

The analysis of data and interpretation of results are done based on the following steps,

1. Comparison of Volleyball playing ability of high and low achievement motivation and self confidence Volleyball players of Ballary and Bidar districts.
2. Comparisons of Volleyball playing ability among high and low physical fitness level Volleyball players of Ballary and Bidar districts.
3. Analysis of relationships between Physical fitness, Psychological factors and Volleyball playing ability performances among Volleyball players of Ballary and Bidar districts.

**1. Comparison of Volleyball playing ability of high and low achievement motivation and self confidence Volleyball players of Ballary and Bidar districts:**

**Table.No.1**

**Comparison of Volleyball playing ability of high and low achievement motivation and self confidence Volleyball players groups of Ballary and Bidar districts**

Variables	District	Groups	N	Mean	SD	t-value	Sig. (2-tailed)
Achievement Motivation and Self confidence	Ballary	High	30	23.23	8.48	2.73	.011
		Low	30	17.13	9.25		
	Bidar	High	30	20.00	7.63	4.10	.000
		Low	30	16.73	7.10		

Significant at 0.05 level

It is observed from the Table.No. 1 the mean, standard deviation and t-values of high and low achievement motivation and self confidence groups Volleyball players of Ballary and Bidar districts. It is observed that the mean (23.23) value of high achievement motivation and self confidence group Volleyball players is higher than the mean (17.13) value of low achievement motivation and self confidence group Volleyball players of Ballary district. The t-value (2.73) which is significant at 0.05 level because the p-value .003 is less than 0.05 level. Further it is concluded that high achievement motivation and self confidence group Volleyball players of having more Volleyball playing ability than the low achievement motivation and self confidence group Volleyball players of Ballary district.

Table.No. 1 also illustrates that the mean (20.00) value of high achievement motivation and self confidence group Volleyball players is higher than the mean (16.73) value of low achievement motivation and self confidence group Volleyball players of Bidar district. The t-value (4.10) which is significant at 0.05

level because the p-value .003 is less than 0.05 level. In other words it is interpreted that high achievement motivation and self confidence group Volleyball players of having more Volleyball playing ability than the low achievement motivation and self confidence group Volleyball players of Bidar district.

## 2. Comparisons of Volleyball playing ability among high and low physical fitness level Volleyball players of Ballary and Bidar districts:

Table.No.2

### Comparison of Volleyball playing ability of high and low physical fitness Volleyball players groups of Ballary and Bidar districts

Variable	District	Groups	N	Mean	SD	t-value	Sig. (2-tailed)
Physical Fitness	Ballary	High	30	25.03	8.56	5.08	.000
		Low	30	19.42	8.12		
	Bidar	High	30	24.32	9.06	4.76	.000
		Low	30	20.14	8.24		

Significant at 0.05 level

Table.No. 2 presents the mean, standard deviation and t-values of high and low physical fitness groups Volleyball players of Ballary and Bidar districts. It is observed that the mean (25.03) value of high physical fitness group Volleyball players is higher than the mean (19.42) value of low physical fitness group Volleyball players of Ballary district. The t-value (5.08) which is significant at 0.05 level because the p-value .000 is less than 0.05 level. In other words it is interpreted that high physical fitness group Volleyball players of having more Volleyball playing ability than the low physical fitness group Volleyball players of Ballary district.

It can be also seen from the Table.No. 2 that the mean (24.32) value of physical fitness group Volleyball players is higher than the mean (20.14) value of physical fitness group Volleyball players of Bidar district. The t-value (4.76) which is significant at 0.05 level because the p-value .003 is less than 0.05 level. In other words it is interpreted that high physical fitness group Volleyball players of having more Volleyball playing ability than the low physical fitness group Volleyball players of Bidar district.

## 3. Analysis of relationships between Physical fitness, Psychological level and Volleyball playing ability performances among Volleyball players of Ballary and Bidar districts:

Table. No. 3

### Correlation between the Physical fitness, Psychological factors and Volleyball playing ability performance scores among Volleyball players of Ballary and Bidar districts

S.N	Variables	r-values
	SC and Volleyball playing ability	0.71**
	ACMT and Volleyball playing ability	0.76**
	Physical fitness and Volleyball playing ability	0.80**

\*\*Significant at 0.01 level

SC- Self confidence, ACMT- Achievement motivation

Table.No.3 presents the r-values between Physical fitness, Psychological factors and Volleyball playing ability performance scores among Volleyball players of Ballary and Bidar districts. It can be seen that r-values were significant at 0.01 level to indicate the significant relationship between the Physical fitness, Psychological factors and Volleyball playing ability performances. Thus the results clearly indicate the fact that there is a positive and significant relationship between Physical fitness, Psychological factors and Volleyball playing ability performances of Volleyball players of Ballary and Bidar districts.

**CONCLUSIONS:**

- Final results concluded that high achievement motivation and self confidence group Volleyball players of having more Volleyball playing ability than the low achievement motivation and self confidence group Volleyball players of Ballary district.
- It is concluded that high achievement motivation and self confidence group Volleyball players of having more Volleyball playing ability than the low achievement motivation and self confidence group Volleyball players of Bidar district.
- Results of the study concluded that high physical fitness group Volleyball players of having more Volleyball playing ability than the low physical fitness group Volleyball players of Ballary district.
- It can be seen that high physical fitness group Volleyball players of having more Volleyball playing ability than the low physical fitness group Volleyball players of Bidar district.
- There is a positive and significant relationship between Physical fitness, Psychological factors and Volleyball playing ability performances of Volleyball players of Ballary and Bidar districts.

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