REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.7631(UIF)
VOLUME - 15 | ISSUE - 4 | JANUARY - 2026

COMPARISON OF SELECTED SPECIFIC MOTOR ABILITIES OF VOLLEYBALL PLAYERS

Mr. Brajesh Singh Dhakad and Dr. Vijay Francis Peter
School of Physical Education, D.A.V.V, Indore.

ABSTRACT

Motor abilities is the ability to consistently sustain one's ideal performance state during adversities in competition performing to one's potential requires good technique and skills. The purpose of the study was to assess and compare the selected motor ability of volleyball players at university level. The subjects selected for these studies were 45 male volleyball players from inter college, district and university players of DAVV Indore. The sample was taken through purposive sampling. The study was delimited to inter college, district and university level players with the age of 18 to 25 years. The criterion measures were used to collect the data in a deal and systematic way to record in a correct unit and style for each test item. Statistical Techniques used- Descriptive and ANOVA was used if need to apply Post Hok. Result of the study significance difference found agility of inter district level is higher in comparison of inter college and university players, coordinative ability of university players are better in comparison with the inter district and inter college level and explosive strength of the university players are far better as comparison with the inter district and inter college players

KEYWORDS: *Motor ability, volleyball.*

INTRODUCTION

The pursuit of athletic excellence in volleyball is not merely a contest of strength, but a dynamic expression of human movement and specialized physical potential. Beyond the tactical complexities of the game, the performance of an athlete is deeply rooted in their unique motor fitness profile—a symphony of power, agility, and coordination that defines their capability on the court. By examining these variables, we move beyond viewing the athlete as a mechanical entity and instead recognize them as a disciplined individual striving to harmonize physiological capacity with the demanding, high-speed rhythms of competitive play.

This research endeavors to bridge the gap between abstract physical metrics and the lived reality of the volleyball player through a comparative analysis of key motor fitness variables. By evaluating essential components such as explosive leg power, reaction time, and flexibility, we seek to understand how these attributes differ across various levels of play or specific player positions. Ultimately, this study aims to provide a more profound understanding of the human element in sports science, offering insights that can refine training methodologies and empower athletes to reach the pinnacle of their physical and personal development.

OBJECTIVES OF THE STUDY

- To compare the specific Motor Abilities of volleyball players.
- To compare the selected specific motor ability components of volleyball Players at different levels of university.

Research Question

Whether there no significant difference in Motor abilities of Volleyball Players of different levels.

METHODOLOGY

The sample of the study consisted of 45 volleyball players belonging to DAVV Indore Madhya Pradesh. The sample was taken through purposive sampling. The study was delimited to inter college, district and university level players with the age of 18 to 25 years. The criterion measures were used to collect the data in a deal and systematic way to record in a correct unit and style for each test item.

- Agility was measure by 10x4 shuttle run.
- Explosive strength was measure by standing broad jump.
- Coordinative ability was measure by alternate hand wall test.

Statistical Techniques used- Descriptive and ANOVA was used if need to apply Post Hok. Graphic representation of the data was given wherever necessary.

ANALYSIS OF RESULTS AND DISCUSSION

Table - 1
SHUTTLE RUN,SBJ AND CORDINATIVE ABILITY OF UNIVERSITY, INTER COLLEGE AND DISTRICT

S.N.	N	Variable	Group	Mean	SD
1	45	Shuttle Run	university	11.18	.347
			Inter college	11.77	.767
			District	11.99	1.11
2	45	SBJ	University	2.38	.183
			Inter college	2.18	.121
			District	2.14	.228
3	45	Coordinative Ability	University	35.58	2.38
			Inter College	32.05	2.65
			District	28.31	3.68

***significant at .05 level.**

Table – 1 reveals the mean the standard deviations of different level inter District, inter college and University of volleyball players. The variable shuttle run on university level having the mean 11.18 and standard deviation .347 , on inter college level mean 11.77 and standard deviation .767 and on inter district level mean 11.99 and standard deviation 1.11 . The variable standing broad jump on university level having the mean 2.38 and standard deviation .1.83 , on inter college level mean 2.18 and standard deviation .121 and on inter district level mean 2.14 and standard deviation .228 .The variable coordinative ability on university level having the mean 35.58 and standard deviation 2.38 ,

on inter college level mean 32.05 and standard deviation 2.65 and on inter district level mean 28.31 and standard deviation 3.68 .

Figar-1
SHUTTLE RUN,SBJ AND CORDINATIVE ABILITY OF UNIVERSITY, INTER COLLEGE AND DISTRICT

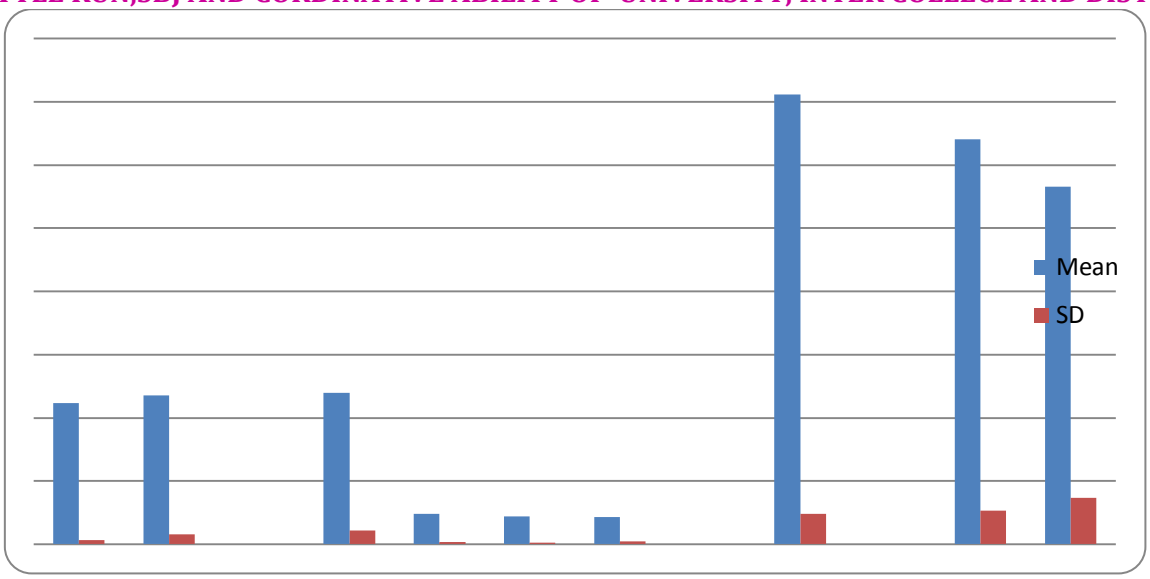

Table- 2
ANOVA TABLE FOR THE DATA ON AGILITY OF DIFFERENT LEVEL OF PERFORMANCE

	Df	SS.	MSS	f value	Tabulated f
INTER DISTRICT	r-1=2	5.16	2.58	4.07	$F_{0.05}$ (2,42)=3.23
UNIVERSTY	N-r=42	28.35	0.65		
INTER COLLEGE	N-1=44	33.51			

***significant at .05 level.**

In the following table the value of f at 5% level with degree of freedom (2,42) is 3.23, since the calculated value of (f = 4.07) is greater than Tabulated f, the F value is significant and the null hypothesis is rejected and post hoc test will be done to compare the mean of different groups.

Table - 3
Post hoc comparison of means using Scheffe's Test

Means of Shuttle Run Scores in different Groups				
Inter District	**University**	**Inter College**	**Mean difference**	**CD at 5% level**
11.99	11.16		0.83*	0.76
11.99		11.77	0.22	0.75
	11.16	11.77	0.61	0.68

From the Table, it is clear that mean difference between Inter district and University as well as university and Inter collegiate are significant because they are higher their corresponding CD's. However there is no significant difference in Inter district and Inter collegiate level. By looking at their mean values, it may be inferred that the Agility of the Inter district is highest, whereas the agility of Inter university and Inter collegiate are significant and lower than that of Inter district.

It may be concluded the agility of Inter district level is higher in comparison with the university ad Inter collegiate level due to the fact that the training schedule of the Inter district level is better as comparison to the others.

Table - 4
ANOVA TABLE FOR THE DATA ON COORDINATIVE ABILITY

	Df.	SS.	MSS	f value	Tabulated f
INTER DISTRICT	r-1=2	42493.97	21216.9	577.83	$F_{0.05}(2,42)=3.23$
UNIVERSTY	N-r=42	1544.69	36.77		
INTER COLLEGE	N-1=44	40949.28			

***significant at .05 level.**

Table - 5
Post hoc comparison of means using Scheffe's Test

Means of Coordinative Ability Scores in different Groups				
Inter District	**University**	**Inter College**	**Mean difference**	**CD at 5% level**
28.31	35.58		7.27*	5.74
28.31		32.05	3.74	5.53
	35.58	32.05	3.53	5.10

It is clear that the mean difference of coordinative ability between inter district and university level are significant because they are higher than their corresponding critical values. However there was no significant difference between inter district & inter college and university and inter college level by looking at their mean values, it was also inferred that coordinative ability of university level is highest, whereas the coordinative ability of inter district and inter college level are equal and significantly lower than university level.

It may be therefore concluded that university level players have better coordinative ability.

Table - 6
ANOVA TABLE FOR THE DATA ON EXPLOSIVE STRENGTH

	df.	SS.	MSS	f value	Tabulated f
INTER DISTRICT	r-1=2	1.73	.86	5.05	$F_{0.05}(2,42)=3.23$
UNIVERSTY	N-r=42	7.21	.17		
INTER COLLEGE	N-1=44	8.94			

Table - 7
Post hoc comparison of means using Scheffe's Test

Means of Explosive Strength in different Groups				
Inter District	**University**	**Inter College**	**Mean difference**	**CD at 5% level**
2.14	2.40		.26*	.21
2.14		2.18	.04	.55
	2.40	2.18	.22*	.19

From the Table, it is clear that the mean difference of explosive strength university, inter district as well as inter college and university level are significant because they are higher than their corresponding critical values. However, there is no significant difference between inter district and inter collegiate level.

DISCUSSION AND CONCLUSION:

From the table it is evident that the agility of inter district level is higher in comparison of inter college and university players due to the fact that as the level of sports increases the agility gradually decreases therefore the agility of the inter district players are far better to the remaining groups.

The coordinative ability of university players are better in comparison with the inter district and inter college level due to the fact that in higher level of competition the perfection in skill is much needed for the execution and coordinative ability is one of the skills of the volleyball.

From the table it is clear that the explosive strength of the university players are far better as comparison with the inter district and inter college players due to the fact that at the higher level of competition the explosive strength is one of the skill which is of extreme important in the game.

REFERENCES

1. Reddy, B. K., & Prasad, K. (2018). Comparative study of motor fitness components between football and volleyball players. International Journal of Physical Education, Sports and Health, 3(1), 129–131.
2. Sharma, R., & Kumar, V. (2015). Comparative study of motor fitness components among football and volleyball players of A.P.S. University. International Journal of Physical Education, Sports and Health, 2(1), 45–49.
3. Singh, A., & Yadav, P. (2025). A comparative study of speed and muscular endurance of volleyball and basketball players. International Journal of Physical Education, Sports and Health, 12(2), 56–60.
4. Khan, M., & Ali, S. (2023). Comparative study of motor fitness components between inter-collegiate volleyball and basketball players. Pramana Research Journal, 13(4), 101–108.
5. D'Souza, J., & Naik, R. (2021). Comparative analysis on the level of selected motor fitness of college-level badminton and volleyball male players. Paripex – Indian Journal of Research, 10(2), 40–42.
6. Kumar, L. G. V., & Singh, A. (2014). An assessment of strength, power and agility in volleyball players. International Journal of Scientific Research, 3(8), 22–24.
7. Patel, H., & Mehta, P. (2013). A comparative study of motor fitness components of volleyball and basketball female players. International Journal of Yogic, Human Movement and Sports Sciences, 2(1), 35–38.
8. Rani, S., & Kaur, T. (2017). Impact of motor fitness variables on the competitive performance of women volleyball players. International Journal of Creative Research Thoughts, 5(4), 1200–1208.
9. Verma, A., & Singh, R. (2017). Prediction of volleyball playing ability from selected motor fitness variables among inter-university players. International Journal of Creative Research Thoughts, 5(4), 450–456.
10. Karthick, S., & Kumar, P. (2022). Influence of skill-based conditioning on selected motor fitness components and playing ability of volleyball players. International Journal of Physical Education, Sports and Health, 9(1), 248–252.

11. Rajkumar, M., & Joseph, A. (2025). Effect of resistance training on selected motor fitness variables and playing ability among college level men volleyball players. International Journal of Physical Education, Sports and Health, 12(2), 61–66.
12. Kowalski, P., & Nowak, M. (2023). Reactive agility and its motor and perceptual-cognitive determinants in competitive young volleyball players. Journal of Human Kinetics, 87(1), 75–86.