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## Power of spike to dominate different levels of volleyball competitions

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### Abstract

The present study assessed that in different level (district, state, national & international) of Volleyball game or competition how the skills 'spike' played a dominating role was observed. The videos of semi-final and final game of these four levels were taken (2014-15). These skills were measured by Volleyball Information System (VIS). The result indicated that the spike skill of international level was more dominant than national, state and district level skill.

**Keywords:** Volleyball, spike skill

### Introduction

**Background:** skills play a very important role in volleyball. To make the game more effective, it is very necessary to develop all the skills. Spike is a very important skill of Volleyball. The matches in which, all these skills as well as spike are presented very skilfully and effectively, have become the more interesting and splendid matches. So, it should be the only aim of the volleyball players to develop these basic skills as well as spike, it is the only way to increase its graph.

**Method:** The present study was conducted in Hooghly district, West- Bengal state, India and International level senior male Volleyball team (2014-15). Semi-final and final game only.

**Criterion Measure:** The skill, spike measured by Volleyball Information System (VIS). The evaluation method of spike- when rally continues in spike there was no evaluation and when rally ends, success '+' or if there was faults then '-'. Measuring criteria and formula was  $\text{success\%} = \frac{\text{success spike}}{\text{total attempts}}$ .

**Analytical Techniques:** To analysis of the dominating power of spike in Volleyball in different level (district, state, national, international) competitions, one way ANOVA was computed using Microsoft excel and SPSS software version 20. The level of significant was set as 0.05.

### Finding and results

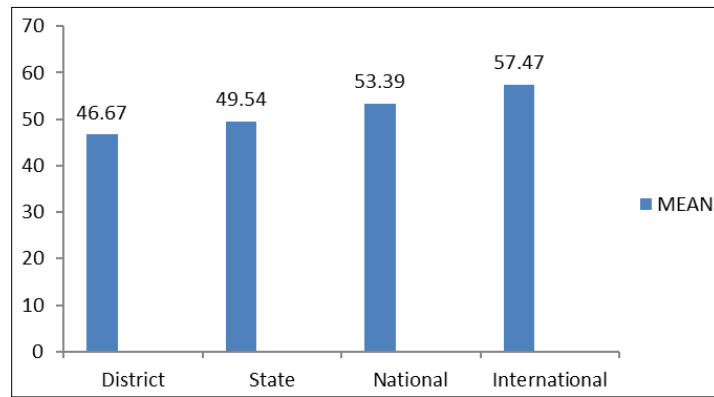
The findings data of different (district, state, national and international) level in volleyball skill, spike described below.

**Table 1:** Descriptive Statistics of spike of Volleyball Skill in Different Level of Competition (N = 3)

Skill	Level of game	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Spike	District	46.67	9.80	5.66	39.66	57.87
	State	49.54	2.43	1.40	47.50	52.22
	National	53.39	8.83	5.10	43.65	60.87
	International	57.47	7.54	4.35	50.52	65.48

Table 1 shows that the mean of spike's success % in district, state, national and international level senior male volleyball team was  $46.67 \pm 9.80$ ,  $49.54 \pm 2.43$ ,  $53.39 \pm 8.83$  and  $57.47 \pm 7.54$

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**Fig 1:** Graphical representation of spike skill in Volleyball (Success %).

**Table 2:** Anova of block

		Sum of squares	df	Mean square	F-ratio	Sig.
Spike	Between Group	198.438	3	66.146	1.118	0.398
	Within Groups	473.498	8	59.187		
	Total	671.937	11			

It seems that Anova of spike of between group and within groups in district, state, national & international levels men Volleyball (2014-15). It seems that the between group, sum of squares was 198.438, degree of frequency (df) was 3, mean square was 66.146 and within groups, sum of square was 473.498, degree of frequency (df) was 8, mean square was 59.187 and total sum of squares was 671.937, total degree of frequency (df) was 11. The between and within groups of F-ratio was 1.118 and significant level was 0.398 so, the spike of between and within groups not significant at 0.05 levels.

\*No significant difference exists among four distinct group (district, state, national & international) in Spike.

### Conclusion

- The spike skill of international level is more dominant than national, state and district level's spike skill.
- In national level spike skill is more dominating than district and state level, but not more dominating than international level.
- In state level spike skill is more dominating than district level, but not more dominating than national and international level.
- In district level spike skill is not more dominating than the spike skill of national, state and district level's skill.

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