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## A COMPARATIVE STUDY OF SPIKE TECHNIQUES AMONG VOLLEYBALL PLAYERS

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### ABSTRACT

The spike is a crucial technique in volleyball for scoring points. This technique is correlated with the players' skills and their Body Mass Index (BMI). Players of greater height can execute this skill with relative ease. In this study, the researcher selected players from the India and Japan national teams to examine the hypothesis. The analysis compared the spiking ability and height of players from both nations. The findings indicate that the average spike height for Japanese players is 135.15 inches, while for Indian players, it is 135.02 inches. The results of this study demonstrate that Japanese players exhibit greater height compared to their Indian counterparts, and their spiking ability is significantly superior across both shorter and taller players.

### Keywords:

Spikes, BMI, Anthropometry, Motor fitness component, Height, Players, Volleyball

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### INTRODUCTION

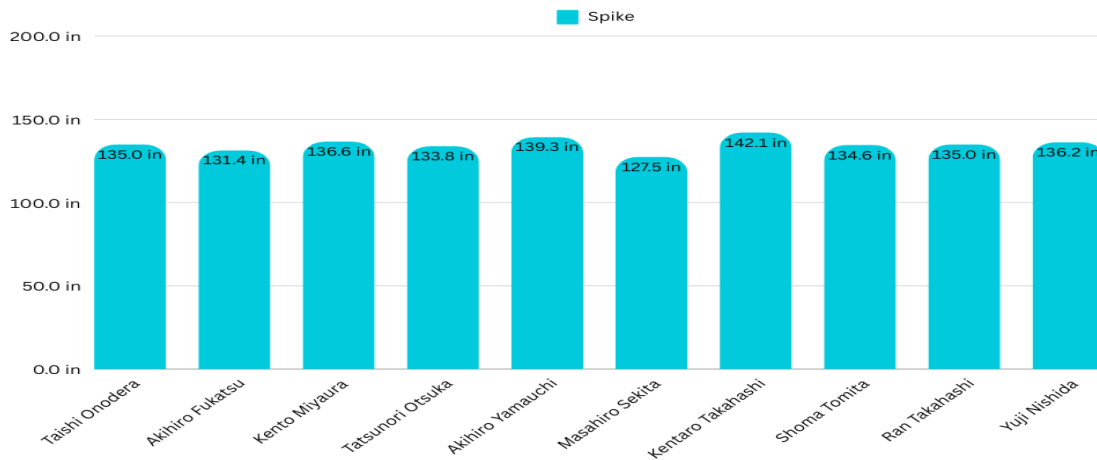
Spike is the most important technique in volleyball to score a point. This technique has a relationship between skills and Body mass index. A good heightened player can easily execute the skill. In Volleyball spikes or blocks are the key factor to get the points. Generally, we have seen long-height players are better in the spike technique because they can execute the smash in a very easy manner. "Intrinsic muscle properties like neural activation capacity, force-velocity relationship and force-length relationship can be altered by training (Widrick et al. 2002) within individual boundaries. Simulation studies (Thaller et al. 2010), "The complexity in the analysis of the spike advanced in the last decades and has generated practical implications for the coaches and athletes **Reeser JC. 2017**"[1].

An athlete's anthropometric and physical characteristics may represent important prerequisites for successful participation in any given sport (2). In volleyball, the height of the player plays a very crucial role. In spike a player needs to take the jump to execute the smash on time. They may influence the level of performance, at the same time helping to determine a suitable physique for a certain sport (3). Volleyball belongs to sport activities in which anthropometric characteristics of its participants influence the level of sport performance. It was established that volleyball players compared to most other athletes have distinctive anthrop-morphological characteristics (Ercolessi, 1999; Jankovic et al., 1995; Ugarkovic, 2004).{4}, Volleyball is a team sport that alternates between high athletic intensity and relatively less strenuous moments during the play (González-Ravé et al., 2011) {5} . In the team games a player needs mutual understanding between the players. Onne player make the ball and other jump and hit on the opponent side to get the point. When playing, the players perform different movements (e.g., jump, dive, roll, rapid forward and lateral movements) that require strength, power, agility and speed (Lidor & Ziv, 2010) (6).

### METHODOLOGY

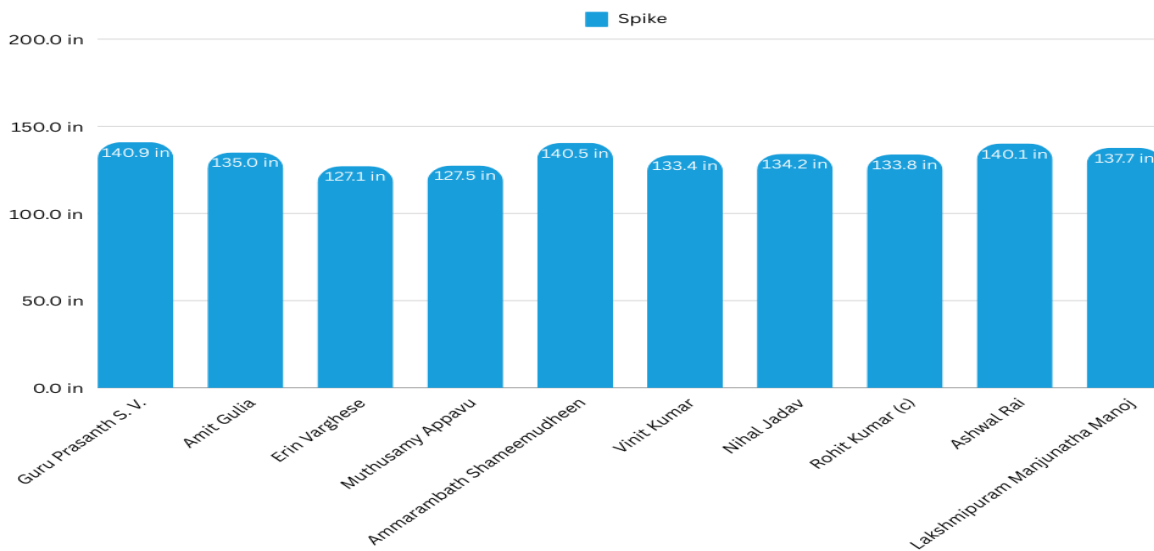
In this research paper, we have taken data from Japanese and Indian volleyball players. In this data, we have taken the height and the spike of players. The number of samples was 10 for each team. The term spike is related to the jump of a player during the smash. These top 10 players are renowned National players and regularly represent the National team. 10 Players were taken from India and 10 were taken from Japan.

**Spike of Japan Volleyball players.**



In the finding we have seen Average Spike of Japan players is 135.15 inches and the highest spike of Kentaro Takahashi is 142.1 Inches and the height of players is 6 feet 7 inches. The player Masahiro Sekita has lowest spike on the net is 127.5 inches and the height of the player is 5 feet 9 inches.

**Spike of India Volley ball players.**



In the finding we have seen Average Spike of India players is 135.02 inches and the highest spike of the Guru Prasanth 140.9 Inches on the net and Height of the player is 6 feet 4 inches. In the volleyball Erin Varghese has lowest spike on the net is 127.1 inches and height is 6 feet 3 inches.

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### FINDING AND RESULTS

The results of this study demonstrate that Japanese players exhibit greater height compared to their Indian counterparts, and their spiking ability is significantly superior across both shorter and taller players.

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