

## RELATIONSHIP OF SPEED AND MUSCULAR ENDURANCE BETWEEN VOLLEYBALL AND BASKETBALL PLAYERS

Kaizad N. Wadia,<sup>1</sup> K.J.Gohil<sup>2</sup>

<sup>1</sup>Research scholar, Swarnim Gujarat Sports University, Desar, Vadodara, Gujarat, India

<sup>2</sup>C.P. Degree College of Physical Education Rajpipla, Gujarat, India

Article Info	Abstract
<p><b>Received:</b> 10/03/2025  <b>Revised:</b> 18/03/2025  <b>Accepted:</b>20/03/2025</p> <p><b>Keywords:</b> Physical fitness, speed, muscular endurance, Volleyball, Basketball.</p>	<p>Comparing the Speed and Muscular Endurance of Volleyball and Basketball players who competed in state or university-level tournaments was the aim of the study. A total of 200 male athletes, 100 in volleyball and 100 in basketball, were chosen for the study from among Surat city's to evaluate Volleyball and Basketball players speed and muscular endurance. Participants were given the speed and muscular endurance T-test. The age range of the subjects was 17–25 years old. Descriptive statistics such as mean, standard deviation, and t-test" were used to examine the gathered data. The findings indicated that there were notable variations in speed and muscular endurance across male state or interuniversity Volleyball and Basketball players.</p>

### INTRODUCTION:

The most essential thing in life is being physically healthy. Whether we like it or not, this is the case. Physical fitness has become less essential to our everyday life as humanity has evolved throughout time, but it is still vital to our existence. The quality and quantity of our stay in these bodies are still determined by our level of physical fitness more than anything else. Our physical fitness used to dictate how much food we ate and how warm and dry we kept, but today it only dictates how well we perform in these new environments that our civilization has created for ourselves. However, we are still animals, and ultimately, the only thing that matters is our bodily existence. When a guy is weak, he is not as joyful as when he is powerful. Some people find this reality insulting because they prefer the intellectual or spiritual to be prioritized. A person's level of physical fitness is crucial for both regular people and those attending sporting events.<sup>2</sup> One Olympic sport that is practiced everywhere in the world is volleyball. This game involves short-distance running, direction changes, jumping, diving, and hitting. Views on physical fitness vary from person to person. A healthy physique is a sign of physical fitness for the average person. Physical fitness, according to the doctor, is necessary for the physiological systems to work properly. Physical fitness is actually a straightforward concept with several meanings.

For those who teach physical education Being physically fit is having the ability to perform daily tasks without feeling exhausted or exerted, having the energy to perform additional tasks after finishing his work, and recovering more quickly. Being physically fit involves more than just having strength and stamina. It involves being physically healthy enough to perform daily tasks, participate in leisure activities, and handle emergencies when they

occur. In actuality, someone who is physically healthy is someone who is enthusiastic and actively<sup>4</sup> Numerous studies show that children's and adolescents' levels of physical fitness are predictors of their standard of living, cardio-metabolic health, and the likelihood of developing chronic illnesses like obesity, cardiovascular issues, and physical and mental health issues.<sup>3</sup> The five motor skills speed, strength, endurance, flexibility, and coordination as well as their complex forms such as strength, endurance, maximum strength, explosive strength, maximum speed, and agility that are required for motor activity made up physical fitness.<sup>1</sup>

**Speed**

Speed is the ability of an athlete to move as fast as possible, through the optimal range of motion, in a deliberate and intentional manner, in a particular direction. Speed is not just measured on how fast a person is either; there are several components of measurement that give a complete picture of an athlete's speed.

**Muscular Endurance**

“Endurance is the result of the physiological capacity of the individual to sustain movement over a period of time.”

**2. Methodology**

**2.1 Selection of Subjects**

For the present study, the researcher selected 200 male players (100 Volleyball and 100 Basketball players) from various colleges of Surat city as subjects, and the age ranged from

17-25 years.

**2.2 Selection of Variables**

Independent Variable	Dependent Variable
Volleyball players	Power
Basketball players	Agility

**2.3 Criterion Measure**

Selected variables and their criterion measures

**2.4 Statistical Analysis**

To find out the significance difference of Speed and muscular endurance of Volleyball and Basketball Boys players of state or inter university of Surat city in comparison to Speed ability the data were analyzed by applying Descriptive statistics and independent sample t-test. The level of significance was set at 0.05.

**3. Result of the study**

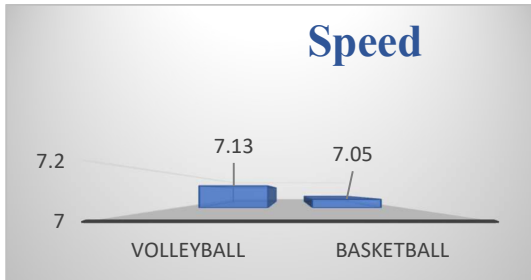
The scores were obtained by applying the 50 meters dash and push up test. All the individual scores of 50 meters dashes and push ups test used to judge the level of speed and muscular endurance.

**Table 1:** Shows statistical comparison of Speed between volleyball and basketball players is as under

Variable	Group	Mean	S. D.	Std. Error Mean	t-value	Sig. (2-tailed)
Speed	Volleyball	7.13	0.28	0.02	2.40	0.01
	Basketball	7.05	0.23	0.02		

\*Significant at 0.05 level

Above Table 4.14 shows that the t-value of volleyball and basketball players of the speed was (t = 2.401, p<0.05) which found significant at 0.05 level of confidence. This indicates that the volleyball and basketball players differ significantly of the speed. Since, the mean value of speed for volleyball players (7.13) was higher in comparison to basketball players (7.05) it shows that basketball players were efficient with comparison to volleyball players so far as speed is concern.



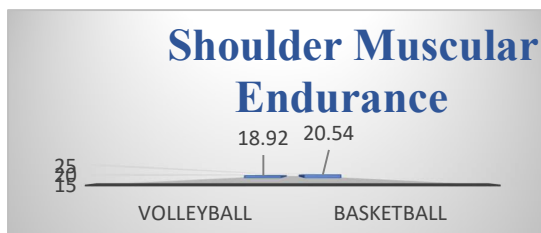
**Fig 1:** Figure showing the Mean difference of volleyball and basketball players on Speed

**Table 2:** Shows a statistical comparison of muscular endurance between volleyball and basketball players are as under

Variable	Group	Mean	S. D.	Std. Error Mean	t-value	Sig. (2-tailed)
Shoulder Muscular Endurance	Volleyball	18.92	5.25	0.52	-2.14	0.03
	Basketball	20.54	5.43	0.54		

\*Significant at  $p < 0.05$ .

Above Table 4.13 shows that the t-value of volleyball and basketball players of the Shoulder muscular endurance was ( $t = 2.349$ ,  $p < 0.05$ ) which found significant at 0.05 level of confidence. This indicates that the volleyball and basketball players differ significantly of shoulder muscular endurance. Since, the mean value of shoulder Muscular endurance for volleyball players (18.92) was lower in comparison to basketball players (20.54) it shows that basketball players are efficient in comparison to volleyball players so far as Shoulder muscular endurance is concern.



**Fig 2:** Figure showing the Mean difference of volleyball and basketball players on muscular endurance

#### 4. Discussion of Findings

The results of the study revealed that there was a significant mean difference between the male volleyball and basketball players in the scores of speed and shoulder muscular endurance. Since the mean value of speed for volleyball players (7.13) was higher in comparison to basketball players (7.5) it shows that volleyball players were efficient with comparison to basketball players so far as speed is concern. In terms of shoulder muscular endurance, it is disclosing that mean value for Volleyball players (18.92) was lower in comparison to basketball players (20.54) This shows that Basketball players were powerful in comparison to Volleyball players so far as muscular endurance is concerned. Basketball players often exhibit higher levels of upper body endurance and grip strength compared to volleyball, likely due to the demands of shooting, rebounding, and defending.<sup>5</sup>

#### 2. CONCLUSIONS :

The investigator analyzed the collected data as per the purpose of study. The statistical analysis of motor fitness components showed that in the parameters such as speed, muscular endurance there was significant difference between volleyball and basketball players of state or university players of Surat city.

#### REFERENCES:

- Anderson D. The Discipline and the Profession. Foundations of Canadian Physical Education, Recreation, and Sports Studies. Dubuque, IA: Wm. C. Brown Publishers, 1989.
- Angell (Combined endurance and resistance circuit training in highly Antonio La Torre, Gianluca Ve trained/top-level female race walkers: a case report (58,

DOI:10.1007/s1133rnillo, Pierluigi Fiorella, Clara Mauri and 2-008-0067-1)

3. Babalola JF. Effects of 8-weeks Circuit Training Programmed on Physiological and Performance Characteristics of University Racket Game Players. 2011; 1(4):143-149.

4. Farzaneh Moslemi-Haghighi, *et al.* The comparison of physical fitness of 13-year-olds Tuden Ts from Ljubljana and Belgrade, University of Ljubljana, Faculty of Sport, Slovenia, University of Belgrade, Faculty of Sport and Physical Education, Serbia, 2009.

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