

## Strength and Speed of Uttarakhand School Girls: A Comparative Study

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### Abstract

The purpose of the study was to compare the selected physical fitness variables between Badminton and Football school girls. To fulfil the objective of the study, 20 Badminton and 20 football school girls were selected who have participated in Uttarakhand school State. The data were collected in different district and state championship. All the subjects were under 19 age group category. Strength was measured through standing board jump and speed was measured through 60 yard dash tests. T-test was used to analyze the data between Badminton and Football school girls and investigator observed that there is insignificant difference between badminton and football school girls on strength and speed. Badminton school girls have much better strength and speed as compare to football school girls.

**KEYWORDS:** Strength, Speed, Badminton, Football.

### Introduction

Physical fitness is a multifaceted continuum extending from birth to death, affected by physical activity. It ranges from optimal activities in all aspects of life through high and low levels of different physical fitness to serve disease and dysfunction. The ability to function efficiently and effectively is to enjoy leisure, to be healthy, to resist disease and to cope with emergency situations. Health related components of physical fitness include body composition, cardiovascular fitness, flexibility, muscular endurance and strength. Skill related components include agility, balance, coordination, power, reaction time and speed.

The relative importance of each of the components varies for each sport. Physical fitness is not only sport specific it may also be position specific, combined good health and physical development. The object of any program of physical fitness is to maximize any individual's health, strength, endurance and skill relative to age, sex, body build and physiology. These ends can only be realized through conscientious regulation of exercise, rest, diet and periodic medical examinations. Exercise should be regular and vigorous, but begun slowly and only gradually increased in strenuousness. Popular exercise methods include jogging, cycling and the use of body-building machines. It is more important that periods of sleep be regular and restful than that they extend any fixed number of hours.

Success in soccer is dependent upon a variety of factors including the physical characteristics and physiological capacities of the players, their level of skill, their

degree of motivation, and tactics employed by them against the opposition. Some of these factors are not easily measured objectively, but others can be tested using standardized methods and can provide useful information for coaches (Mosher, 1985).

In soccer, speed plays an important role; the accelerated pace of the game calls for rapid execution of typical movements by every member in a team. In many instances, successful implementation of certain technical or tactical maneuvers by different team members is directly related with the degree of velocity deployed (Kollath & Quade, 1991).

Badminton players need to possess a variety of fitness capabilities to be successful. Cardiovascular fitness, flexibility, agility, power and strength are all desirable traits that can be developed with regular training. Strength training for badminton should be as sports specific as possible, and your program should reflect the demands of your sport while still leaving sufficient time and energy for playing practice.

The Strength Demands of Badminton, strength, according to the National Strength and Conditioning Association, can be categorized in a number of ways: absolute strength refers to the maximum amount of force a muscle or muscle group can develop; strength endurance refers to the ability to perform a high volume of sub-maximal contractions without fatigue; and speed strength, which is better known as power, is strength expressed at speed. The low weight of modern badminton racquets and the low inertia of the shuttlecock mean that badminton has a relatively low demand for absolute strength. However, badminton players will benefit from increasing their strength endurance and speed strength.

## **Methodology**

### **Statement of the study**

The purpose of the study was to compare strength and speed variables between badminton and football players.

### **Sample of the study**

To achieve the desire objective of the study, only those under -19 girls players were selected who have reached in semi finals of their respected tournament in different district and state championship of Uttarakhand school State.

### **Tools used**

The physical fitness variables were tested to collect the data by using two tests that is standing broad jump for strength and 60 yard dash run for speed.

### **Data collection procedure**

The data were collected on the two selected variables that are strength and speed during their respected tournament in different district and state championship of Uttarakhand school State.

### Statistical treatment

The "t" test was used to compare the two variables that is strength and speed on Badminton and Football school girls players at 0.05 level of significance.

### Results

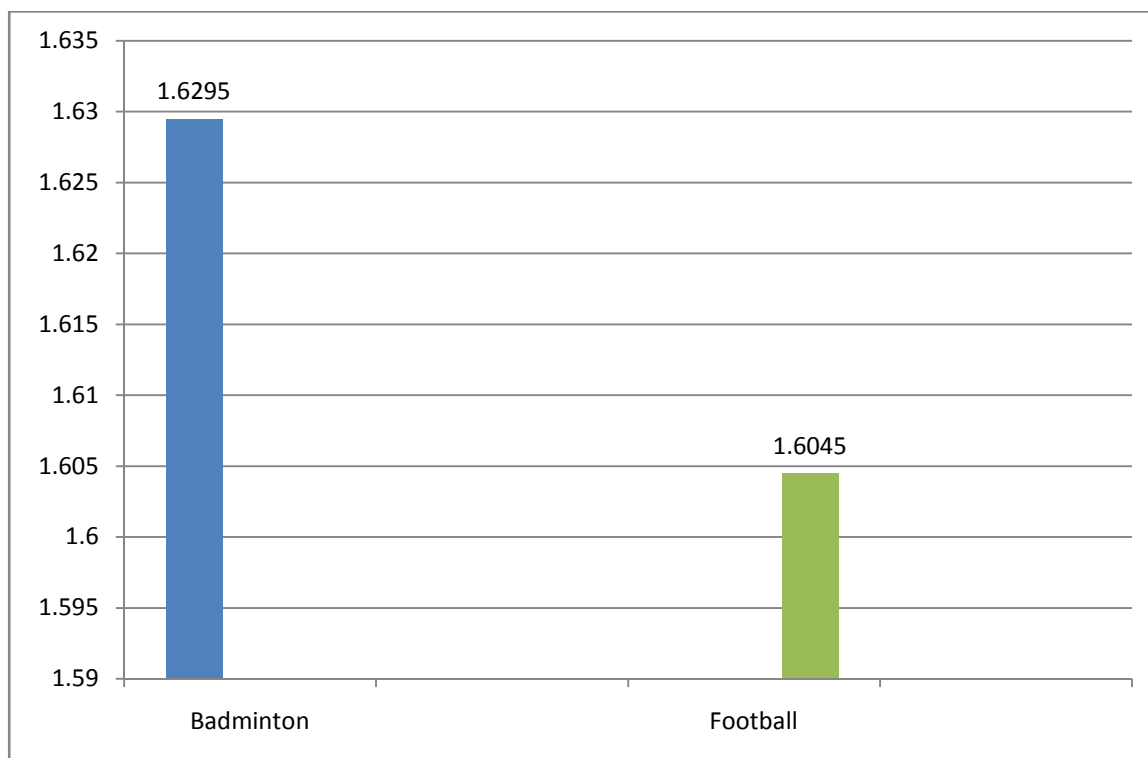
**Table 1**

#### Comparison of strength between Badminton and Football school girls

Group	N	Mean	SD	SED	t
Badminton	20	1.6295	0.10154	0.02717	0.369
Football	20	1.6045	0.07141		

Significant at 0.05 level.

As shown in **table-1** that the Mean score of strength of Badminton and Football Players were 1.6295 and 1.6045 respectively and SD of strength of Badminton and Football is 0.10154 and 0.07141 respectively and 't' value was 0.369, which is insignificant at 0.05 level.



**Mean score of strength of Badminton and Football Players**

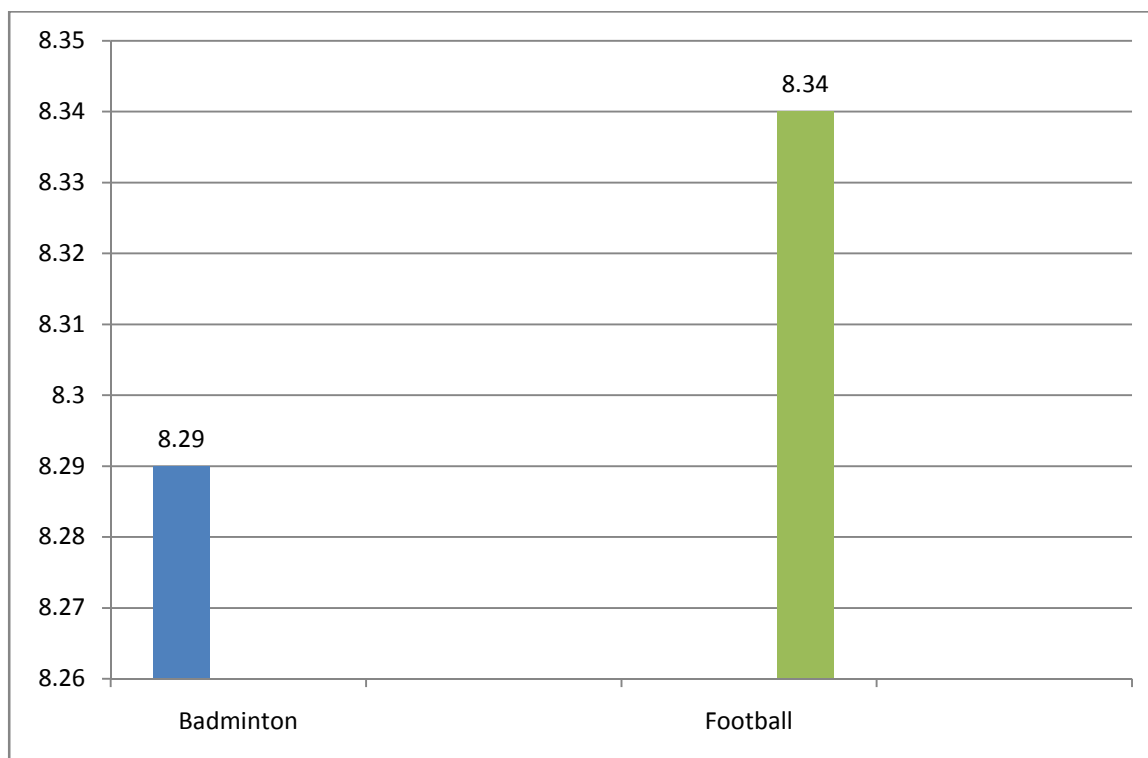
**Table 2**

**Comparison of Speed between Badminton and Football School girls**

Group	N	Mean	SD	SED	t
Football	20	8.3240	0.11564	0.05929	0.573
Badminton	20	8.2900	0.26053		

Significant at 0.05 level

As shown in **table-2** the mean score of speed of Football and Badminton were 8.32 and 8.29 respectively and SD of speed of football and badminton players were 0.11564 and 0.26053 respectively and 't' value was 0.573, which is insignificant at 0.05 level.



### Mean score of speed of Badminton and Football Players

### Discussion of Findings

As per the findings the mean score of strength of Badminton and Football Players were 1.6295 and 1.6045 respectively, the 't' value was 0.369, which is insignificant may be attribute to the fact that, due to their tender age, the level of strength in their training schedule in both the team players may be same. Finding also shows that the Badminton girls have better strength than Football school girls. As per the findings the mean score of speed of Football and Badminton were 8.32 and 8.29 respectively, the 't' value was 0.573, which is insignificant may be attribute to the fact that, due to their small age, the level of speed in both the team players are nearly the same may be due to the nature of their training programme. The finding also shows that the Badminton school girls have much better speed in 60 yard dash as compare to football school girls.

### References

**Behringer, M., et al.** (2011), Effects of strength training on motor performance skills in children and adolescents: A meta-analysis. *Paediatric Exe. Sci.*, 23 (2).

**Balsom, P.** (1994). *Sprint performance in soccer. Science and Football, III*, London: E & FN Spon.

**D. Raman, Dr. A. S. Nageswaran** (2013), Effect of Game-Specific Strength Training on Selected Physiological Variables among Badminton Players / *International Journal of Scientific Research*, Vol.2, Issue.10 October.

**Kollath, E., & Quade, K.** (1991). Measurement of sprinting speed of professional and amateur soccer players. In T. Reilly, J. Clarrys, & A. Stibbe (Eds.), *Science and football II*. London: E & FN Spon.

**Mosher, R. E.** (1985). Interval training: The effects of 12-week programme on elite, prepubertal male soccer players. *Journal of Sports Medicine and Physical Fitness*, 25.