



Comparative Study on Performance Related Physical Fitness among Inter School Level Badminton and Volleyball Players

SAJEED KP

*Assistant Professor, College of Education Lakshadweep, Calicut University Centre Kavaratti-682555
E-mail-coachsajeed@mail.com*

Received: 21 Nov. 2020 / Revised: 23 Nov. 2020 / Accepted: 01 Dec. 2021 / Published: 15 January 2021

Abstract: Fitness usually includes activities related to performance and games with varying abilities to perform those forms of physical exercise successfully. Fitness encompasses mental, emotional, social, and physical elements. All of these components are essential in ensuring that the motor skills of those who are not natural athletes are perfectly satisfied. Includes five basic components, they are cardiorespiratory endurance, muscular strength, flexibility, and body composition. Participating in sports activities improves these fitness components often requires certain motor skills like agility, balance, coordination, explosive power, speed, and reaction time. This research intended to compare inter-school players for chosen performance-related fitness factors on Badminton and Volleyball. The investigator chose 30 Badminton players and 30 Volleyball players from Lakshadweep Island to achieve the investigation's purpose. The criterion variables for performance-based physical fitness were chosen. The subjects of the two groups were evaluated with standard tests on the chosen dependent variables. Analyze the significant difference, if any, between groups was using the independent "t" test. The confidence level of 0.05 was determined by the value of the "t" ratio, which was deemed sufficient for research.

Keywords: Arm power, explosive power, performance fitness, Badminton and volleyball

INTRODUCTION

Fitness usually includes activities related to performance and games with varying abilities to perform those forms of physical exercise successfully. Fitness encompasses mental, emotional, social, and physical elements. All of these components are essential in ensuring that the motor skills of those who are not natural athletes are perfectly satisfied. Includes five basic components, they are cardiorespiratory endurance, muscular strength, flexibility, and body composition. Participating in sports activities improves these fitness components and requires certain motor skills like agility, balance, coordination, explosive power, speed, and reaction time.

OBJECTIVES OF THE STUDY

The study's objective was to compare the performance-related physical fitness among inter-school level Badminton and Volleyball players.

HYPOTHESIS

It was hypothesized that there would be significant differences between the performance-related physical fitness among inter-school level Badminton and Volleyball players

SELECTION OF SUBJECTS

The study is intended to compare the physical fitness variables of selected performance-related physical fitness variables between Arm power and Explosive power of Badminton and Volleyball school players. To achieve the present study's purpose, 30 subjects of each group were selected; group I consists of Badminton and group II comprising volleyball players. The subject was chosen from the Government School, Kavaratti Island Lakshadweep. The subject's age ranged from 14-17 years.

Selection of Variables

1. Arm power
2. Explosive power

<i>Sl.No</i>	<i>Variables</i>	<i>Test items</i>	<i>Unit of measurement</i>
Physical fitness variables			
1	Arm Power	Modified Pull-ups	Numbers
2	Explosive power	Sergeant Vertical Jump	Centimeter

ANALYSIS OF DATA AND RESULTS

The purpose of this analysis was to compare the Arm power and the explosive power of the men's Badminton and volleyball players. Data obtained from selected subjects have been statistically evaluated in this chapter. The data obtained for Arm power and explosive power from Badminton and volleyball players were evaluated using a 't' ratio statistical methodology. The level of significance was 0.05 degrees of confidence. The findings of the study are seen in Table 1.

Table 1
Analysis of 't' Ratio between Badminton and Volleyball Players on Arm Power

<i>Arm Power</i>					
<i>Group</i>	<i>Mean</i>	<i>SD</i>	<i>MD</i>	<i>t' Ratio</i>	<i>Table Value</i>
Badminton	13.12	2.00	1.58	2.71	2.11
Volleyball	14.70	2.16			

*significance at 0.05 level of confidence

Table 1 indicates that the observed 't' value of 2.71 is significant at a level of 0.05 for the degree of freedom and that the acceptable value is 2.11. The value obtained is 2.71, which is considered to be greater than the table value of 2.11. Thus it is concluded that the value found among the players on the Arm power is statistically significant. This means that the Arm power of Volleyball players better than the Badminton Players. The detailed interpretation of the study findings is illustrated in figure 1.

Figure 1: Bar Diagram Showing Mean Difference of Arm power between Badminton and Volleyball Players

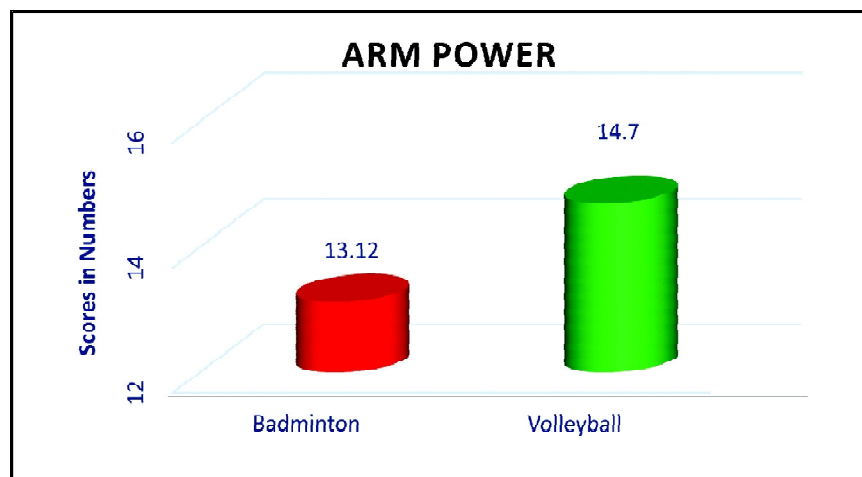


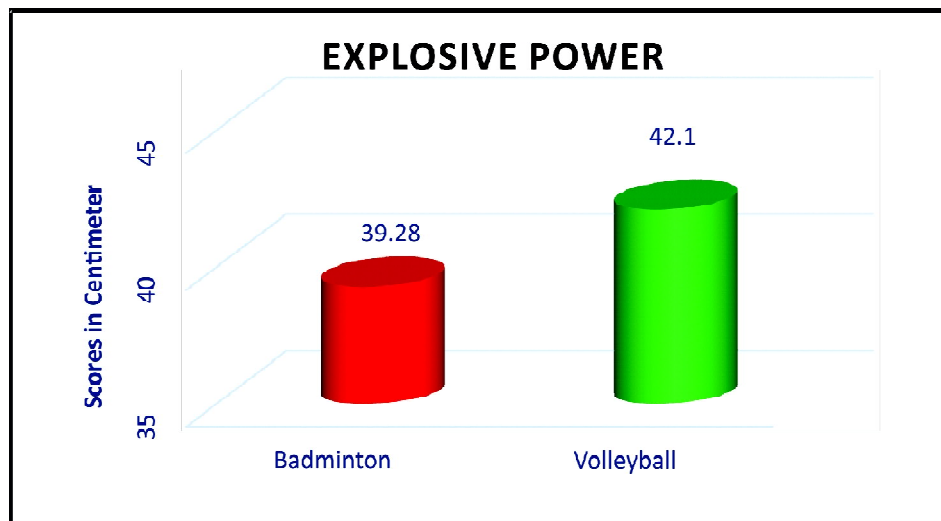
Table 2
Analysis of 't' Ratio between Badminton and Volleyball Players on Explosive Power

<i>Explosive Power</i>					
<i>Group</i>	<i>Mean</i>	<i>SD</i>	<i>MD</i>	<i>t' Ratio</i>	<i>Table Value</i>
Badminton	39.28	4.92	2.82	2.21	2.00
Volleyball	42.10	3.12			

*significance at 0.05 level of confidence

Table 2 indicates that the obtained 't' value is 2.21, which is significant at a level of 0.05 for the degree of freedom, and the acceptable value is 2.00. Thus, the obtained value of 2.21 is considered to be greater than the table value of 2.00. It is also inferred that improvements in the Explosive power statistically significant. It implies more explosive power for volleyball players than for Badminton players. The detailed interpretation of the study findings is illustrated in figure 2.

Figure 2: Bar Diagram Showing Mean Difference of Explosive power between Badminton and Volleyball Players



DISCUSSION ON FINDINGS

The study results showed that between badminton and volleyball players, the arm power and explosive power differ significantly. As a power sport, volleyball requires a high number of jumps for players to perform spikes and blocks, so the ability to jump is introduced as an important factor determining the physical fitness of volleyball players by assessing low-extremity explosive power. The main purpose of volleyball players is to achieve maximum height at the net to performing high (Stec & Smulsky, 2007). Nowadays, players who can reach higher heights while performing spike and block, as the most valuable volleyball skills, have advantages compared to other players who can jump higher (Ciccarone et al., 2007). Anthropometric differences and other differences may have influenced Arm Power and explosive power between Badminton and volleyball players.

CONCLUSIONS

The following assumptions are taken based on the findings of the analysis.

1. It was concluded that there was a significant difference in Arm Power and explosive power between the two groups.
2. It was also concluded that Volleyball players had more Arm power than Badminton players.
3. It was concluded that volleyball players had more explosive power than Badminton players.

References

- Clark. Basic understanding of physical fitness. Physical fitness research digest, 1971, 254-255.
- Ghose Alope. Handbook of sports medicine and physical fitness allied book agency Calcutta, 1980.
- Jerrold S, George Barabee Myers O Kes. Physical fitness and wellness United States of America; mchampaign; pearson education, 2003, 6-511.
- Singh Hardy. Science of sports training, New Delhi. DVS Publications, 1991.