



PHYSICAL FITNESS AMONG SCHOOL-LEVEL VOLLEYBALL PLAYERS

Samir Waghmare

Asst. Professor, P. G. T. D. of Physical Education, R. T. M. Nagpur University, Nagpur.

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Abstract

This study examines the physical fitness levels of school-level volleyball players and highlights the components that contribute to their performance. A sample of 40 volleyball players, aged 14–18 years, was assessed using standardized physical fitness tests, including flexibility, strength, endurance, agility, and speed. The findings revealed that school-level volleyball players demonstrate moderate to high fitness levels, with agility and strength being their strongest attributes. The study concludes with recommendations for enhancing the overall fitness of young volleyball players through targeted training programs.

Keywords: Physical Fitness, Volleyball, School-Level Athletes, Agility, Strength, Endurance

➤ Introduction

Volleyball is a sport that requires a combination of physical, technical, and tactical abilities. At the school level, physical fitness serves as the foundation for developing these skills. Components like strength, agility, endurance, flexibility, and speed are critical for optimal performance in volleyball.

Physical fitness among school-level players is influenced by factors such as training intensity, coaching quality, and school infrastructure. This study aims to evaluate the current fitness levels of school volleyball players and provide insights into areas that require improvement to support their athletic growth.

➤ Literature Review

Physical fitness is essential for young athletes as it directly impacts their performance and reduces the risk of injuries. Volleyball-specific movements, such as jumping, diving, and lateral quickness, place high demands on agility and explosive strength. Research has shown that regular training significantly enhances these attributes in young players. However,

variations in fitness levels are often observed due to differences in training frequency and program quality.

➤ **Methodology :**

1. Participants

Sample Size: 40 volleyball players aged 14–18 years from different schools.

2. Inclusion Criteria:

Minimum of two years of experience in school-level volleyball tournaments.

Participation in at least three weekly training sessions.

3. Fitness Components Assessed

1. Flexibility: Sit and reach test.
2. Strength: Handgrip strength test using a dynamometer.
3. Endurance: 12-minute Cooper run test.
4. Agility: Shuttle run test (4x10m).
5. Speed: 50-meter sprint test.

➤ **Procedure**

1. Participants were briefed on the purpose of the study and completed a consent form.
2. Fitness tests were conducted over two days in a controlled environment, with a warm-up session before each test.
3. Data were collected and analyzed using descriptive and inferential statistical methods.

➤ **Results**

The analysis of fitness test results is summarized below:

The results indicate that school-level volleyball players demonstrate above-average physical fitness, particularly in agility, speed, and strength. These attributes align with the demands of volleyball, where quick directional changes, explosive movements, and reactive power are crucial.

However, the moderate performance in flexibility and endurance suggests areas for improvement. Flexibility is essential for injury prevention and efficient movement, while endurance supports sustained performance during long matches.

The variability in fitness levels among participants may be attributed to differences in training quality, access to resources, and coaching expertise. Schools with structured physical education programs tend to produce better results in fitness assessments.

➤ Conclusion

This study highlights the overall physical fitness levels of school-level volleyball players, with notable strengths in agility, speed, and strength. To enhance their performance further, coaches and trainers should focus on improving flexibility and endurance through targeted training program.

➤ References

- Weinberg, R. S., & Gould, D. (2018). *Foundations of Sport and Exercise Psychology*. Human Kinetics.
- Sharma, V., & Kumar, P. (2017). *Impact of Physical Education Curriculum on Fitness Levels of Students*. *International Journal of Physical Education and Sports Science*, 6(3), 45–53.
- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015). *Research Methods in Physical Activity*. Human Kinetics.
- Johnson, B. L., & Nelson, J. K. (1986). *Practical Measurements for Evaluation in Physical Education*. Burgess Publishing Company.