

A Study of Physical Fitness Variables in Relation to the Performance of Kabaddi Players

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Abstract

The purpose of this study was to examine the relationship between selected physical fitness variables and the performance of kabaddi players. The selected variables included speed, agility, flexibility, and muscular strength. A total of 40 male kabaddi players aged 18–25 years participated in the study. Standardized tests such as the 50-meter dash for speed, shuttle run for agility, sit-and-reach test for flexibility, and push-up test for muscular strength were administered. Performance in kabaddi was evaluated by expert ratings and match performance analysis. Statistical techniques such as Pearson's Product Moment Correlation were used to determine the relationship between physical fitness variables and kabaddi performance. The findings revealed that agility and muscular strength had a significant positive relationship with kabaddi performance, while speed and flexibility also contributed moderately to performance. The study concluded that physical fitness variables play a vital role in enhancing the performance of kabaddi players.

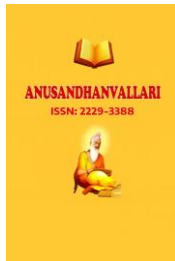
Keywords: Kabaddi, speed, agility, flexibility, muscular strength, performance, physical fitness.

Introduction

Kabaddi is one of the most popular traditional sports in India that demands high levels of physical fitness, tactical skill, and mental alertness. The game requires players to perform rapid movements, quick directional changes, strong muscular actions, and flexible body movements during raiding and defending. Therefore, physical fitness variables such as speed, agility, flexibility, and muscular strength are essential components influencing the performance of kabaddi players. Physical fitness helps athletes improve efficiency, reduce fatigue, and prevent injuries during competition. Among the various fitness components, speed enables quick raids and escapes, agility supports sudden directional changes, flexibility improves body movement efficiency, and muscular strength contributes to powerful tackles and holds. The present study aims to analyze the relationship between selected physical fitness variables and the performance of kabaddi players.

Statement of the Problem

The study was designed as A Study of Physical Fitness Variables in Relation to the Performance of Kabaddi Players.



Objectives of the Study

- To determine the relationship between speed and kabaddi performance.
- To determine the relationship between agility and kabaddi performance.
- To determine the relationship between flexibility and kabaddi performance.
- To determine the relationship between muscular strength and kabaddi performance.

Hypotheses

- There will be a significant relationship between speed and kabaddi performance.
- There will be a significant relationship between agility and kabaddi performance.
- There will be a significant relationship between flexibility and kabaddi performance.
- There will be a significant relationship between muscular strength and kabaddi performance.

Methodology

Selection of Subjects

For the purpose of this study, 40 male kabaddi players aged between 18 and 25 years were selected from colleges affiliated to varied Universities of Karnataka State.

Variables

Independent Variables

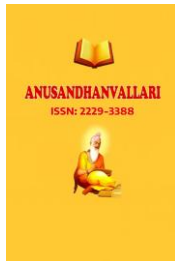
- Speed
- Agility
- Flexibility
- Muscular Strength

Dependent Variable

- Performance of kabaddi players

Criterion Measures

S.No	Variable	Test Used
1	Speed	50 Meter Dash
2	Agility	Shuttle Run Test
3	Flexibility	Sit and Reach Test
4	Muscular Strength	Push-Up Test
5	Kabaddi Performance	Expert Rating/Performance Score



Administration of Tests

Speed Test – 50 Meter Dash

The subjects were instructed to run 50 meters as fast as possible. The time taken was recorded in seconds.

Agility Test – Shuttle Run

The shuttle run test was conducted to measure the ability to change direction quickly.

Flexibility Test – Sit and Reach

The sit-and-reach test was used to assess lower back and hamstring flexibility.

Muscular Strength Test – Push-Up Test

Subjects performed maximum push-ups continuously without rest.

Performance Assessment

Kabaddi performance was assessed through expert evaluation and match statistics.

Statistical Technique

To determine the relationship between selected physical fitness variables and kabaddi performance, Pearson's Product Moment Correlation method was used.

Results and Discussion

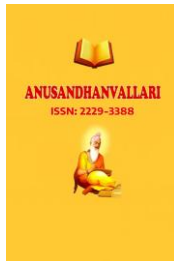
Table 1: Relationship Between Physical Fitness Variables and Kabaddi Performance

S.No	Variable	Correlation Value (r)	Result
1	Speed	0.52	Significant
2	Agility	0.71	Highly Significant
3	Flexibility	0.43	Moderate Significant
4	Muscular Strength	0.68	Significant

The results indicate that agility showed the highest relationship with kabaddi performance, followed by muscular strength, speed, and flexibility. Kabaddi players with better agility and muscular strength performed more effectively during matches.

Discussion

The findings of the study suggest that physical fitness variables are strongly associated with the performance of kabaddi players. Agility emerged as the most important factor because kabaddi requires rapid directional changes and quick body movements. Muscular strength was also found to be crucial for effective tackling and resisting opponents. Speed contributed to successful raiding and escaping techniques, while flexibility supported better body control and injury prevention.



These findings are consistent with previous studies that emphasized the importance of physical fitness in team sports performance.

Conclusion

Based on the findings of the study, the following conclusions were drawn:

1. Speed has a positive relationship with kabaddi performance.
2. Agility significantly influences the performance of kabaddi players.
3. Flexibility moderately contributes to kabaddi performance.
4. Muscular strength plays an important role in successful kabaddi performance.
5. Physical fitness variables collectively enhance the overall efficiency of kabaddi players.

Recommendations

1. Coaches should emphasize agility training in kabaddi practice sessions.
2. Strength training exercises should be included regularly.
3. Flexibility exercises should be performed to reduce injury risk.
4. Speed development drills should be incorporated into training programs.

References

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