

## An Association of speed, agility and flexibility with the performance of Kabaddi Players

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### Abstract

The purpose of the study was to find out relationship of speed, agility and flexibility with the playing ability of kabaddi players. To know the relationship of speed, agility and flexibility with playing ability of kabaddi players, total 25 kabaddi players were selected from Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh. The age was ranging between 18 to 25 years. For the purpose of the present study speed, agility and flexibility were selected as independent variables. Under dependent variables researcher had selected playing ability of kabaddi players. To know the nature of data descriptive statistics mean, standard deviation was used. To know the significant relationship of speed, agility and flexibility with the playing ability of Kabaddi players, Product Moment coefficient of correlation was used. All statistics were calculated with SPSS 16.0 version software. Level of significance was set at 0.05. After the analysis of data the results and findings of the study shows that playing ability of kabaddi players is significantly related with speed ( $r = -.937, p < .05$ ), agility ( $r = -.840, p < .05$ ), flexibility ( $r = .919, p < .05$ ).

**Keywords:** Speed, Agility, Flexibility, Playing ability of Kabaddi players.

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### Introduction

Kabaddi is the indigenous game with seven players on each side; Kabaddi is essentially a combat sport. It is played for 40 minutes with a 5-minute break (20-5-20). The goal of the game is to touch as many defensive players as you can without being caught on a breath while raiding into the opponent's court to score points. One participant is shouting "Kabaddi!!" Kabaddi!!!! Charges into the opposing team's court and tries to contact the opponent who is nearest to him while the other six players move to stop him. Kabaddi game, also known as the struggle game, in which one person struggles against seven. The offensive player is referred to as the "Raider," while the defensive players are referred to as "Antis." In Kabaddi, the assault is referred to as a "Raid." If the defense does not catch the raider before he returns to the home court, the antis he touched during the attack are deemed "out." Only after their side achieves points against the other side during their raiding turn, or when the remaining players successfully catch the opposing side's raider, may these players rejoin play.

According to the game, players on each team alternately hold their breath and walk to the other side of the line, trying to touch as many players as possible on the other team, but the other team does everything they can. Do from that player returning to his side of the line without breathing. Therefore, running, kicking, dodging, and feinting are essential skills in the game, and once you start picking them up, your muscles will be much stronger and your movements will be more agile.

Kabaddi is a game where players need to move and think very quickly. The fact that breathing is not allowed means that you need to move quickly. Over time, you'll find that even outside the game, you're much faster in terms of physical and mental abilities, with quick reflexes and the ability to instantly assess the inside and outside of a situation and make quick decisions.

Flexibility is the ability of individual to move muscles and joints over the normal range of motion (ROM). Flexibility helps performance, posture, promotes efficient movement, prevents improper body alignment, maintains proper muscle length and balance, and reduces the risk of injury. To achieve the best performance in kabaddi game, flexibility plays a very important role. If the muscles are too tight, they may not be able to provide the explosiveness needed for a particular movement. For example, a tight hip flexor

will not be able to do a full stride while raider trying to perform toe touch or hand touch, resulting in poor performance. Flexibility improves athlete movement and mobility.

Speed, agility and flexibility play a very important role for any sports to perform particular skill efficiently. Kabaddi is the game in which player's required high amount of some physical fitness components such as speed, agility and flexibility for better performance in sports. Therefore researcher conducted this study to know the contribution of speed, agility and flexibility on playing ability of kabaddi players.

### **Objectives of the study**

- The purpose of the study was to find out relationship of speed with the playing ability of kabaddi players.
- The purpose of the study was to find out relationship of agility with the playing ability of kabaddi players.
- The purpose of the study was to find out relationship of flexibility with the playing ability of kabaddi players.

### **Hypothesis of the study**

- It was hypothesized that there will be no significant relationship of speed with the playing ability of kabaddi players.
- It was hypothesized that there will be no significant relationship of agility with the playing ability of kabaddi players.
- It was hypothesized that there will be no significant relationship of flexibility with the playing ability of kabaddi players.

### **Methodology**

To investigate relationship of speed, agility and flexibility with playing ability, total 25 kabaddi players were selected from Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh. The age was ranging between 18 to 25 years.

### **Selection of variables**

For the purpose of the present study researcher had selected following variables by keeping the feasibility criterion in mind:-

- Independent Variables
  - Speed
  - Agility
  - Flexibility
- Dependent Variables
  - Playing ability of Kabaddi Players

### **Criterion Measures**

- Speed of the Kabaddi players was measured by 50 meter run and recorded in second.
- Agility of the players was measured by 4X10 meter shuttle run and recorded in second.
- Flexibility was measured with the help of sit and reach test and recorded in centimeter.
- Playing ability of Kabaddi players was measured by the subjective judgment of three Kabaddi game experts. Maximum 10 marks were awarded by the all three experts and total over all 30 marks were awarded for measuring the playing ability of the Kabaddi players. The Kabaddi

playing ability was measured on the basis of points awarded by experts on the basis of three criteria such as:

- I. Raid ability of players
- II. Catching ability of players
- III. Coordination with team members

**TABLE-1**

Selected variables and their criterion measures with unit of measurement

S.N.	Variables	Criterion measures	Unit of measures
1	Speed	Stop watch	Second
2	Agility	Stop watch	Second
3	Flexibility	Sit and Reach test	Centimeter
4	Playing ability of Kabaddi players	Subjective judgment	Number

Table-1 clearly shows the selected variables, measuring tools with unit of measurement

### Statistical Technique

For the purpose of the present study and to know the nature of data descriptive statistics mean, standard deviation was used. To know the significant relationship of speed, agility and flexibility with the playing ability of Kabaddi players, Product Moment coefficient of correlation was used. All statistics were calculated with SPSS 16.0 version software. Level of significance was set at 0.05.

### Result and Findings of the Study

**Table-2**

**Descriptive statistics of Selected Independent Variable (speed, agility and flexibility) and dependent variables (playing ability of Kabaddi players)**

Variables	N	M	SD
Speed	25	7.230	.825
Agility	25	9.888	.879
Flexibility	25	34.00	2.308
Playing ability of Kabaddi players	25	23.880	2.386

Table-2 indicates the descriptive statistics (Number of subject, mean and standard deviation) of selected independent and dependent variables

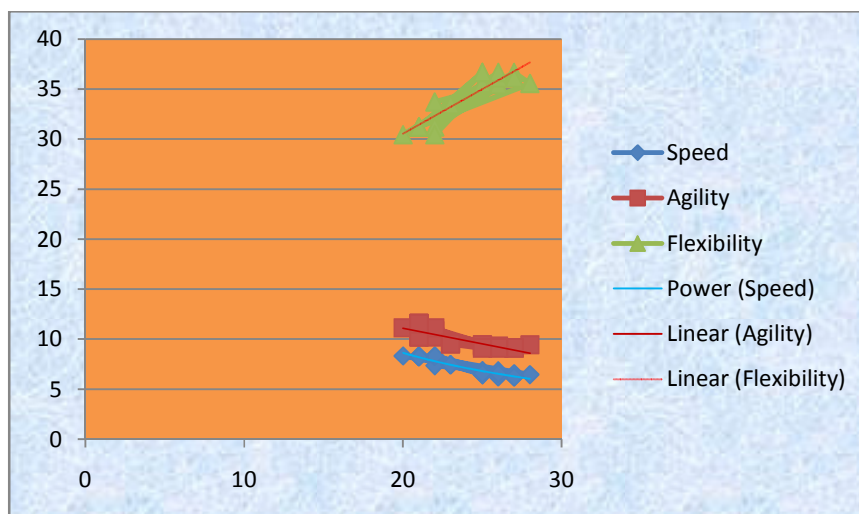
**Table-3**

**Correlation between dependent Variable (playing ability of Kabaddi players) and independent Variables (speed, agility, flexibility)**

S.N.	Variables	Correlation coefficient	Sig.
1	Speed	-.937*	.000
2	Agility	-.840*	.000
3	Flexibility	.919*	.000

Table-3 clearly indicates that there is significant relationship of selected independent variables (speed, agility and flexibility) with dependent variables (playing ability of kabaddi players)

Figure-1



### Discussion of Findings

After the analysis of data the results and findings of the study shows that playing ability of kabaddi players is significantly related with speed ( $r=-.937$ ,  $p<.05$ ), agility ( $r= -.840$ ,  $p<.05$ ), flexibility ( $r=.919$ ,  $p<.05$ ). The probable reason of these results that kabaddi is indigenous and combative game in which players requires greater speed at the time of raid and also at the time of defense. Agility also play most important role in different situation during entire game to turn quickly and change direction according to situation. Agility is crucial in Kabaddi because of how often raiders change directions, which causes defenders to follow suit, and vice versa. Flexibility is the range of motion around the joint. Flexibility play most important role for the raider at the time of raid. During the raid, raider trying to touch the defender either by hand or toe touches.

### Conclusions

As result and findings indicate, these following conclusions may be drawn:

- Significant relationship was found between playing ability of Kabaddi players and speed ( $r=-.937$ ,  $p<.05$ ).
- Significant relationship was found between playing ability of Kabaddi players and agility ( $r=-.840$ ,  $p<.05$ ).
- Significant relationship was found between playing ability of Kabaddi players and flexibility ( $r=.919$ ,  $p<.05$ ).
- Initially it was hypothesized that there will be no significant relationship of speed, agility and flexibility with playing ability of Kabaddi players is not accepted at .05 level of significant.

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