



**ASSESSMENT OF PHYSICAL PARAMETERS OF KABADDI
PLAYERS IN RELATION TO THEIR PLAYING POSITIONS**

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Abstract:

The purpose of this research is to compare and contrast the physical requirements of different Kabaddi positions. Kabaddi is a fast-paced, physically demanding game that calls for quick reflexes, quick thinking, stamina, and strength. When it comes to training programmes, talent discovery, and squad selection, having a firm grasp on how different roles need different physical qualities from their players may be invaluable. To conduct this evaluation, a representative cross-section of Kabaddi players from different university would be enlisted. Based on their major function on the squad, the players will be divided into specialised roles such as raider, corner coverer, and all-rounder. Anthropometric data, muscular strength and power, speed, agility, flexibility, and body composition were all evaluated.

Keywords : Kabaddi, physical parameters, playing positions, assessment

Introduction

To be physically fit is to have a healthy heart, blood vessels, lungs, and muscles. In order to function at peak efficiency, one must have the best possible health physical fitness for engaging in work and play. Those who aren't physically fit miss out on the benefits of a high-performing lifestyle and game they may otherwise enjoy. Strength training uses the body as a whole to create and sustain physical fitness. In order to meet the physical demands of daily life, one must have "enough physical capability," as defined by the President's Council on Physical Fitness and Sports in the United States. Being physically fit is a fundamental human need. The failure to address which reduces overall performance. Maintaining a healthy level of physical fitness is crucial not only for the overall efficacy of every person, but also for the success of athletes (Clarke, 1978).

Sports performance is also linked to general and specific physical fitness. Schnabel (1987) defines "sports performance" as "the unity of execution and outcome of a sports activity or a complicated sequence of action assessed or evaluated according to socially set and accepted standards." Different body types, structures, ground surfaces, biological aspects, fitness, mobility, equipment availability, and so on all have an impact on sports performance.

Muscular strength of the arms is quite important in Kabaddi, and this applies to both the raider and the antis. In the course of the game's forty minutes, both the raider and antis team players make extensive use of arm strength. In contrast to the raider, defining players use just their arms to hold a raider, preventing him from using his usual means of evasion—pushing and pulling to dislodge grips and overwhelm his opponents with brute force. Muscular stamina is essential, as both raider and defines players must defeat the opposition. In Kabaddi, the explosive strength of your legs and arms is crucial. Movements in Kabaddi are lightning fast and explosive. The raiders' methods often include the use of the lower body and are accomplished with great speed and surprise. Both the raider and the definer rely heavily on their leg strength for getting off to a fast start, turning, and stooping. They need powerful legs to create thrust from the ground up. Both raiders and defenders rely heavily on their limbs in order to contact, flee, counter, and apply hard pressure to one another. There is a statistically significant relationship between performance rating in Kabaddi and the chosen physical factors of arm strength, abdominal endurance, arm explosive power, leg explosive power, running speed, and leg stretch ability.

All of the aforementioned physical characteristics are crucial to an individual's working capacity, which in turn affects their athletic performance. In the current study, the researcher made an attempt to test the hypothesis that there are differences in physical characteristics among Kabaddi players.

Method and Procedure

Selection of the Subjects

The participants in this research were culled from the zonal intercollegiate Kabaddi championships held by universities within Haryana. To conduct this research, we used a non-probability selection approach to pick 180 Kabaddi players from three universities: Kurukshetra University (KUK), Maharishi Dayanand University (MDU), and Chaudhary Devi Lal University (CDL) (CDLU).

Selection of the Variables

The following physical variables were selected for the study.

- Reaction Agility
- Ability
- Back strength
- Flexibility
- Balance ability
- Arm strength
- Legs strength

Measurement of Physical Variables:

The selected physical variables were tested with standards tests as Reaction Ability was measured with Nelson's Speed of Movement Test and Balance Ability was tested with Nelson's Balance Test (1976). Agility was measured with Side Step Test constructed by H.D. Edgren in 1932. Arm and Back Strength measurements were taken with Hand Grip and Back Dynamometer. Similarly Legs Strength was tested with Standing Broad Jump and Flexibility was measured with Sit and Reach Test.

Statistical Technique:

The average and standard deviation of each Kabaddi playing positions were determined for each available position. The average disparity amongst Kabaddi players at various positions was calculated using analysis of variance. If the F ratio was significant, the results were further examined using Scheff's post hoc test.

Results of the Study

Mean, standard deviation, F-value of physical parameters of kabaddi player of different playing position have been presented in table- I and Scheff's post hoc value of those variable where F- value found significant have been presented in table -2.

Table-1 mean, standard deviation and f-value of physical parameters of kabaddi players of different playing positions

Variable	Corner	Coverer	Raider	All-rounder	f-value
Reaction Ability (cm/sec)	22.85 3.88	22.23 3.68	20.59 3.52	20.36 3.47	5.05
Balance ability (in sec)	36.82 1.93	36.39 1.84	31.49 1.25	33.77 2.39	76.71
Agility (Repetitions In 10 sec)	27.20 1.30	26.57 1.91	23.95 1.49	22.95 1.95	65.63
Leg strength (in meters)	2.30 13	2.30 10	2.39 12	2.38 12	8.02
Back Strength (in kg)	167.06 7.14	166.98 7.59	168.04 7.64	167.28 7.15	19
Flexibility (in cm)	16.53 5.81	16.91 4.5	17.33 5.23	16.77 5.66	17
Right hand grip strength (in kg)	22.64 1.59	22.66 2.11	23..33 1.52	23.31 1.53	2.28
Left hand grip strength (in kg)	23.68 1.48	23.08 2.03	23.80 1.73	23.11 1.78	2.01

Table -2 Scheffe's post hoc value of physical parameter of kabaddi players of different playing positions.

Variable	Corner Vs. Coverer	Corner Vs. Raider	Corner Vs. All rounder	Coverer Vs. raider	Coverer Vs. All rounder	Raider Vs. All rounder
Reaction Ability	.62	2.26	2.49	1.64	1.87	2.31
Balance ability	.43	5.32	3.05	4.89	2.61	2.27
Agility	.62	3.24	4.24	2.62	3.62	1.00
Leg Strength	.003	.09	07.	.09	1.53	.01

The table-1 depicts the mean, S.D and F value of Physical variable of kabaddi players of different playing positions. Table -2 shows the post hoc values of physical variable of kabaddi players. It was evident from the table that there was significant difference of reaction ability among the corner, coverer, raider and all-rounders. Raiders have better reaction ability among the other groups which was followed by raider, corner and coverer kabaddi players. The post hoc values show that all-rounders and raider were significantly better than corner kabaddi players in reaction ability. Significant difference in balance ability was observed among the kabaddi players of different playing positions. Raider has edge in balance ability over the player of other playing positions. This was followed by all-rounder, coverer and corner kabaddi players. The post hoc values reveal that raider had significantly higher balance ability than all-rounder, coverer and corner kabaddi players. Again, all-rounders were also significantly superior to coverer and corner kabaddi players in balance ability. The data also shows that there was significant difference of agility in the kabaddi players of different playing positions. The corner kabaddi players were more agile than other kabaddi players, which were followed by coverer, raiders and all-rounder kabaddi players. The post hoc values depict that corner and coverer kabaddi players were significantly better than the raider and all-rounder kabaddi players in agility. It was evident from table-1 that there was significant difference of leg strength among the kabaddi player of different playing positions. Raider had highest leg strength and this was followed by all-rounders, corner and coverer kabaddi players. The post hoc values illustrate that raider and all-rounder kabaddi players had significant higher leg strength than corner and coverer kabaddi players. Whereas, there was no significant difference found in back strength, flexibility, left and right hand grip strength among the kabaddi players of different playing positions.

Discussion

The result of the study shows that there was significant difference existed in many physical parameters among the kabaddi players in relation to their playing positions. The difference among the kabaddi players in relation playing position might prevail because of their specific role in game and the physical fitness demand of that particular playing position. As different playing positions in different games requires different physical attributes for successful participation. The finding of the study was supported by other study on the characteristics of

players of different playing positions (Kaur, 2004; Ahmet, 2007). The result of study further revealed the raider and all-rounders were better in reaction, balance abilities and leg strength than corner and coverer kabaddi players. This might exist because of their functional role in the game and the training programme difference of different players in relation to their playing positions. During the raid, the raider and all-rounder are require quicker reaction time and superior leg strength to react swiftly and produce quick movements to save themselves from defender after touching them. Better balance abilities were also helpful for offensive players to maintain their balance during raid.

Conclusions

The reaction ability, balance ability, agility and leg strength of corner, coverer, raider and all rounder kabaddi players differ significantly.

- There was no significant difference in back strength, agility, left and right hand grip strength among the corner, coverer, raider and all-rounder kabaddi players.
- The raider and all-rounder kabaddi players had better reaction ability than corner kabaddi The raider kabaddi players had superior balance ability than all rounder, corner and coverer kabaddi players, whereas all rounders were superior than corner and coverer kabaddi.
- The corner and coverer kabaddi players were significantly more agile than the raider and all-rounder kabaddi players.
- The raider and all-rounder kabaddi players had significant higher leg strength than corner and coverer kabaddi players.

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