



A Comparative Study Of Physical Fitness, Components Agility, And Strength, Among The Female Kabaddi Players Of District And State Level.

Satinderjit Kaur

Masters Student, Department of physical Education and Sports Technology, Sri Guru Granth Sahib
World University, Fatehgarh Sahib, Punjab.

Abstract

The purpose of the study was to analyse the physical fitness components between state level and district level female kabaddi players. The variables selected for the study were Explosive Strength, and Muscular Endurance. The subject age ranged between 15-17 years. The subjects of the study were 30 girls of state and district level kabaddi players from Banga district. The selected physical fitness components were assessed using the standardized test. The collected data on the selected variables are treated with independent 't' test for physical fitness.

Keywords: Physical Fitness, Agility, Strength, Female Kabaddi Players.

Introduction

Kabaddi is one of the oldest and most popular indigenous games of India. It originated in ancient India and is now played at national and international levels. Kabaddi gained worldwide popularity after the introduction of professional leagues and international competitions. The game is included in major sports events such as the Asian Games, where Indian players have shown remarkable achievements. According to International Kabaddi Federation (2021), kabaddi is a physically demanding combative team sport that requires quick reflexes, muscular strength, agility, speed, endurance, and tactical ability for successful performance.

Physical fitness is considered an essential factor for achieving excellence in sports performance. Players competing at higher levels generally demonstrate superior physical fitness characteristics compared to players competing at lower levels. Kumar (2018) reported that kabaddi players participating at higher competitive levels showed better performance in selected physical fitness components than players at lower levels.

The athletes with greater competitive experience possessed better physical fitness profiles and were able to perform more effectively during competition. Bhagat (2018)

STATEMENT OF THE PROBLEM

A comparative study of physical fitness, components agility, and strength, among the female kabaddi players of district and state level.

LIMITATIONS OF THE STUDY

1. The study was limited to female Kabaddi players only; therefore, the findings was not be applicable to male players.
2. The study was confined to state-level and district-level players of Punjab only, which may limit the generalization of results to other states or regions.
3. The study was considered only two physical fitness components, namely agility and strength, while other components such as speed, endurance, flexibility, and coordination will not be included.
4. The sample size was limited, which may affect the broader applicability of the findings.
5. The age group of the subjects was limited, only 15-17 and results may differ for other age categories.

Delimitations

1. The study was delimited to female kabaddi players only.
2. The study was confined to state-level and district-level female kabaddi players.
3. Only two physical fitness components, namely strength and agility, were selected for the study.
4. The age of the subjects was restricted to the selected age group.
5. The study was conducted in the selected geographical area.
6. Standardized tests were administered to measure strength and agility.

MATERIAL AND METHODOLOGY

A total of 30 children (N=30) from rural and urban school were selected. The subject aged ranged between 15-17 years. Fifteen girls from state level and Fifteen girls from district level kabaddi players of Punjab. The selected motor fitness variables for the study are strength, and agility, the selected variables were assessed by using the standardized test "t" test at 0.05 level of significant.

TABLE NO. 1

VARIABLES TESTS AND UNITS OF MEASUREMENT

VARIABLE	UNITS OF MEASURES	TOOLS/TEST USED
Strength	In seconds	Broad jump
Agility	Meters	Shuttle-Run

2.1 PROCEDURE

All the participants were informed in detail about the purpose and procedures of the study before the collection of data. The researcher explained the testing protocol and ensured that the participants understood the requirements of the tests. No special motivational techniques were used prior to data collection. All participants performed the tests under similar conditions and followed the same testing procedures. The researcher provided necessary instructions and supervision throughout the testing process to ensure uniformity and accuracy in data collection.

2.2 STATISTICAL TECHNIQUES

The collected data were analysed using SPSS software (Version 23.0). Descriptive statistics, including mean and standard deviation, were calculated to describe the characteristics of the data. To determine whether significant differences existed in speed and explosive strength performance between rural and urban school boys of Poonch district. Independent samples (t-test) was employed. The level of significance for all statistical tests was set at 0.05

VARIABLES

- ❖ Strength
- ❖ Agility

TABLE N0 1

Group		S. D	SEM	“t”
State Level	1.3687	.16348	.04221	0.036
District Level	1.4893	.13551	.03499	

STRENGTH [STANDINGBROADJUMP]

The aim of this test is to determine the power of legs. To assess the strength of the participants measuring tape, long jump pit was required to record the data.

Procedure:

The subject stood behind the starting line with the feet parallel to each other. The subject was instructed to jump a distance as long as possible by bending knees and swinging arms to take off for the broad jump in the forward direction.

Draw a take-off line on a flat, non-slip surface. The participant stands just behind the take-off line with feet slightly apart. Using a two-foot take-off, the participant swings the arms and bends the knees to jump forward as far as possible. The participant must land on both feet without falling backward. The distance is measured from the take-off line to the nearest point of contact on landing (usually the heels). Usually, three trials are given

Scoring

The distance between the starting line and the nearest point to horizontal landing provides the score of the test.

AGILITY (SHUTTLE RUN 4X10 METERS);

The aim of this test is to determine agility. To assess the agility measuring tape, stopwatch, cone markers, two cones, flat and clear surface of at least 20 meters was required to record the data.

Procedure:

Two parallel lines were marked on the floor 10 meters apart from one line to another line. two cones were placed behind the opposite sides of the starting line. After the starting signal by whistle the timer starts the stopwatch and the subjects run towards the cone, picks-up one cone, then runs back to the starting line, places the cone behind the starting line, runs back and picks-up the second cone to be carried back the starting line as soon as possible. After crossing the starting watch was stopped and the for the time for this task was recorded.

RESULTS

TABLE: NO 3.1

Descriptive statistics of strength variable among District and State level female kabaddi Players

VARIABLE	GROUP	N	Mean	Std. Deviation	Std. Error Mean
STRENGTH	STATE LEVL	15	1.3687	.16348	.04221
	DISTRICT LEVEL	15	1.4893	.13551	.03499

Table 3.1 presents the descriptive statistics for the strength variable among state level kabaddi players and district level female kabaddi players. The state level players recorded a mean value of 1.3687 with a standard deviation of 0.16348, whereas the district level female kabaddi players recorded a mean value of 1.4893 with a standard deviation of 0.13551. The findings indicate that the district level female kabaddi players had a higher mean distance in standing broad jump than the state level female kabaddi players.

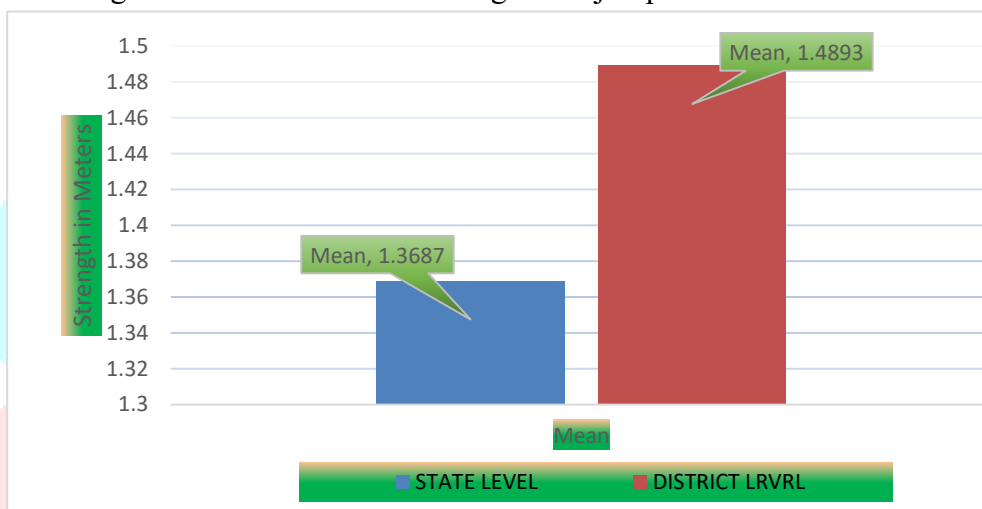


FIGURE NO 3.1 GRAPHICAL REPRESENTATION OF MEAN SCORE OF STRENGTH VARIABLE AMONG STATE LEVEL FEMALE KABADDI PLAYERS AND DISTRICT LEVEL FEMALE KABADDI PLAYERS

TABLE 3.2

COMPARISON OF STRENGTH VARIABLE BETWEEN STATE LEVEL AND DISTRICT LEVEL FEMALE KABADDI PLAYERS

VARIABLE	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
STRENGTH	-2.201	28	.036	-.12067	.05483

Table 3.2. depicts the results of the independent samples t-test for the strength variable between state level and district level female kabaddi players. The obtained p-value ($p < 0.036$) was lower than the selected level of significance (0.05), indicating a statistically significant difference in strength performance between state level and district level kabaddi players.

TABLE: NO 3.3

Descriptive statistics of strength variable among District and State level female kabaddi Players

VARIABLE	GROUP	N	Mean	Std. Deviation	Std. Error Mean
AGILITY	STATE LEVEL	15	13.1740	1.66296	.42937
	DISTRICT LEVEL	15	12.7507	1.12034	.28927

Table 3.3 presents the descriptive statistics for the agility variable among state level kabaddi players and district level female kabaddi players. The state level players recorded a mean value of 13.1740 with a standard deviation of 1.66296, whereas the district level female kabaddi players recorded a mean value of 12.7507 with a standard deviation of 1.12034. The findings indicate that the state level female kabaddi players had a slightly higher mean distance in standing broad jump than the district level female kabaddi players.

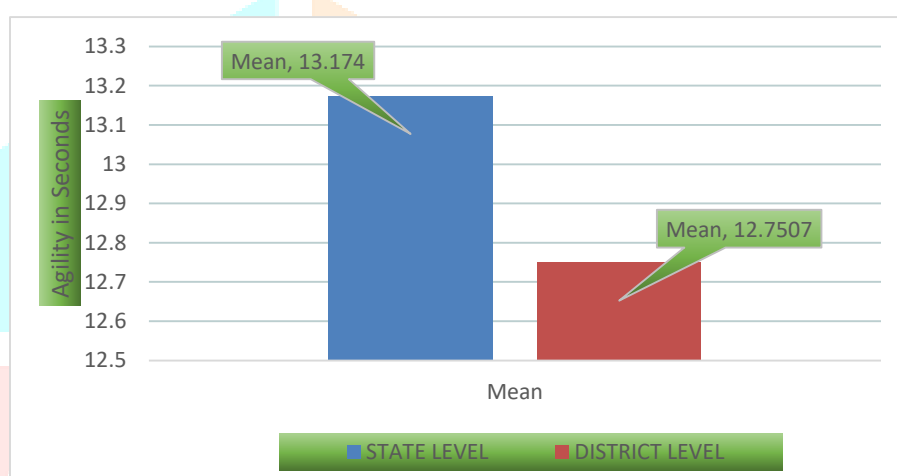


FIGURE NO 3.2 GRAPHICAL REPRESENTATION OF MEAN SCORE OF AGILITY VARIABLE AMONG STATE LEVEL FEMALE KABADDI PLAYERS AND DISTRICT LEVEL FEMALE KABADDI PLAYERS

TABLE 3.4

COMPARISON OF STRENGTH VARIABLE BETWEEN STATE LEVEL AND DISTRICT LEVEL FEMALE KABADDI PLAYERS

VARIABLE	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
AGILITY	.818	28	.420	.42333	.51773

Table 4.3. depicts the results of the independent samples t-test for the strength variable between state level and district level female kabaddi players. The obtained p-value ($p > 0.420$) was higher than the selected level of significance (0.05), indicating no statistically significant difference in agility performance between state level and district level kabaddi players.

DISCUSSION OF THE FINDINGS

Physical fitness variables

1. STRENGTH

The result of the study revealed that there was a significant difference between state level and district level female kabaddi players in strength. State level players performed better than district level players. These findings are supported by Bhagat, U. and Singh, D. (2016), who reported superior physical fitness and strength among higher-level athletes compared to lower-level athletes.

2. AGILITY

The result of the study revealed that there was no significant difference between state level and district level female kabaddi players in agility. State level players performed better than district level players. These findings are supported by Bhagat, U., Singh, A., and Doel, N.S. (2015), who found significant differences in physical fitness variables among athletes competing at different levels.

CONCLUSIONS

- ❖ It was concluded that there was a significant difference in strength between state-level and district-level female Kabaddi players, because the obtained p-value (0.036) was less than the 0.05 level of significance. District-level female Kabaddi players demonstrated better strength performance than state-level female Kabaddi players.
- ❖ It was concluded that there was no significant difference in agility between state-level and district-level female Kabaddi players, because the obtained p-value (0.420) was greater than the 0.05 level of significance.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to all the participants who took part in this study. The authors also extend they're thanks to the school authorities and teachers of Baba Gola Government Girls Senior Secondary School, Banga (S.B.S. Nagar), for their cooperation and permission to conduct the study and collect the required data.

REFERENCES

- Bhagat, U. (2018). *Physical fitness profiles of athletes with different competitive experiences. International Journal of Physical Education, Sports and Health*, 5(2), 145–148.
- Bhagat, U., & Singh, D. (2016). *Comparative study of selected physical fitness variables among kabaddi players of different competitive levels. International Journal of Physical Education, Sports and Health*, 3(4), 120–123.
- Bhagat, U., Singh, A., & Doel, N. S. (2015). *Comparison of physical fitness components among athletes of different performance levels. International Journal of Sports Sciences and Fitness*, 5(2), 45–50.
- International Kabaddi Federation. (2021). *Rules and regulations of kabaddi*. International Kabaddi Federation.
- Kumar, R. (2018). *A comparative study of physical fitness components among kabaddi players of different competitive levels. International Journal of Physical Education, Sports and Health*, 5(3), 210–213.