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COMPARATIVE STUDY ON MOTOR FITNESS AMONG STATE LEVEL DODGEBALL AND KABADDI PLAYERS

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Abstract: The purpose of the present study was to compare the physical fitness among state level Dodgeball Players and Kabaddi players. To achieve the objective of the study, 30 state level performer, i.e. 15 Dodgeball and 15 Kabaddi players were selected at randomly from Karnataka State. The age limit of the subjects was from 18 years to 21 years.The study was confined to selected motor fitness components namely Speed, Endurance and Agility. The data were recorded by different measures namely 50 meter dash, shuttle run, sit ups as prescribed in Test Evaluation. To find out the significance difference between Dodge ball and Kabaddi players on selected motor fitness components, 't' test was applied at 0.05 level of significance. The results of the study revealed that there was No significance difference attained on speed, Endurance and agility.

Index Terms - Agility, Speed, Motor Fitness,

I. INTRODUCTION

Motor fitness and physical fitness are frequently used interchangeably. A broader idea than physical fitness was intended to be described by term "motor fitness". This general word refers to the capacity to carry out fundamental motor abilities successfully. For an athlete to perform at their best in sports, motor fitness is a crucial component. For learning different activities and perfecting different talents, the amount of motor ability components is crucial. Motor skills have historically been thought of as a conglomeration of elements that are fundamental to every situation. The player's ability and capacity for action are the primary concerns of all motor ability elements. The primary factor in acquiring a variety of general activities and honing a variety of talents in sports and physical activities is motor ability. It also shows current athletic prowess.

The word "motor fitness" describing a person's entire dynamic physiological state. There are several components of fitness, including endurance, speed, and agility. Performance is the key to measuring motor fitness, and performance is determined by a variety of factors. Certain characteristics are clearly more prevalent than others, and as a result, they have a stronger correlation with physical fitness. Naturally, a variety of fitness components contribute in different amounts to the majority of sports.

Muscular strength muscular endurance, cardio-vascular endurance, power, flexibility, coordination, balance, speed, and agility are all components of motor fitness, which is the readiness or readiness to perform large muscle activity without experiencing undue exhaustion. Performance is typically used to assess motor fitness, and performance is derived from a combination of numerous elements. The majority of fitness tests aim to assess these aspects, which is why they are referred to be motor fitness exams. They are at least mediocre in a wide range of basic motor skills, including strength, endurance, flexibility, agility, and balance. Additionally, they include at least mediocre proficiency in the fundamental skills of running, jumping, climbing, and throwing.(Barrow 1979)

A fundamental prerequisite for a successful program in a variety of sports is motor fitness. Without motor fitness, it is impossible to perform well in any sport or game. It is the main factor, which determines our sports performance. For a good performance in any sport, the accomplishment of a high quality of fitness is a basic prerequisite. "Motor fitness is the last criterion through which other elements of physical fitness or total fitness are seen and measured in man." Motor fitness can be defined as an efficient performance in basic requirements like running, jumping, dodging, falling, climbing, and swimming with sustained effort in a variety of situations. As a result, it would involve elements like power, agility, speed, and balance. (Bookwalter, 1952)

IMPORTANCE OF MOTOR FITNESS

1. To build muscular mass and strengthen the body,
2. In order to stay young,
3. To enhance or rehabilitate the body as a whole or a specific body portion,
4. To reduce body weight or avoid obesity,
5. To preserve or enhance different organs capacity to function
6. To maintain or enhance the body's fitness and health,
7. To improve the cardiovascular system's performance in order to prevent cardiac illnesses
8. In order to avoid sadness, sleepless, sleeplessness, and
9. To enhance mental health
10. To postpone the aging process,
11. To strengthen the immune system and fend against illnesses,

MOTOR FITNESS COMPONENTS

1. Speed
2. Agility

STATEMENT OF THE PROBLEM

Finding out the "COMPARATIVE STUDY ON MOTOR FITNESS AMONG STATE LEVEL DODGE BALL AND KABADDI PLAYERS" was the aim of the study.

OBJECTIVES OF THE STUDY

The purpose of the study was to compare the motor fitness variables of players of kabaddi and dodgeball.

DELIMITATION OF THE STUDY

- The study was restricted to 30 participants who played Kabaddi and Dodgeball.
- Only Karnataka State players were included in the study.
- It was restricted to the chosen players who were between the ages of 18 and 25.

LIMITATION OF THE STUDY

- This study was limited by a number of factors that may have affected the subjects motor fitness, including their training age, lifestyle, food, socioeconomic status, daily routine, and baseline level of fitness.
- As a limitation, the weather at the time of the test was thought to have affected the university male subjects performance.

- Because a variety of social, cultural, and environmental elements were not taken into account, the study's limitations were identified as the individuals overall mood, environmental conditions, and test performance.

HYPOTHESIS

- It was hypothesized that there would be no discernible difference between Kabaddi and Dodgeball players motor fitness metrics.
- The hypothesis posited that there is no discernible variation in speed between Dodgeball and Kabaddi players from different universities.
- The hypothesis posited that there is no discernible variation in agility between Dodgeball and Kabaddi players from different universities.
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REVIEW OF RELAED LITRETURE

It is crucial to review related literature in order to fully comprehend the issue at hand. The researcher attempts to report the literature in this chapter based on comparisons of physiological, psychological, and motor fitness characteristics.

- **Bhattacharyya (1993)**
  contrasted a sprinter's motor skills to those of a chaser in Kho-Kho. Twenty-eight participants were chosen at random from the North Pargans area in West Bengal for this study; fourteen of them were from the sprinting group and fourteen were from Kho-Kho. A 12-minute run or walk, a 50-meter dash, a 4-by-10-meter shuttle run, a standing wide jump, pull-ups, and knee sit-ups were all exercises he conducted. In contrast to the "Chaser" in Kho-Kho, who has greater cardio-respiratory endurance than a sprinter, the results showed that sprinters possess motor ability, namely in the 50-meter dash, standing wide jump, and bent knee sit-ups. Additionally, it showed that there was no discernible difference between sprinters and chasers in terms of pull-ups and shuttle runs.

- **Chowdhury (1980)**

  Developed a study to evaluate a few physiological factors between the Tripura State Kho-Kho and Kabaddi girls teams. Fifteen Kho-Kho and fifteen Kabaddi players from Tripura State School girls participated in the national meet for this study, with twelve players from each group. He assessed the Kho-Kho and Kabaddi players resting heart rate, systolic and diastolic blood pressure, hemoglobin content, vital capacity, breath holding, physical fitness index, and recovery time. However, the mean pulse rate, systolic and diastolic blood pressure, blood hemoglobin content, breath-holding capacity, and physical fitness of Kho-Kho and Kabaddi players did not differ significantly.

- **Dhillo (2007)**

  Conducted a study on Kabaddi and Kho-Kho players of Maharshi Dayanand University team. He compared skinfolds measurement and body composition variables these games players. The skinfold measurement such as bicwps, triceps, suprailiac, thigh and calf Kabaddi players were found significantly better than compare to Kho-Kho players. Kabaddi players were significantly better than the Kho-Kho players in body composition variables such as Fat%, Fat weight and lean body mass. Kho-Kho players were significantly better than the Kabaddi players in body composition variables such as body density.

METHODOLOGY

This chapter presents the methods used for subject, variable selection, research design, test selection, subject oriented, data collection, test administration, and statistical analysis of the results.

SELECTION OF SUBJECTS

Thirty state-level dodgeball and kabaddi players were chosen as study participants from different Karnataka districts with the aim of determining their degree of fitness. The subjects were between the ages of 18 and 25.

SELECTION OF MOTOR FITNESS VARIABLES

1. Speed
2. Agility

DESIGN OF THE STUDY

The present investigation adopted a descriptive comparative research design to analyse and compare the selected motor fitness

SELECTION OF TESTS

Sl. No.	Variables	Test items and Tools	Criterion Measurements
1	Speed	50 yard Dash	Running distance covered by subject against time taken in Seconds
2	Agility	4x10m Shuttle run	Running distance covered by seconds

COLLECTION OF DATA

After the tournament or camp, the finder personally met with the Dodgeball and Kabaddi players and instructed them to gather in a room for the test. The finder gave a brief explanation of the test items, and all subjects who voluntarily cooperated had no questions about the tests. Experts and specially educated physical education teachers assisted in the collection of pertinent data regarding the motor fitness components of state-level dodgeball and kabaddi players.

ADMINISTRATION OF TESTS:

Speed
50 yards dash test

Aim
To measure speed of the subjects.

Equipment
A stopwatch, clapper or whistle, marking power, measuring tape, and at least 60 yards of open space are required.

Procedure
The subjects stood behind the standing line, four at a time. The individuals ran as quickly as they could across the 50-yard finish line after receiving the whistle, the standing signal.

Scoring
The final score was calculated as the amount of time that passed between the beginning signal units and the runner's torso crossing the finish line, to the closet hundredth of a second.

Agility
4x10 meters shuttle run.

Purpose
To assess the ability to change body position and direction while running.

Equipment
Two wooden blocks of 2 inches by 4 inches and stop watches.

Procedure

Of the Examination On the floor, there were two parallel lines spaced ten meters apart. On the other side of starting line were two wooden blocks. After being instructed to pick up a block, the subject ran back to stand behind the starting line. The subject went to the starting line on the single "start" and put the block behind it. He then grabbed the second block and carried it back across the starting line. The subjects were not allowed to pass the block in order to position it; instead, they had to place it with their hands on the standing line. Subjects who disregarded the test's guidelines were given a restart. After two trial were conducted, the best trial was considered.

Scoring

The subject's performance was measured by the amount of time that passed from the commencement of the signal and the finish of the course, to the closet tenth of a second. (Yobu, 2000)

ANALYSIS AND INTERPRETATION OF THE DATA

The goal of the study was to determine the motor fitness of the Dodgeball and Kabaddi players in Karnataka. Thirty kids were chosen for the study. The age range of 18 -25 years old. Players at the state level were chosen as the study's participants.

The motor fitness variables chosen for this study were rating cover time as data and speed to assess a 50 yard sprint. The time needed to complete a 4x10yard shuttle run was recorded in order to gauge agility performance.

The following table details the motor fitness variables that the researchers collected data on.

TABLE NO. 1 COMPARISON OF SPEED MEAN VALUES BETWEEN DODGEBALL AND KABADDI PLAYERS.

KABADDI

- Mean- 8.13 sec
- Median-8.0 sec
- Standard Deviation-1.19 sec

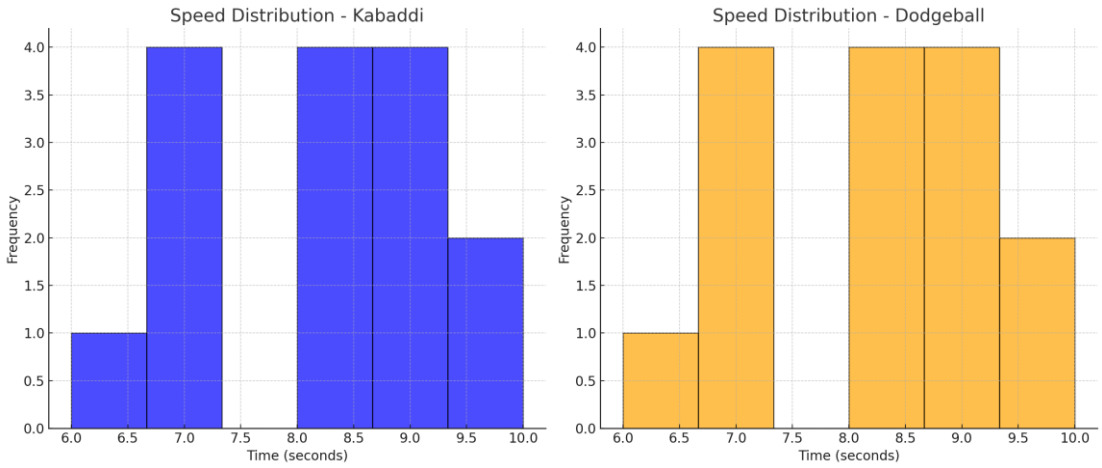
Dodgeball

- Mean-8.13 sec
- Median-8.0 sec
- Standard Deviation- 1.19 sec

The following are the findings of the paired t test for the Speed data comparing Dodgeball and Kabaddi Players

T-Test:

- T-statistic- 0.0
- P- value - 1.0



The histograms displaying the speed Distributions are as follows

1) **Kabaddi**- The histogram illustrates the frequency of time intervals for Kabaddi. Most values are centered around 7 to 9 sec

2) **Dodgeball-** The histogram for Dodgeball shows a similar distribution, with most values clustering around 7-9 sec

The data summaries are supplemented by these visualizations, which show that the speed performance distributions in the two sports are similar.

TABLE NO 2 COMPARISON OF AGILITY MEAN VALUES BETWEEN DODGEBALL AND KABADDI PLAYERS.

Kabaddi
Mean- 13.27 sec
Median - 13.0 sec
Standard Deviation- 1.03
Dodgeball

Mean-13.53sec

Median-13.0 sec

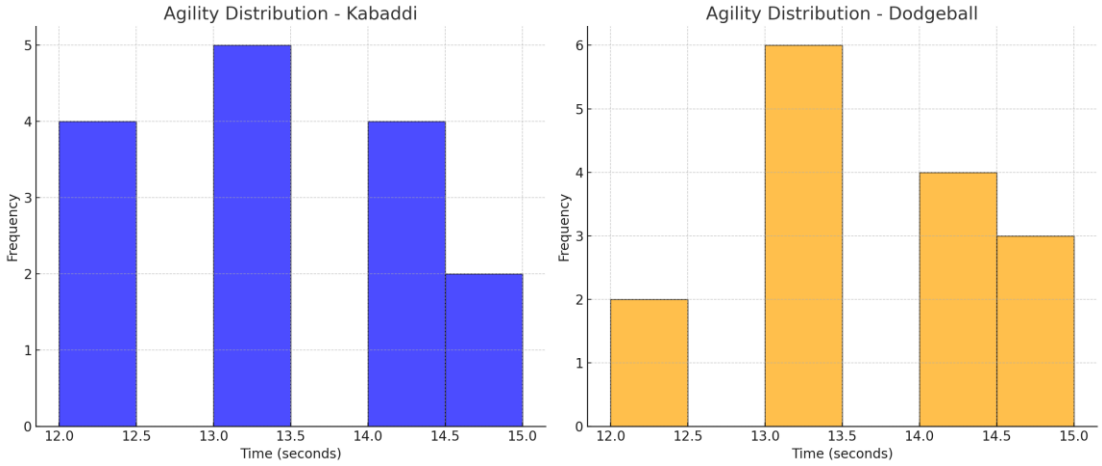
Standard Deviation-0.99 sec

T-Test

T-statistic- 0.72

P-value-0.476

At standard significance levels (eg 0.05) the p-value indicates that there is no statistically significant difference between the agility times for kabaddi and Dodgeball.



Here are histograms representing the agility distribution for Kabaddi and Dodgeball

- Left Plot (Kabaddi)- Shows the frequency of agility timings in seconds for Kabaddi.
- Right Plot (Dodgeball)- Shows the frequency of agility timings in seconds for Dodgeball.

Discussion of Hypothesis

According to the research hypothesis, there would be no discernible differences in motor fitness between Dodgeball and Kabaddi players from difference districts. Since the research hypothesis's statement and the findings are consistent, the hypothesis was approved.

Discussion of Findings

The results pertaining to speed, It was discovered that players of Kabaddi and Dodgeball did not significantly differ in speed. Kabaddi players are just as fast as dodgeball players. There is no discernible difference in the agility of Dodgeball and Kabaddi players, Kabaddi players have the same level of agility as dodgeball players.

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