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A COMPARATIVE STUDY ON STRENGTH, AGILITY, AND DYNAMIC BALANCE BETWEEN KABADDI AND HANDBALL PLAYERS

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ABSTRACT

The purpose of the present study was to compare selected physical fitness components, namely Strength, Agility, and Dynamic Balance, between Kabaddi and Handball players. A total of 40 male players (20 Kabaddi players and 20 Handball players) aged 18–25 years were selected from intercollegiate level Competitions. Standing Broad Jump was used to measure strength, Illinois Agility Test to assess agility, and Star Excursion Balance Test to evaluate dynamic balance. The collected data were analyzed using the independent t-test to determine significant differences between the groups. The level of significance was set at 0.05. The results revealed that Kabaddi players showed significantly better strength and dynamic balance, whereas Handball players demonstrated superior agility. These findings highlight the influence of sport- specific demands on physical fitness components.

Keywords: Kabaddi, Handball, Strength, Agility, Dynamic Balance, Physical Fitness

INTRODUCTION

Modern competitive sports demand high levels of physical fitness, including strength, agility, balance, speed, and endurance. Among these, strength, agility, and dynamic balance play a crucial role in determining athletic performance, especially in contact and team sports.

Kabaddi is a traditional Indian sport characterized by continuous body contact, rapid directional changes, holding breath, and resisting opponents, which demands high muscular strength and balance. On the other hand, Handball is a fast-paced Olympic sport requiring quick movements, sudden accelerations, jumps, throws, and rapid changes in direction, emphasizing agility and coordination.

Although both sports require similar fitness components, the nature and intensity of these components vary. Therefore, a comparative analysis of these physical variables between Kabaddi and Handball players can provide valuable insights for coaches, trainers, and sports scientists in designing sport-specific training programs.

Physical fitness is a fundamental component of sports performance, particularly in competitive team sports where athletes are required to perform complex movements under varying game conditions. Components such as strength, agility, and dynamic balance play a crucial role in enhancing performance, preventing injuries, and ensuring efficient movement execution. The level of these physical attributes often determines an athlete's ability to meet the specific demands of a sport.

Strength is essential for producing force against resistance and is vital for activities such as jumping, pushing, pulling, and maintaining body control during physical contact. Agility refers to the ability to rapidly change direction while maintaining speed and control, which is especially important in fast-paced sports. Dynamic balance, the ability to maintain stability while the body is in

motion, is critical for efficient movement, quick reactions, and injury prevention.

Kabaddi is a traditional Indian contact sport that involves intense physical engagement, rapid movements, tackling, and resisting opponents. Players are required to demonstrate high levels of muscular strength and dynamic balance to perform raids, maintain stability, and counter defensive strategies. In contrast, Handball is an internationally recognized team sport characterized by quick transitions, fast breaks, jumping, throwing, and sudden directional changes, demanding superior agility, coordination, and lower body power.

Although Kabaddi and Handball share common physical fitness requirements, the nature of play and physiological demands differ considerably between the two sports. These differences may result in variations in the development of strength, agility, and dynamic balance among players. Therefore, a comparative analysis of these selected fitness components can provide valuable insights into sport-specific physical characteristics.

The present study aims to compare the strength, agility, and dynamic balance between Kabaddi and Handball players, thereby contributing to a better understanding of how different sporting demands influence physical fitness. The findings of this study may assist coaches, trainers, and sports scientists in designing effective training programs tailored to the specific requirements of each sport.

Objectives of the Study

1. To compare the strength of Kabaddi and Handball players.
2. To compare the agility of Kabaddi and Handball players.
3. To compare the dynamic balance of Kabaddi and Handball players.

Methodology

A total of **40 male players** aged between **18 and 25 years** were selected for the study.

- **20 Kabaddi players**
- **20 Handball players**

All subjects had a minimum of **3 years of playing experience** and had participated at the intercollegiate level.

Variable Type	**Variables**	**Test Used**
Independent Variable	Type of Sport	Kabaddi & Handball
Dependent Variables	Strength	Standing Broad Jump
	Agility	Illinois Agility Test
	Dynamic Balance	Star Excursion Balance Test

Results

Comparison of Strength, Agility, and Dynamic Balance

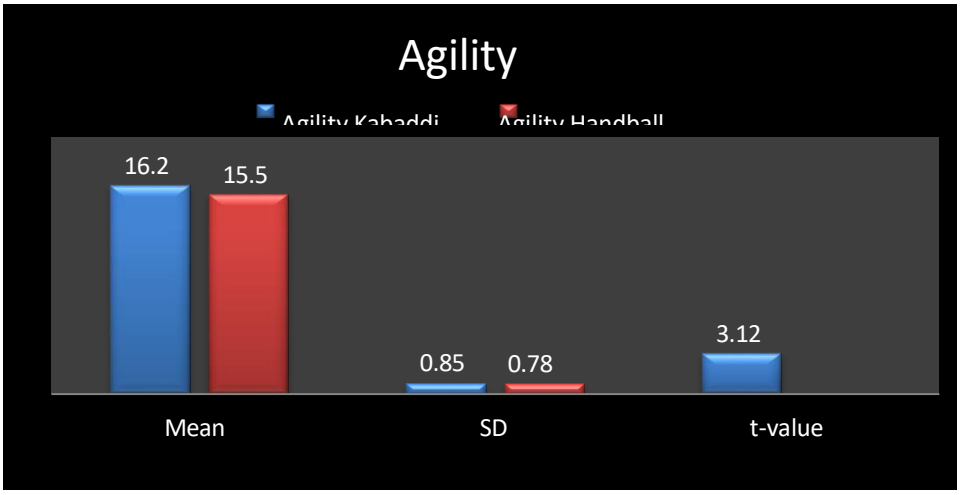


Table -1

Variable	Group	Mean	SD	t-value	Result
Strength	Kabaddi	2.45	0.21	2.87	Significant
	Handball	2.30	0.19	-	-

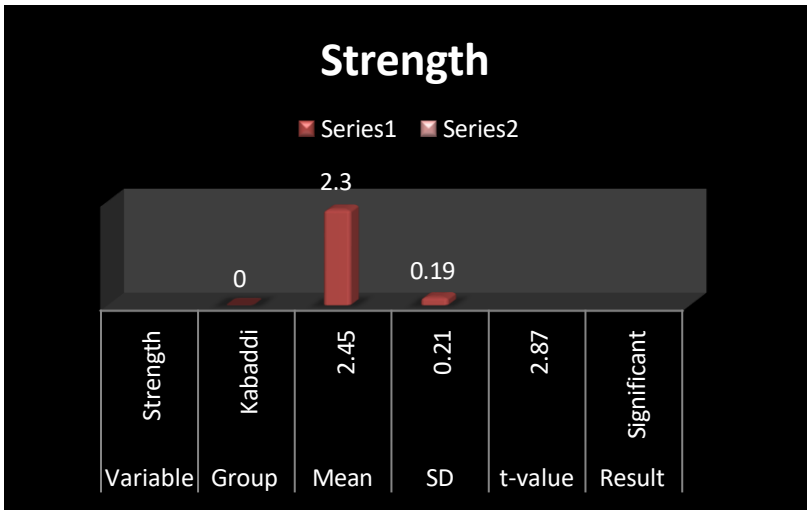
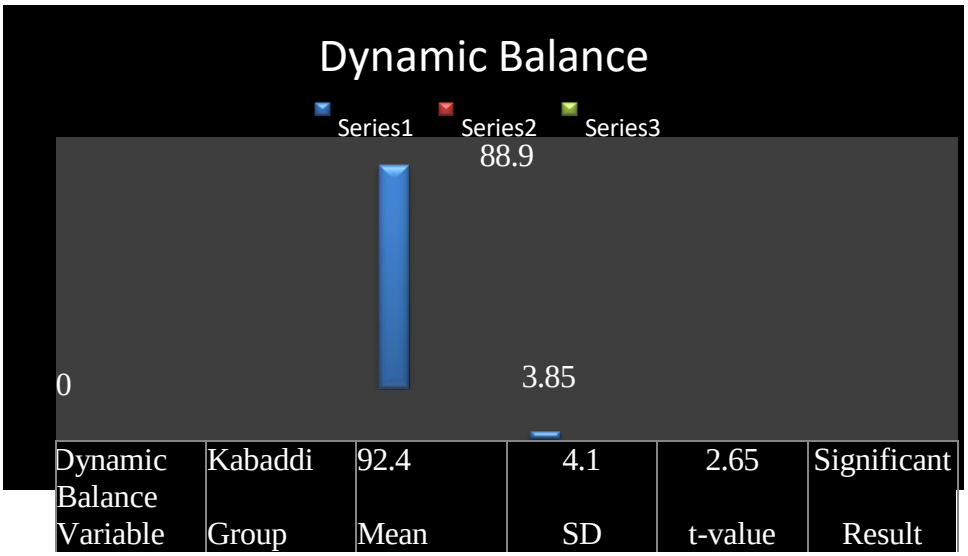


Table -2

Variable	Group	Mean	SD	t-value	Result
Agility	Kabaddi	16.20	0.85	3.12	Significant
	Handball	15.50	0.78	-	-

Table -3

Variable	Group	Mean	SD	t-value	Result
Dynamic Balance	Kabaddi	92.40	4.10	2.65	Significant
	Handball	88.90	3.85	-	-



DISCUSSION

The findings of the study revealed significant differences in all selected variables between Kabaddi and Handball players. Kabaddi players showed superior **strength and dynamic balance**, which may be attributed to frequent physical contact, grappling, and defensive manoeuvres involved in the game. These movements require strong lower body muscles and postural control.

Handball players demonstrated better **agility**, likely due to continuous fast breaks, sudden directional changes, and quick foot movements during offensive and defensive play. The sport demands rapid acceleration and deceleration, enhancing agility levels.The results confirm that **sport-specific training and game demands** significantly influence physical fitness components. The purpose of the present study was to compare **strength, agility, and dynamic balance** between Kabaddi and Handball players. The results of the study revealed **significant differences** between the two groups in all the selected physical fitness variables, indicating the influence of sport-specific demands on physical performance.

The findings showed that **Kabaddi player's demonstrated superior strength** compared to Handball players. This may be attributed to the nature of Kabaddi, which involves frequent body contact, tackling, grappling, and

resisting opponents during raids and defensive play. These activities place continuous demands on the muscular system, particularly the lower body and core muscles, leading to enhanced muscular strength. The results are consistent with earlier studies suggesting that contact sports promote greater strength development due to repeated high-resistance movements.

In contrast, **Handball players exhibited better agility** than Kabaddi players. Handball is a fast-paced game that requires rapid changes of direction, quick acceleration and deceleration, and coordinated footwork during both offensive and defensive situations. Regular exposure to

these movement patterns likely contributes to improved neuromuscular coordination and agility. The superior agility observed among Handball players reflects the dynamic and speed- oriented nature of the sport.

With regard to **dynamic balance**, Kabaddi players showed significantly higher performance compared to Handball players. Kabaddi requires players to maintain stability while pushing, pulling, and countering opponents, often in unstable postures and under physical pressure. These game situations demand continuous postural adjustments and body control, which may enhance dynamic balance over time. Improved balance is also essential in Kabaddi to avoid falling during raids and to execute effective defensive holds.

Overall, the results of the study confirm that **sport-specific training and competition demands** play a crucial role in shaping physical fitness characteristics. The differences observed between Kabaddi and Handball players highlight the need for targeted conditioning programs that emphasize the dominant physical requirements of each sport.

CONCLUSION

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

1. Kabaddi players possess significantly greater **strength** than Handball players.
2. Handball players demonstrate superior **agility** compared to Kabaddi players.
3. Kabaddi players exhibit better **dynamic balance** than Handball players.

The study highlights the importance of incorporating sport-specific training programs to enhance performance.

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