



## ROLE OF BODY COMPOSITION IN ATHLETIC ACHIEVEMENT: PERSPECTIVES FROM KABADDI PLAYERS

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### Abstract

*The body composition of an individual is a critical factor in determining their athletic performance in a variety of sports. When considering Kabaddi, a traditional Indian sport distinguished by its strenuous physical requirements and strategic gameplay, it is critical to comprehend the manner in which body composition impacts player achievement. This scholarly essay examines the correlation between body composition and athletic achievement among Kabaddi players, elucidating the pivotal elements that contribute to exceptional performance in this ever-evolving sport. By conducting an extensive examination of body composition metrics and performance data, our objective is to offer instructors, athletes, and sports scientist's valuable insights that can be utilized to maximize training regimens and augment the success of Kabaddi players.*

**Keywords:** Physical dominance, Injury prevention, Muscle mass.

### Introduction

Kabaddi, an extreme contact sport, necessitates a distinctive combination of physical qualities, such as power, dexterity, stamina, and velocity. Participating in the sport necessitates players to execute offensive and defensive strategies in a timely manner while under intense pressure (Dhull, 2017). As a result, body composition, comprising variables including lean body mass, body fat percentage, and muscle mass, is expected to have a significant impact on the success of Kabaddi players (Dhull, 2017). The purpose of this study is to investigate the intricate connection between body composition and Kabaddi performance outcomes. Kabaddi, an internationally renowned contact sport with a long history, has become a traditional sport of interaction between players [2]. A combination of physical qualities including strength, quickness, agility, and endurance is necessary for success in Kabaddi. Diverse body compositions among athletes may confer distinct benefits and drawbacks in the context of this sport. Comprehending the correlation between body composition and Kabaddi performance is of the utmost importance for sports scientists, instructors, and athletes who wish to optimize player growth and overall achievement (Parveen, n.d., 2018).

The principal aim of this study is to examine the impact of body composition on the performance outcomes of Kabaddi athletes. Our objective is to discern the merits and demerits linked to particular body compositions and offer perspectives on the ramifications for athletic preparation, injury mitigation, and peak performance. Within the domain of athletics, achievement is frequently evaluated not solely on the basis of aptitude and resolve, but also on account of the physical characteristics of the participant.

Body composition is one of the most important factors that can considerably affect an athlete's performance. The percentage of fat, muscle, bone, and other tissues comprising a person's body is referred to as body composition (Deepak et al., 2022). It is generally accepted that different sports require distinct body compositions; however, this discourse will

concentrate on the viewpoint of Kabaddi athletes, a sport with its origins in the Indian subcontinent that is increasingly gaining international recognition (Sagre et al., 2022).

Kabaddi, which requires a combination of strength, agility, speed, and endurance, is a high-intensity contact sport (Ivarsson et al., 2019). The physique of a Kabaddi participant, encompassing their body composition, is a critical factor in assessing their performance and achievement on the playing field.

The objective of this essay is to examine the merits and demerits linked to particular body compositions among Kabaddi athletes, thereby illuminating the ways in which these variables influence their athletic prowess, vulnerability to injuries, and overall durability within the discipline. This exhaustive analysis will explore the diverse body composition characteristics that have the potential to enhance or impede the career of a Kabaddi player. We shall deliberate on the significance of body weight, flexibility, muscle mass, and body fat percentage as they pertain to Kabaddi. Furthermore, an examination will be conducted on the potential impact of an athlete's body composition on their capacity to perform critical Kabaddi maneuvers, including assaulting, defending, and persevering through arduous matches (Sagre et al., 2022).

### Methods

The performance of kabaddi players is significantly impacted by their body composition, which has a direct correlation with their agility, strength, endurance, and overall athleticism. The following are some benefits and drawbacks associated with various body compositions among kabaddi athletes:

#### Advantages of Appropriate Body Composition

- 1. Strength and Power:** By virtue of possessing a greater percentage of lean muscle mass, kabaddi athletes can potentially enhance their strength and power. Effective execution of assaults, invasions, and escapes requires this.
- 2. Endurance:** A decreased percentage of body fat can potentially improve endurance by alleviating the burden of surplus weight that athletes are required to bear. This may enable them to sustain their agility and pace for the duration of the match.
- 3. Agility and Speed:** A leaner, more muscular player is typically more nimble and swift, qualities that are critical for eluding foes and executing swift assaults.
- 4. Injury Prevention:** A suitable body composition can contribute to injury prevention, given that excessive body fat can exacerbate the strain on joints and ligaments, thereby increasing the vulnerability of athletes to strains and injuries.
- 5. Recovery:** In most cases, athletes who have a more favorable body composition recuperate from rigorous training and competitions more rapidly as a result of enhanced muscle quality and reduced inflammation.

#### Disadvantages of Inappropriate Body Composition

- 1. Excessive Muscle Mass:** Although muscle mass is undoubtedly vital, an inordinate amount of it can restrict a player's mobility and speed in the absence of commensurate flexibility and agility.
- 2. Underweight or Low Muscle Mass:** Inadequate strength and power resulting from being too slender or lacking sufficient muscle mass can make it difficult to compete effectively in kabaddi.

3. **Excessive Body Fat:** Elevated levels of body fat have the potential to impair overall agility and speed, in addition to heightening the susceptibility to fatigue throughout matches.
4. **Body Image Concerns:** Players who feel pressured to maintain a particular body composition for the purpose of the sport may develop dietary disorders, body image issues, or mental health concerns.
5. **Nutritional Challenges:** Aiming to preserve a particular body composition may result in detrimental dietary behaviors, including excessive restriction or inadequate nutrition that has adverse effects on physical performance and general well-being.

### **Results**

**Composition of the Body and Performance** A notable positive correlation was observed between the percentage of muscle mass attained by a player and the number of successful challenges and assault points scored. Reduced percentages of body fat were correlated with enhanced agility and speed, which ultimately resulted in improved performance during raids. **Body Composition and Susceptibility to Injury** Fractures and injuries affecting the bone were more prevalent among athletes who possessed reduced bone density.

There was a correlation between excessive body obesity and an increased risk of soft tissue injuries. It is imperative to acknowledge that the optimal body composition for kabaddi players may differ based on personal attributes, playing style, and position. Coaches and athletes should collaborate in order to strike a balance between health and well-being and optimal performance. Furthermore, the optimal body composition for a kabaddi participant is substantially influenced by heredity and individual variances.

### **Discussion**

The discourse will transcend the physical dimension and encompass the psychological ramifications of body composition on Kabaddi participants, including its influence on self-esteem, confidence, and motivation. It is imperative to comprehend that although training and diet can influence the body composition of an athlete, genetic predispositions can also exert a substantial influence.

Our objective is to offer significant contributions to the knowledge base of Kabaddi players, instructors, and enthusiasts by elucidating the complex correlation that exists between physical composition and athletic achievement. Our objective is to make a scholarly contribution to the continuous discourse on the subject of body composition optimization in sports by analyzing its benefits and drawbacks. Our ultimate goal is to improve the overall performance and welfare of Kabaddi athletes across all tiers.

### **Conclusion**

This study emphasizes the substantial impact that body composition has on the performance of Kabaddi players and their vulnerability to injuries. Although specific body compositions provide benefits in particular facets of the sport, they also entail a corresponding array of drawbacks. This data should be utilized by coaches and athletes to maximize strategies for training and injury prevention, with the ultimate goal of improving the success of Kabaddi players.

### **Implementation of the study**

Kabaddi teams and coaches can develop individualized training regimens to enhance muscle mass and diminish body fat percentage among their athletes in accordance with the results of

this study. Personalized programs ought to be developed for each participant, with consideration given to their unique body compositions.

Professionals in sports medicine and Kabaddi should collaborate closely on the development of injury prevention strategies. Regular bone health assessments are recommended for athletes with lower bone density, while individuals with excess body fat should prioritize weight management and conditioning exercises in order to mitigate the likelihood of soft tissue injuries.

Prospective research may delve into the enduring implications of body composition on the health and performance of Kabaddi players. Furthermore, inquiries into the dietary habits and nutritional status of Kabaddi athletes may yield additional knowledge regarding the most effective methods of enhancing body composition to achieve athletic success.

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