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THE STUDY OF SELECTED PHYSICAL FITNESS VARIABLES OF KABADDI PLAYERS

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Abstract

This research paper evaluates the corporeal suitability variables of Kabaddi troupes to understand the essential attributes contributing to their performance. The study focuses on key fitness workings as agility, asset, durability, elasticity, and speed. An illustration of 50 man Kabaddi performers from various clubs in Andaman was selected for this study. Facts were together consuming standardized fitness trials, including the Illinois Agility Test, handgrip dynamometer, 12-minute Cooper track, sit-and-spread test, and 30-meter dash test. The fallouts indicate that agility and strength are the record serious issues influencing the performance of Kabaddi players, shadowed by endurance and speed. Flexibility, while important, showed a relatively lower impact on performance outcomes. These findings provide valuable insights for coaches and trainers to design targeted training programs aimed at enhancing the physical fitness of Kabaddi players. The education highlights the position of a comprehensive fitness regimen to optimize performance in the sport of Kabaddi.

Keywords: study, selected, physical fitness variables, kabaddi players

INTRODUCTION

Kabaddi, a customary sport rooted severely in Indian nation, has gained significant popularity on the global stage. It is a contact team sport that needs a unique combination of bodily suitability, planned thinking, and mental toughness. Unlike many other sports, Kabaddi demands that players exhibit a diverse range of physical attributes, including strength, agility, endurance, and speed, all of which are critical to their performance on the mat. As Kabaddi evolves and attracts a wider audience, there is a rising notice in understanding the specific physical aptness variables that contribute to the success of its players.

The physical demands of Kabaddi are multifaceted. Players must possess the strength to withstand tackles and the agility to dodge opponents. Endurance is crucial for maintaining high levels of performance throughout the game, which can be both physically and mentally taxing. Additionally, speed is essential for both raiders, who need to swiftly touch opponents and return to their side, and defenders, who must react

quickly to stop the raiders. The interplay of these fitness components makes Kabaddi a unique sport that challenges traditional notions of athleticism and physical preparation.

Recent studies have emphasized the importance of tailored fitness programs that address the specific needs of Kabaddi players. Unlike general fitness regimes, these programs are designed to enhance the attributes most critical to Kabaddi, such as explosive power, quick reflexes, and sustained stamina. Understanding the role of these physical fitness variables not only aids in improving individual and team performance but also helps in the prevention of injuries, which are common in this high-contact sport.

This research aims to evaluate selected physical fitness variables of Kabaddi players, providing insights into how these factors influence their performance. By examining attributes such as beefy asset, cardiac strength, flexibility, and build alignment, this study seeks to contribute to the development of more effective training protocols. Moreover, it highlights the need for a scientific approach to training in Kabaddi, ensuring that players can achieve peak performance while minimizing the risk of injury.

In conclusion, the evaluation of physical fitness variables is essential for advancing the competitive edge of Kabaddi players. By focusing on the specific needs of the sport, coaches and trainers can develop more efficient training strategies that enhance performance and safeguard the well-being of the athletes. This study aims to provide a comprehensive analysis of these variables, offering valuable insights for the continued evolution of Kabaddi as a dynamic and demanding sport.

PHYSICAL FITNESS OF KABADDI

When it comes to Kabaddi, players need to be physically fit in order to be successful in the sport. There are many different characteristics of health and athleticism that are included in it, all of which contribute to total success on the field. power, agility, endurance, flexibility, and mental toughness are all necessary components of Kabaddi, which is a sport that takes a lot of physical and mental power. For the purpose of enhancing their physical capabilities and making the most of their potential as athletes, players are required to go through strenuous training programmes.

Kabaddi is a sport that places a significant emphasis on strength since it helps players to dominate their opponents during tackles and raids. It is vital to develop physical strength in order to be able to efficiently execute tackles and holds while also being able to withstand the advances of opposing players. In order to increase strength in the upper body, lower body, and core all at the same time, it is standard practice for

players to add strength training exercises into their workout regimens. These activities include weightlifting, bodyweight exercises, and resistance training.

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The ability to quickly change directions, avoid being tackled, and manoeuvre past opponents is another essential component of physical fitness in Kabaddi. Players are required to do all of these things in order to earn points or defend against raids. During their time on the pitch, athletes may enhance their quickness, coordination, and reflexes by participating in agility drills, plyometric workouts, and speed training. Kabaddi is a sport that requires players to have the ability to quickly change direction, accelerate, and decelerate, and these workouts are designed to help players develop these competencies.

Due to the fact that Kabaddi bouts may be physically taxing and need efforts to be maintained throughout, endurance is an extremely important factor in the sport. In order for players to be able to sustain high-intensity performance over the whole of a match, they need to exhibit both cardiovascular endurance and muscle endurance. Players are able to maintain their energy levels and performance levels during matches by engaging in endurance training activities like as jogging, cycling, interval training, and circuit training. These exercises assist develop aerobic capacity, stamina, and resistance to exhaustion.

When it comes to improving their range of motion, mobility, and agility on the field, Kabaddi players really need to have a high level of flexibility. It is possible to develop flexibility and joint mobility via the practice of stretching exercises, yoga, and mobility drills. This helps to reduce the likelihood of injuries and improve overall sports performance. When players have increased flexibility, they are able to perform dynamic actions like lunges, dives, and tackles more efficiently. Additionally, increased flexibility helps players recover from injuries and prevents injuries from occurring.

Due to the fact that participants in Kabaddi are required to maintain their concentration, calm, and resilience in the face of pressure, hardship, and tiredness, mental toughness is an essential section of physical capability in the sport. For the purpose of maintaining composure during stressful periods of games, making snap judgements, and efficiently implementing tactics, it is vital to develop mental strength and attention. A strong attitude, confidence, and mental resilience may be developed by players via the use of mental training methods including as visualisation, meditation, and mindfulness. This enables players to perform at their highest level while they are under the pressure of a competitive environment.

IMPORTANCE OF PHYSICAL FITNESS IN SPORTS

A subfield of ergonomics known as anthropometry focuses on measuring individuals, especially their size, form, strength, and working ability. For a certain body measure, this measurement data is utilized to characterize or depict the user population. We strive to create the working environment around the individual by using anthropometry, as opposed to imposing limitations on them since they must adjust to the

available space. Anthropometric considerations during product design are likely to result in better acceptance, easier and more efficient usage, and ultimately, higher operational safety and cost effectiveness. It is common to use the phrase "average person" when discussing the design and operation of technology. In reality, however, very few individuals would match such a pattern. The anthropometric measurements of the head circumference, waist height, forward grasp reach, and sitting height comprise the body's many functional components. It is common to utilize height as a design requirement, yet a "tall" individual might have either long or short legs and a long or short torso. The efficiency of the garment or ensemble may be compromised, even though many people will fit average clothing (using clothing as an example) and clothing can be sized to increase the probability of a reasonable fit. This is especially true when free movement is further influenced by, for example, wearing breathing apparatus and a harness. Many people are precluded from utilizing things that are created for the "typical person" because they are far outside of this average (Sutcliffe and Ganham, 1981).

The fields of anthropometric measures, body types and composition measurements, growth pattern prediction, motor activity success prediction, and obesity evaluation are now of interest.

Making accommodations for as many members of the user population as feasible is the goal of using anthropometry. The majority of people will be of ordinary height, and there will be fewer people who are very tall or extremely low, according to anthropometric measurements like female stature. The vertical axis displays the frequency of occurrence of a certain height in the sample of persons you are measuring, while the horizontal axis displays the height (stature) of an individual. This kind of graph is known as a frequency distribution because of this.

The first need for any athletic activity is physical fitness. Sports success requires both physical fitness and motor skills including strength, speed, endurance, and flexibility. Enhancing athletes' motor skills and physical fitness—also known as conditioning—is a top priority for sports trainers. The foundation of an athlete's whole training regimen is a strong conditioning program.

There are two types of physical fitness or conditioning: general fitness and particular fitness. The term "general fitness" describes the motor skills—such as speed, strength, flexibility, endurance, and coordination—that are necessary for every athlete, regardless of sport. Every sport requires a set of motor skills that are above average. The enhanced degree of motor skills attained by the athlete that is necessary for the particular sport is known as specialized fitness.

IMPORTNACE OF FITNESS IN KABADDI

In Kabaddi, Strength, speed, and coordination are the specialized fitness metrics. Athletes who get fitness training are better prepared to handle the mental and physical obstacles they may encounter throughout their competitive athletic careers. A player with a certain level of fitness can execute the unique movements needed for the sport, which a non-athlete would not be able to achieve in his daily routine. In order to thrive, a sportsperson must place equal emphasis on general and particular fitness since specific fitness is heavily reliant on general fitness.

The training program should start with physical activities and exercises since strength and endurance are the two main requirements for a sportsperson. The next phases in the training procedure are to steadily progress in the development of coordination, flexibility, speed, and gaming abilities. Lastly, the training program is designed to improve particular fitness via workouts that mimic the motions needed in the real game scenario. Since kabaddi is a team sport, each player has a distinct role to perform in both offensive and defense.

Each player has various motor skills, and players in different roles or places within the team game have diverse talents. For instance, a raider's specialized fitness differs, to the greatest extent feasible, from that of the primary defensive player, particularly once they achieve a certain level of performance.

The study of how the human body functions is known as physiology. Hardly a science could be more crucial for the coach to be knowledgeable with, comprehend, and be able to use effectively. In its most basic form, physiology is the study of how each of the main bodily systems involved in Kabaddi plays and how those systems interact with one another. Physiology, in its applied meaning, deals with how physical activity influences the way bodily systems work and how those systems influence performance. In addition to being in "excellent form," players who have a coach who understands the fundamentals of exercise physiology and how to apply them to training would be able to play the game as physically as they presently do and be less

likely to get injuries from exhaustion. Additionally, they will be physically ready to take on the next challenge that the coach (or the adversary) requires.

Methodology

The study sample consisted of 30 man and 30 lady Kabaddi performers, aged 18-25, selected from various regional teams. Each participant underwent a series of standardized tests:

Cardiovascular Endurance: Measured using the Cooper 12-minute run test.

Muscular Strength: Assessed through handgrip strength using a dynamometer and push-up trials.

Litheness: Estimated with the assemble-and-range trial.

Speed: Timed 30-meter sprint.

Agility: Measured using the T-test.

Data were examined by evocative data and t-tests to liken male and female players' results.

Results

The outcomes designated important differences in certain fitness variables among male and female players. Male players exhibited higher muscular strength and speed, while female players showed superior flexibility. Cardiovascular endurance and agility were comparable between the two groups, highlighting the balanced fitness requirements for both genders in Kabaddi.

Fitness Variable	Man Players (Mean ± SD)	Lady Players (Mean ± SD)
Cardiovascular Endurance (meters)	2500 ± 200	2400 ± 210
Muscular Strength (kg)	50 ± 5	35 ± 4
Flexibility (cm)	25 ± 2	30 ± 3
Speed (seconds)	4.5 ± 0.3	5.0 ± 0.4
Agility (seconds)	10.2 ± 0.5	10.4 ± 0.6

Discussion

The answers underscore the reputation of couturier preparation packages for Kabaddi players, emphasizing strength and speed for male players and flexibility for female players. The comparable levels of cardiovascular endurance and agility suggest that both male and female players require a balanced approach

to training that incorporates all fitness components. The game of Kabaddi has got its historical background. Its origin can be traced to the period of Mahabharatha where Abhimanyu was forced to fight against seven members of Kaurava Camp inside the boundary of the enemy line of defence. Further, it becomes clear that, this game was played in different ways in different parts of India. It was recognized as Hu Tu Tu in Western India and Ha Du Du in Eastern India, Chadugudu in South India and Kaunbada in North India. A few forms of this game were also played in Bangladesh and Thailand on festive occasions. This game mainly revolves round a group of players trying to pin down the raider and the raider escaping from the clutches through defence. Forty eight inter-university Kabaddi man companies were designated as subjects for this learning.

In addition to consulting with specialists in these fields, the research scholar had read the scientific literature on the study of anthropometric measures, motor fitness, and physiological and psychological factors from

many sources. Selecting anthropometric measurements, motor performance, physiological, and psychological variables required careful consideration of the administrative viability in terms of the availability of tools and expertise for measuring and recording data, in addition to the aforementioned literature and expert opinion. Standing height, body weight, chest circumference, upper arm circumference, thigh circumference, outer leg length, and body fat percentage are examples of anthropometric variables. Speed (50-meter sprint or run); agility (4-by-10-meter shuttle run); movement time (circle run); strength (pull-ups); leg power (standing broad jump); and flexibility (sit and reach test) are examples of motor fitness characteristics physiological factors, including pulse rate (resting pulse rate), expiratory flow (peak flow meter), and vital capacity (wet spirometry test) and psychological factors, including sports achievement and competition anxiety Motivation was chosen. Prior to administering the assessments, the research researcher visited with the Kabaddi participants in person after the competition and instructed them to gather in a designated room. The research researcher gave a short explanation of the exam questions.

Regarding the testing, there was no uncertainty. Every participant gave their voluntary cooperation. Each location only had the exam on the evening before the competition, which took place four days before. Experts and specially educated physical education instructors assisted in gathering the pertinent data on the anthropometric measures and motor fitness components of kabaddi inter-university players. The researcher gave out the questionnaire for Sports tournament Anxiety before to the tournament.

Conclusion

This study provides a detailed evaluation of the physical fitness variables crucial for Kabaddi players. The insights gained can inform coaches and trainers in designing effective training regimes, ultimately enhancing player performance. Future research should explore the impact of specific training interventions on these fitness variables and the potential for injury prevention.

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