CHAPTER-1

INTRODUCTION

Play is an instinctive activity, which helps the child to develop physically and intellectually. Play is a joyful, spontaneous and creative activity. In this he holds his fullest expression based largely on competitive nature. Developmental in function, play shapes human personality during formative years. An Infant's play is mostly individualists i.e. a child moves/plays in precious ways in that one in competitive spirit, because adult and dab affair play requires no formal teaching. Children play whatever, whenever they want to play they neither need nor know any rules. An adult and child differ in their play activities. In games and sports, form the bulk of Physical education. Since the revival of Olympic Games more and more emphasis are being placed on the competitive aspects of games and sports. In carrying away from work “indicating an absolute freedom of activity. The major aim of sports is having recreation because competitive sports today are summed in a much broadened prospective than before. Sports in fact is an attitude of mind, for some people it is competitive that means to excel an activity in high standard of performance. Sports are largely individual events such as swimming, athletics, archery, shooting wherein the participant tries to compete against his own previous standards as well defined activities bound by rules and regulations, so that there is constant effort for bettering of standard are perfection in performance of skill. The craze, quest for winning in international sports competition, shame, use of modern technology or identification of exotic infrastructure and nurturance of talent at a very tender
age, stress on every hand, physical training, introduction of exotic infrastructure and equipment have changed the very complication of games and sports especially at the top level. Competitive sports have raised the standard of human efficiency and performance. They have revealed incredible human capacity.

Sports are an important part of just about every society, every country, and every part of our planet. In one way or another, every one is involved in sports or some sort, whether they are playing or watching or just know some one who does either sports are played for fun or for money. A sport consists of a normal physical activity or skill carried out under a publicly agreed set of rules, and with a recreational purpose; for competition, for self-enjoyment, to attain excellence, for the development of skill, or some combination of these. A sport has physical activity, side by side competition, and a scoring system. The difference of purpose is what characterizes sport combined with nation of individual skill or powers.

Nowadays, sports have become a competitive activity in all over the world. Every country shows their supremacy or superiority through by sports competition. The goal of today's competitions in sports is to exhibit one's excellence and to win. There are numerous factors which are responsible for winning a competition. The performance of the sportsman in individual and team games is dependent on various factors like nutrition, skills, physical growth, scientific trainings, and some physiological and biological factors. Like these factors, the percent body fat also play a significant role in an excellent sports performance.
A highly systematized type of physical education, sports and games is basically a product of the modern historical era. Although exercise is fundamentally a large part of physical education, sports and games, a close examination of the lives of people in the previous societies reveals, that exercise alone is not a true representation of such activities, but man has always had a propensity or natural bent for physical education, sports and games. Many of the physical activities which were practiced in highly disorganized forms during the early times have been modified and developed into modern sports and games.

Today, physical education, sports and games in their diversified forms have become a part of the curriculum in schools, colleges and universities. Professionalism has entered sports and games demanding the sportsmen and sportswomen of a very high level of performance. Performance is physical skill, sports and games require a high level of physical or physiological fitness, psychological- mental and emotional fitness. Different activities require different levels of fitness. That is, different activities demand different elements of or components of fitness in varied proportions.

The improvement and performance of physical skills in the field of physical education, sports and games depend upon the various aspects of the individual, such as the physical characteristics, mental characteristics, the emotional set-up etc. The performance also depends upon the personality traits, body build, age, mental age, training age, and so on.

Physical conditioning and training are as important as technical and tactical training for the improvements of skills in general and superior performance, in particular. One of the main objectives of physical education is
the training for improved physical fitness or athletic efficiency, which is the capacity for physical activity and is referred to as the organic vigor or vitality.

This vigor or vitality is demonstrated through physical performance. Therefore, in performance of physical education activities, skills in sports and games, we will have to take into consideration, first, the development of the various components of physical fitness, athletic efficiency or fitness. In other words, the performance in physical skills on the most part depends upon, how the various components of physical fitness or athletic fitness the developed. The different components of various forms of fitness are strength, power, speed, endurance, co-ordination, flexibility, agility, and so on.

Fitness is that state which characterizes the degree to which a person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. Ability to function depends upon the physical, mental, emotional, social, spiritual and cultural components of fitness, all of which are related to each other and the mutually inter dependent.¹

In the above definition, the reference is to a total fitness, which refers to the individual's capacity to survive and live effectively in his environment. When viewed in the light of this definition, physical fitness is a limited phase of total fitness. However, it is one that is basic to other forms of fitness. Physical fitness would include adequate degree of health, posture, physique, proper functioning of vital organs, nutrition and good health habits along with and adequate amount of endurance, strength, flexibility, etc.

It is defined as the work capacity; the total functional capacity to perform some specified task requiring muscular efforts, conditions the individual involved, task to be performed, quality and intensity of effort; one aspect of total fitness; involves sound organic development, motor skill and the capacity to perform physical work with biological efficiency.\(^2\)

Concerned with the present study, athletic activity is important. Athletic fitness or efficiency and athletic activity may be considered in relation to physical fitness, as the components involved in the physical fitness like endurance, strength, flexibility and speed are also involved in athletic ability or athletic efficiency.

**KABADDI**

Kabaddi is a popular game played throughout India. It is also very popular in Japan, Sri Lanka, Bangladesh, Nepal, Malaysia, Thailand, Iran, West Indies and Pakistan. It is a very exciting and thrilling game, played between two teams consisting of seven players in a small flat area measuring 10 meters by 13 meters which is divided by a midline. The game is played for a duration of 40 minutes which is divided into two halves with an interval of 10 minutes in between. Kabaddi is a game of offence and defensive raid is the offence part of the game. The main feature of the game is raiding on the opponent’s court, alternatively by both the team players. The singularity of this game is that the defence is done with team work, whereas, attack is made by only one player against a team. This attack is known as a raid and is completely an individual effort, offensive is sum total or rounding techniques and tactics, where foot

work plays a major role. Since raid is a means to score more points, the offence part of the game is given prime importance in Kabaddi.

The diamonds of Kabaddi game are very discrete movements, frequent changes of pace and direction in small area and execution of skill in quick succession. All these demand by very height motor ability whichever specific to the game and are to be stressed in the training program. As the game calls for variety of qualities and an individual must develop and maintain the abilities which are very much required and are to be tested to reveal one's playing ability.

Kabaddi is aptly known as the "Game of the Masses "due to its popularity, simplicity and the potential to comprehend rules, and public appeal. The game calls for no sophisticated equipment what so ever, which makes it a very popular sport in the developing countries. It is basically an out door sport played on clay court, of late the game is being played on synthetic surface indoors with great success. The duration of the game is 45 minutes for MEN and Junior BOYS with a 5 minutes break in between for the teams to change sides. The duration of the game is 35 minutes with a 5 minutes break in between for WOMEN, GIRLS, Sub-Junior BOYS and Sub-Junior GIRLS.

Kabaddi is a combative team game, played on a rectangular court, either out-doors or indoors with seven players on the ground for each side. Each side takes alternate chances of offence and defense. The basic idea of the game is to score points by raiding into the opponent's court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called "Antis" while the player of the offense is called the "Raider". Kabaddi is perhaps the only
combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a 'Raid'. The ants touched by the raider during the attack are declared 'out' if they do not succeed in catching, the raider before he returns to home court. These players can resume play only when their side scores points against the opposite side during their raiding turn or if the remaining players succeed in catching the opponent's raider. Yoga the Indian science is to control body and mind through meditation and self-control. Plays an integral part of Kabaddi. The raider has to enter the opponent's court chanting the word "Kabaddi" while holding his breath and has to continue to do so until he returns to his home court. This is known as 'Cant', which is closely related to "Pranayama" of yoga. While Pranayama is about withholding breath in order to exercise internal organs, cant is the means to withhold breath with vigorous physical activity. This is perhaps one of the few sports to combine yoga with hectic physical activity.

The game calls for agility, good lung capacity, muscular co-ordination, presence of mind and quick responses. For a single player to take on seven opponents is no mean task, requires dare as well as an ability to concentrate and anticipate the opponent's moves.

Kabaddi is basically an outdoor team game, played in the tropical countries of Asia. The excitement and thrill provided by the game has made it very popular and Kabaddi is rightly called the 'Game of the mass', since spectators totally involve themselves and give the players a great deal of encouragement. The game requires no equipment whatsoever, and the rules of the game are very easy to comprehend. This is the reason for the popularity of
the game in rural areas, since rural youth in India can ill-afford the sophisticated equipment demanded by other sports. Today all over the world physical Educators and Coaches are facing their greatest challenge in handling problems in scientific way i.e. to give their sportsmen proper and progressive guide-lines based on scientific approach which leads to desired results. Since, both physical and physiological traits have been recognized as one of the best means of underlying sportsman's performance and of helping in producing better performance, the physical educators, coaches and sportsmen need an understanding of physical character and the physiology of exercise to becoming increasingly important. When everyone's understanding grows the trial error methods and application of guessing becomes less than adequate in preparing high level sportsmen for competition.

Performance in any sports activity depends to a large extent on physical fitness. Sports trainers concentrate on improving the physical fitness and motor abilities of a player, i.e., speed, strength, endurance, flexibility. Improving the physical fitness of a player is also called sports person. Conditioning or physical fitness is categorized into general and specific fitness.

General fitness refers to the common qualities required for any sports person irrespective of the sport i.e., motor qualities such as strength, endurance, flexibility and coordination ability. Every sport demands motor abilities at various levels above the average. Specific fitness is achieved when a player acquires the required motor ability at the intensified level for the particular sport. For example, specific fitness in kabaddi is with reference to strength, speed and co-ordination. A player must be physiologically and
psychologically fit to make a good sports person. Physical fitness training will enable the player withstand the stress and strain of a competitive sport without adversely affecting him physiologically or psychologically. It is only with specific fitness that a player can perform the unusual movements which an average person (non sports person) may not in the normal every day course, require to perform. However, the basis of specific fitness lays in general fitness and the player has to improve both the categories of fitness to succeed.³

**ORIGIN OF KABADDI GAME**

The sport has a long history dating back to pre-historic times. It was probably invented to ward off group attacks by individuals and vice-versa. The game was very popular in the southern part of Asia played in its different forms under different names. A dramatized version of the great Indian epic, the "Mahabharata". has made an analogy of the game to a tight situation faced by Abhimaneu, the heir of ' the Pandava kings when he is surrounded on all sides by the enemy. Buddhist literature speaks of the Gautam Buddha playing Kabaddi for recreation. History also reveals that princes of yore played Kabaddi to display their strength and win their brides!

The game, known as Hu-Tu-Tu in Western India, Ha-Do-Do in Eastern India and Bangladesh, Chedugudu in Southern India and Kaunbada in Northern India, has undergone a sea change through the ages. Modern Kabaddi is a synthesis of the game played in its various forms under different names.

FORMS OF KABADDI

**Amar**: Amar literally means invincible. This is a form of Kabaddi, which is played based on points scored by both sides. The play field has no specific measurements and nine to eleven players constitute each of the teams. In this form of Kabaddi, there is no 'out' and 'revival' system or 'Iona' but time is the deciding factor. The main advantage of this form of the game is that tile players remain in the court through out the match and are able to give their best performance.

**Gemini**: This form of Kabaddi is played with nine players on either side, in a play-field of no specific measurements. The principle characteristic of this form of Kabaddi is that a player who is put out has to remain out until all his team members are put out. The team that is successful in putting out all the players of the opponent's side secures a point. This is akin to the present system of 'Lona'. After all the players are put out, the team is revived and the game continues. The game continues until five or seven 'Lona' are secured. The game has no fixed time. The main disadvantage of this form of Kabaddi is that the player is not in position to give his best performance since he is likely to remain out for the better part of the match until a Iona is scored.

**Sanjeevant**: This form of Kabaddi is the closest to the present game. In this form of Kabaddi, players are put out and revived and the game lasts for 40 minutes with a 5-minute break in between. The team consists of nine players on each side. The team that puts out all the players on the opponent's side scores four extra points for a 'Iona'.

The winning team is the one that scores the maximum number of points at the end of 40 minutes. The play field is bigger in this form of
Kabaddi and the 'cant' was different in various regions. Modern Kabaddi resembles this form of Kabaddi a great deal especially with regard to 'out and revival system' and 'Iona'. The present form of Kabaddi is a synthesis of all these forms of Kabaddi with a good number of changes in the rules and regulations.

**HISTORY OF KABADDI GAME**

Kabaddi is basically a combative sport, with seven players on each side; played for a period of 40 minutes with a 5 minutes break (20-5-20). The core idea of the game is to score points by raiding into the opponent's court and touching as many defense players as possible without getting caught on a single breath. One player, chanting Kabaddi!!! Kabaddi!!!! Kabaddi!!!! Charges into the opponent court and try to touch the opponent closest to him, while the seven opponents make maneuvers to catch the attacker. This is Kabaddi, the match of one against seven, known as the game of struggle.

The players on the defensive side are called “Antis” while the player of the offence is called the “Raider”. The attack in Kabaddi is known as a ‘Raid’. The antis touched by the raider during the attack are declared ‘out’ if they do not succeed in catching the raider before he returns to home court. These players can resume play only when their side scores points against the opposite side during their raiding turn or if the remaining players succeed in catching the opponent's raider.

The origin of the game dates back to pre-historic times played in different forms. The modern Kabaddi game was played all over India and some parts of South Asia from 1930. The first known framework of the rules of Kabaddi as an indigenous sport of India was prepared in Maharashtra in the
year 1921 for Kabaddi competitions on the pattern of Sanjeevani and Gemini in a combined form. Thereafter a committee was constituted in the year 1923, which amended the rules framed in 1921. The amended rules were applied during the All India Kabaddi Tournament organized in 1923.

The All India Kabaddi Federation was formed in the year 1950 to look after the promotion of the game and the Senior National championship started from the year 1952. The new body, Amateur Kabaddi Federation of India (AKFI) came into existence from the year 1972 affiliated to Indian Olympic Association (IOA) with a view to popularize the game in India and neighboring countries of Asia. After formation of this body, Kabaddi took a new shape and National level competitions started for Junior and Sub-junior boys and girls also.

The 1st Asian Kabaddi Championship was held in the year 1980 and was included as a demonstration game in the 9th Asian Games, New Delhi in the year 1982. The game was included in the South Asian Federation (SAF) games from the year 1984 at Dacca, Bangladesh. Kabaddi was included as a discipline in the 11th Asian Games Beijing 1990 and India won the Gold Medal of Kabaddi in the 11th Asian Games Beijing 1990. India is the reigning champion in the succeeding Asian Games held in Hiroshima 1994, Bangkok 1998, Busan 2002, Doha 2006 and China 2010 recently at and created history in Indian sports by winning five consecutive Gold medals in the Asian Games so far. 1st World Cup of Kabaddi was organised in 2004 at Mumbai (India), India won the First World Cup by beating Iran in the finals. The second World Cup was held Panvel (India) in 2007 and India once again became Champion. The First Asian Women Championship was held at Hyderabad in 2005 and
India won the Gold Medal. Women Kabaddi was included for the first time in the South Asian Games held in Colombo, Sri Lanka in 2006.

For the first time in the history of Asian Games a separate indoor stadium was built for Kabaddi competition and training in the 15th Asian Games held at Doha [Qatar] 2006. The training/ warming up courts and main field of play was made up of puzzle mats of Korean make. The main field of play was equipped with a giant public screen, which displayed replays and the running score. Two ‘Tissot’ plasma scoreboards, info terminals for the presentation crew, the ceremony crew and the media were provided.

The 15th Asian Games Doha provided an excellent opportunity to showcase Kabaddi to the Europeans and Australians who were in great numbers in organizing the Asian Games. A good many spectators belonging to European countries, USA, Australia, Western Asia, and the Mediterranean countries, who saw the Game for the first time, were very impressed with the simple rules and the thrill of the sport and desired to introduce the sport in their countries. This has given Kabaddi very good and positive exposure for its future development in the continents of Europe, USA, Australia and Africa.

Kabaddi was included in the 2nd Asian Indoor games held at Macau from 25th October to 3rd November 2007. Once again India Won the Gold Medal. Kabaddi Men and Women both was included in 1st Asian Beach Games being hosted by Indonesia in 2008 at Bali, India Won Both the Gold Medals of Men and Women Events. There has been a gradual but significant change in the trends of the game since the past 50 years. What was once considered a game of brawn is not so now. The introduction of mats, shoes, new techniques and changes in rules has made the sport more interesting and advantageous
to skilled players who are now able to defeat heavier players with better skills and techniques.

DEVELOPMENT OF THE GAME

There is a gradual but marked change in the style of the game during the past fifty years. What was once considered a game of brawn is not so now. The introduction of more techniques to the came has made it relatively easier for a player with more skill than weight to score points against better-built opponents.

Over the years, the game's pattern changed along with the rules and the size of the playfield. The concept of Kabaddi as an Indigenous Game of India first came up during the year 1921 in Maharashtra, when a certain framework of rules was prepared and the game was played on the pattern of Sanjeevani and Gemini in a combined form. A special committee was constituted in 1923 which amended the rules. These rules were applied in an All India Kabaddi Tournament organized during the same year.

It was the Hanuman Vyayam Prasarak Mandal, Amaravati, Maharashtra, which took up the task of organizing and developing Kabaddi in a more systematic and scientific manner. This Institution believes in the maxim "A healthy mind in a healthy body", and has been doing yeoman's service to sports in general and indigenous games in particular, over the years. During the years 1927 to 1952, Kabaddi was played in different parts of the country based on rules framed by the various clubs and organizing committees, which mushroomed and gained in prominence. There were frequent disputes over the rules during tournaments owing to lack of uniformity in the rules and regulations followed in various parts of the country. In Maharashtra, the
pioneering state to regularize the game and bring it to the National platform, Kabaddi, which was known as "Hu-Tu-Tu", was played according to the rules framed by the Deccan Gymkhana from 1928 to 1938.

The introduction of the game to the Inter-national arena as a demonstration game in the 1936 Berlin Olympics led to the inclusion of Kabaddi in the list of priority games of the Indian Olympic Committee, in the year 1940. Thereafter, Inter-provincial Kabaddi tournaments were organized biannually. The matches at the district and provincial level were played as per the rules framed by the Akhil Maharashtra Sharirik Shikshan Mandal, while the Inter-Provincial Championships were based on Buck's Rules of Games and Sports, published by Mr. H.C Buck, Founder principal of YMCA College of Physical Education, Madras.

The Indian Olympic Games were re-named as National Games in the year 1952 and are since being organized once in a year instead of biannually. The All India Kabaddi Federation, which was formed in the year 1952 appointed a 'Rules Sub-Committee' with the express purpose of laying down standard rules and regulations to be followed by affiliated provincial units all over the country. A new set of rules were framed by the Rules Sub-Committee based on Buck's Rules and the game rules followed till then by the Akhil Maharashtra Sharirik Shikshan Mandal.

The game's pattern also changed over the years, along with the standardization of rules and regulations. Some of the major changes in the game's pattern include the introduction of the Unproductive Raid Rule, Time Out system, Bonus Line Game, etc that did not change the basic structure of the game but all the same had a lot of impact.
Unproductive Raid Rule: The Asian Amateur Kabaddi Federation at the behest of certain member countries introduced the Unproductive Raid Rule. The 'rule reads as follows. "If in three consecutive raids by a side no point is scored by either side, the opponent's will get a point. The referee shall immediately declare such point which is to be recorded in the running score sheet by cutting the number with a cross mark "X". The counts of such unproductive raids shall not be carried over to the game after 'Lona', recess at half time and to extra time."[Rules of Kabaddi Asian Amateur Kabaddi Federation 1980]

As per the rule, in case no point is scored in three consecutive raids, the opponent's side automatically gains a point. The referee is to immediately declare the point which shall be recorded in the running score sheet with the mark 'X'. Though the score sheets records the scoring of a point, there is to be no revival of teammates as in the normal points scored. The idea behind the introduction of this rule was to make sure that the raider went all out to struggle and gain points in order to avoid the risk of giving away points to the opponent's side through three consecutive unproductive raids. However, it did not work out the way in which it was visualized, since the game lost some of its thrill and the scores did not reflect the true picture of the team's performance.

After practicing the rule for three years in the National as well as Inter-National level, it was unanimously decided by the Asian Amateur Kabaddi Federation and the Amateur Kabaddi federation of India to cancel the rule. Now the rule is not in force at either the National or the inter-National level anymore.
The time out system has recently been introduced in the Asian and Amateur Kabaddi Federation of India rules. Hither to, "Time Out" was allowed when called by the captain of the team, with the permission of the referee, only in the event of injury of a player, not exceeding two minutes. Even in such an instance, no player on either side was allowed to leave the court without the permission of the referee.

The Time Out Rule reads:

"Each team shall be allowed to take two 'time out' of 30 seconds in each half. Such time out may be called by the captain/coach of the team with the permission of the referee."

- During the time out, team shall not leave the ground. Any violation is committed by the player/s/coach; a technical point shall be awarded to the opponent team.

- Official time out: In the event of any injury to a player only, the referee shall call such time out. Such time out should not exceed two minutes."

The bonus line rule came into existence in the year 1978 as an outcome of some experiments conducted during a workshop organized by the Amateur Kabaddi Federation of India in the year 1976, to make the game more interesting. The Bonus Line is a line drawn parallel to the baulk line at a distance of one meter from the baulk line towards the end line.

The rule reads:

- Bon-us Line should be drawn at a distance of one meter from the baulk line towards the end lines.
• One point shall be awarded to the raider when he completely crosses the Bonus Line. If the raider is caught, he shall be declared out and the opponent shall be awarded one point. One point shall also be awarded to the raider for having crossed the bonus line first. In this situation, the raider shall be awarded first point.

• The bonus line will be applicable when there are minimum six players in the court. The bonus point shall be awarded by the Referee/Umpire after the completion of the raid, by showing thumb upwards towards the side which scores.

• There shall be no revival for bonus point.

• The bonus point shall be marked in the shape of a triangle in the running score.

• If the raider after crossing the bonus line reaches home court safely touching one or more antis he will be awarded one bonus point in addition to the numbers.”

It is further clarified that crossing the Bonus Line is not compulsory and this rule applies only when the raider crosses the bonus line before the struggle. This rule makes the game more interesting since agile raiders can score points for their side without the risk of a struggle. A good defense is required to counter the raider’s move to cross the Bonus Line and as such, the defense will concentrate on the Bonus Line, which will make the playing area smaller and increase the game’s tempo. Without the Bonus Line, it is possible that both sides begin very cautiously and end up with zero or single digit points, which makes the match very dull and slow. It is also possible that neither the raider nor the defense will take any risk, which will make the result
of the match very predictable. This rule is being followed in the Kabaddi tournaments at all levels in India and efforts are being made to include the rule at the Asian Level. In the meeting of the Asian Amateur Kabaddi Federation held during the SAF Games at Katmandu, Nepal 1999, it was decided that the Bonus Line Rule be adopted by all member countries on an experimental basis for competitions at National level so as to consider the inclusion of the rule in the next Asian Games 2002.

Sports is an athletic activity requiring skill or physical prowess and often of a competitive nature as racing. The sports of the modern day has become more competitive oriented and exhibition of high skill to achieve higher performance in any field of activity. The competition has lead to the research and innovation apart form skill, coaching, training and execution of skill and techniques. The biological and anatomical chemistry of the sportsmen place a very important role. The performance in any sports not just depends upon the infrastructure facilities, advanced training and coaching but also the physical, physiological, psychological characteristics determines one's potential in given activity. The anatomical structure of an individual is a unique an important basic requirement to become a sports man, Even to the extend sports demands certain unique anatomical structure to except in given competition. The anatomical characteristics such as height, weight, body mass, body fat, arm length, leg length, etc., place an important role in the execution of skill and training higher performance. The basic biological law is “Structure decides the function and function determines the structure”. The structure is important concept to be noted in the field of physical education and sports sciences research.
The Kabaddi Federation of India (KFI) was founded in 1950, and it compiled a standard set of rules. The Amateur Kabaddi Federation of India (AKFI) was founded in 1973. The AKFI has given new shape to the rules and it has also the rights of modification in the rules. The Asian Kabaddi Federation was founded under the chairmanship of Sharad Pawar. The Governing body of Kabaddi in Asia is Asian Kabaddi Federation (AKF) headed by Mr. Janardan Singh Gehlot. AKF is affiliated to Olympic Council of Asia. Parent body to regulate the game at international level is International Kabaddi Federation (IKF). In 1979, a return test between Bangladesh and India was held at different places of India including Mumbai, Hyderabad, and Punjab. The Asian Kabaddi Championship was successfully arranged in 1980 and India emerged as the champion and Bangladesh as the runners-up. Bangladesh became runners-up again in 1985 in Asian Kabaddi Championship held in Jaipur, India. The other teams included in the tournament were Nepal, Malaysia and Japan. Kabaddi was played as a demonstration sport at the 1936 Summer Olympics in Berlin. The game was included for the first time in Asian Games held in Beijing in 1990. Eight countries took part including India, China, Japan, Malaysia, Sri Lanka, Pakistan and Bangladesh. India won the gold medal and has since won gold at the following three Asian Games in Hiroshima in 1994, Bangkok in 1998, Busan in 2002, in Doha 2006 and in China 2010. Kabaddi is popular throughout South Asia, and has also spread to Southeast Asia, Japan and Iran. It is the national game of Bangladesh where it is known as Ha?u?u. It is the state game of Punjab, Karnataka, Tamil Nadu, Andhra Pradesh, and Maharashtra in India. It is played by the British Army for fun, to keep fit and as an enticement to recruit soldiers from the British Asian community. The game is also played extensively in the small town of Peebles in the Scottish Borders, mainly in the local primary school playground, where it is favoured to more traditional childhood past-times such as 'British bulldogs' and 'Kiss, Cuddle and Torture'.
MODEL OF KABADDI COURT
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Field Measurements</th>
<th>Men and Junior Boys (Mts.)</th>
<th>Women and Junior Girls (Mts.)</th>
<th>Sub Junior Boys and Girls (Mts.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Side Lines (AB, CD, EF and GH)</td>
<td>13</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>End Line (AC, BD)</td>
<td>10</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3.</td>
<td>Lobby (AE, BF, CG, DH)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Baulk Line (from Mid Line) (LN, KM, LR, KQ)</td>
<td>3.75</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Baulk Line (RQ, MN)</td>
<td>8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Mid-Line (IJ)</td>
<td>10</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>7.</td>
<td>Bonus Line (TS, PO) From Baulk Line RT, QS, MO, NP</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>Bonus Line (MN, ST)</td>
<td>8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>9.</td>
<td>Court (Each half of the playfield divided by the mid line)</td>
<td>6.5×8</td>
<td>6×6</td>
<td>5.5×6</td>
</tr>
<tr>
<td>10.</td>
<td>Sitting Block (2 meters away from mid line)</td>
<td>8×1</td>
<td>6×1</td>
<td>6×1</td>
</tr>
<tr>
<td>11.</td>
<td>Space surrounding (the play field divided by the mid line)</td>
<td>4 meters from side lines and end lines</td>
<td>4 meters from side lines and end lines</td>
<td>4 meters from side lines and end lines</td>
</tr>
<tr>
<td></td>
<td>Duration of the Match</td>
<td>20.05.20 Minutes</td>
<td>15.05.15 Minutes</td>
<td>15.05.15 Minutes</td>
</tr>
</tbody>
</table>
Slowly kabaddi the thrilling game occupying the heart and soul of the Asian countries and world sports persons. Experimented and succeeded conducting game indoor and on synthetic surface. The following are the results Asian Federation game and Asian games:

**Men**

<table>
<thead>
<tr>
<th>Year</th>
<th>Venue</th>
<th>Winner</th>
<th>Runner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>Dacca</td>
<td>India</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>1987</td>
<td>Calcutta</td>
<td>India</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>1988</td>
<td>Islamabad</td>
<td>India</td>
<td>Pakistan</td>
</tr>
<tr>
<td>1990</td>
<td>Beijing</td>
<td>India</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>1991</td>
<td>Colombo</td>
<td>India</td>
<td>Japan</td>
</tr>
<tr>
<td>1993</td>
<td>Dacca</td>
<td>Pakistan</td>
<td>India</td>
</tr>
<tr>
<td>1994</td>
<td>Hiroshima</td>
<td>India</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>1998</td>
<td>Bangkok</td>
<td>India</td>
<td>Pakistan</td>
</tr>
<tr>
<td>2002</td>
<td>Busan, Korea</td>
<td>India</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>2006</td>
<td>Doha</td>
<td>India</td>
<td>Pakistan</td>
</tr>
<tr>
<td>2010</td>
<td>Guangzhou, China</td>
<td>India</td>
<td>Iran</td>
</tr>
</tbody>
</table>

**2010 Results of Asian Federation Game (Women):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Final match</th>
<th>Winner</th>
<th>Runner</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Guangzhou (China)</td>
<td>India</td>
<td>Thailand</td>
</tr>
</tbody>
</table>
**Kabaddi World Cup**

**Men**: The Kabaddi World Cup was first played in 2004 and then in 2007 and 2010. So far India is the unbeaten champion in Kabaddi World Cup. Iran is the next most successful nation being twice runner-up. Pakistan was the runner-up in 2010.

**Results of Kabaddi World Cup (Men):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Final match</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>India vs. Iran (55 – 27)</td>
<td>India</td>
</tr>
<tr>
<td>2007</td>
<td>India vs. Iran(29 – 19)</td>
<td>India</td>
</tr>
<tr>
<td>2010</td>
<td>India vs. Pakistan(58 – 24)</td>
<td>India</td>
</tr>
<tr>
<td>2011</td>
<td>India vs. Canada(59 – 25)</td>
<td>India</td>
</tr>
</tbody>
</table>

**Women**: The Women’s Kabaddi World Cup was first played in 2012 in Patna, Bihar, India. India won the championship defeating Iran in the finals.

**Results of Kabaddi World Cup (Women):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Final match</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>India vs. Iran(25 – 19)</td>
<td>India</td>
</tr>
</tbody>
</table>

**Importance of Anthropometry in sports**

Anthropometry means the measurement of man, whether living or dead, and consists of primarily in the measurement of the dimensions of the body. Anthropometry is the measurements of man provide scientific method and observation on the living man and the skeleton. Anthropometry represents the typical and traditional tool of human biology, physical anthropology and auxology, Recently It has taken a strong bonded
relationship with physical education and sports sciences. Quetelet a French Mathematician was the first known person to use the term “Anthropometric or Anthropometry”. The measurement of man dates back to ancient civilizations and the oldest form of measurement. It was of interest in ancient India and later Egypt, where study was undertaken to find one part of the body which would predictor become a common measurement of all body part. In Egypt for example, the length of the middle finger was considered to a common measure of all the body proportion. For instance, five finger lengths to the knee. Ten to the pubic arch and eight the lengths of the arm reach.

Anthropometric measurements are a must in monitoring the rate of growth of different body parts in classification of body types and also in identifying the talents according to the requirements of the support. In recent days a special concern is given to this factor in achieving elite performance. Anthropometric measurements are also essential for grouping the pupils and allotting physical activities to individual students according to their fitness, strength, stamina, Endurance, Agility, Flexibility and speed. Anthropometry involves the use of carefully defined body landmarks for measurements, specific subject positioning and rigidity standardized techniques of measurement. They are generally divided into those of Weight; Length and Height; Breadth; Widths or Depths. Circumference or Girth; curvatures or Arcs and Soft tissue.

---

There are numerous factors which are responsible for the performance of a sports person. The Physique and body composition, including the size, shape and form are known to play a significant role in this regard. The performance of the sportsman in any game of event depends on skill training, motivation and on various other factors of physiological and biomechanical nature, age, sex, physical growth have also been noticed to influence a person's capacity for physical activities. Various anthropometric measurements and indices and their bearing on motor skill performance have been extensively studied. Thus sports anthropometry has developed as a special branch, not only as a parameter of selective diagnostic procedure but also as a performance prediction tool.  

Anthropometric factors influencing strength and motor performance are viewed in terms of overall body size, body proportions, Physique and Sun. Today there are now ever new physical education who identify themselves as specialists in this area of measurement. The anthropometrics research of today usually focus their attention on elite athletes and dancers; these researchers have added body fat measures to the traditional measures of height, weight and girth.

As pointed out by Singh individuals differ significantly in their basic traits and while participation in physical activities will not appreciably change there maturity, body size and physique type. These individual differences will drastically influence physical performance. Thus these traits should be

---

considered in judging an individual’s potentialities for participation in physical activities of different types.

Physical educationists have long realized that the performance of an individual is greatly influenced by such factors as height, weight and body structure. The performance diagnosis can only be done through definite knowledge and understanding of physical characteristics and their relationship to the complex movement mechanics. It is logical to assure that the anthropometric measurements have got definite and most important role in performance.

The physique may be useful in choosing a suitable physical activity for an individual because if the fact that according to physique they have many mechanical advantages e.g. longer legs are helpful to take necessary jump without the loss of time.\(^\text{10}\)

Anthropometric measurements were the central concern of the first phase of the scientific era of measurement, which begin in 1860’s. Current interest in anthropometric measurement focuses on three areas, growth measures, body types and body composition. The use of such measures include classification, prediction of growth patterns and prediction of success in motor activities as well as assessment of obesity.\(^\text{11}\)

The measurement of structure and proportion of body is called anthropometry. It has wide application as one of the essential parameters constituting the selective diagnostics of any game and sport. Measurement of


body size included such descriptive information as height, weight and body surface area, while measures of body proportion describe the relationship between height and weight and among lengths, width and circumferences of various body segments. It has been found that top players in same sports tend to have those proportions that bio-mechanically aid the particular performance required.12

Anthropometric measurements have revealed correlation between body structure physical characteristics and sports capabilities. This knowledge of mechanical correlation permits sports physicians to evaluate and to predict performance potentialities on the basis of physical characteristics and specific requirements of the game.13

Scientists and physiologists have held the view that anthropometric measurements and physical components of an athlete have a lot to do with his performance. More than the technique and characteristics help him for better performance. The research findings show that a high level of technique perfection alone cannot produce success in competitive sports.14 Various anthropometric measurements and indices and their bearing on motor skill performance have been extensively studied. “Thus sports anthropometry has developed as a special branch not only as a parameter of selective diagnostic procedure but also as a performance prediction too.”15

---

13 Ibid., P.161.
Anthropometric is that branch of anthropology that is concerned with the measurements of human body. The definition has been confined to the kind of measurement commonly used in associated physical performance with body build.\textsuperscript{16} Anthropometry involves the measurements of external parts of the body including body diameters; body circumferences and somatotypes. Body diameters are measured by the use of a broad bled.

Balsevitch and Siris\textsuperscript{17} have pointed out that the Russians are strongly guided by the anthropometric data derived from statistics of a large number of world champions. The knowledge of this science is easy to formulate but too difficult to practice. The system is quite complicated in this regard. However a theoretical base-line, once formulated can help to add to the knowledge by further analysis and interpretation and therefore it seems reasonable to work on this system. From the above discussion it is quite obvious that attempts have been made to predict physical performance or ability based in selected anthropometrical characteristics. So far it has not been established.

The anatomical structure of the body, like the muscular tending us attachment to the bones, the length of the bones and other anthropometrical measurements are responsible for the mechanical leverage, which is advantageous, or disadvantageous for a particular sport. No matter, how much of training may be given to an individual whose anatomical structure does not suit the particular sport in which he competes, he can not excel in that sport


when compared to an player whose anatomical structure is suited for that particular sport. In addition to this “Sportsmen are born, not made.” Many physiological research studies have shown that the performance of an sportsman depends mostly upon the number of fast twitch fibers present in the active muscles. Since the performance of both Volleyball and basketball players is determined to a great extent by the number of fast twitch fibers, it aroused the curiosity of the researcher to find out if there are any specific anthropometrical characteristics which differentiate between the volleyball and basketball players. The enhancement of the performance depends a great deal on training but the anatomical structure (inherited quality) puts a limit to it. Therefore besides a scientific training it is necessary to consider the various anthropometric variables.

Most sources agree that the human body requires a certain amount of fat for good health. Fat helps regulate body temperature, store energy and cushion and insulate organs. The percentage of body weight that makes up this “essential fat” is around 4% of body weight for men and 10% for women. Beyond that, there is somewhat wide range of what is considered a healthy percentage of body fat.

A person's body is made up of many different components. Some of the major components are bone, muscle, organs and fat. The amount of percentage of the fat component is of great interest to most of us, it is what every body is concerned about when they think about their appearance health, fitness and longevity. The amount of body fat you carry, your body fat percentage makes a difference to your body shape and your health. Your shape is affected by body fat percentage because muscle tissue is more
compact that fat a balloon containing 1 lb of muscle tissue would be smaller than a balloon containing 1 lb fat!

There is general agreement that men with body fat percentages over 25 and women over 35 are over fat and that fat values of over 30 percent in men and 40 percent in women is considered obese. Percentage body fat is the percentage of total body weight that is fat. The average man has 15 to 17% body fat while the average women are between 18 to 22%. Typical scores for elite athletes are 6% to 12% for men and 12% to 20% for women.

The relative importance of fat in the athlete's diet has been undervalued, with potentially harmful effects on immunity as well as endurance performance, according to New York researchers reviewing the effects of diet on immune function in athletes.

It is of great concern, they comment, ‘that many athletes are on low total calorie and low fat diets that result in not only depleted intramuscular fat stores and essential fatty acids, but also deficiencies in many micronutrients. The unavailability of fat to oxidize and spare glycogen and build the immune system leads to reduced exercise performance and increased stress and risk of infection’. While carbohydrate availability is well recognized for its role in immense competency, the role of lipids in the immune response to exercise has been under appreciated. In fact, lipids play a crucial role in building and maintaining the immune system and bolstering it again is the stress of exercise.

Some experts have recommended fat in takes as low as 20% of total calories. But New York researchers believe that endurance athletes could boost their consumption as high as 42% of total intake with beneficial effects of
performance and immune function and with no adverse impact on the risk of heart disease. Today's citizens are less physically fit than their ancestors who lived over a hundred years ago. “Fit” in this context means having good health and an adequate degree of physical activity and their means to total fitness. The concept of total fitness encompasses the whole philosophy of health, the social, emotional and physical condition of the individual. A totally fit individual has the strength, speed, agility, endurance and social and emotional adjustments appropriate to his age. Therefore the present study was undertaken to scientifically investigate the underlying anthropometric characteristics in a wide range of sports activities of competitive nature. It is quite apparent that certain anthropometric characteristics are responsible factor of playing ability of Kabaddi players.

**Motor Fitness**

Sports in the present day have become extremely competitive. Previous records are being broken whenever there is a competition. It is not the more participation or few days' practice that brings an individuals victory, but the continuous hard work of training right from childhood, a strong self determination and certain psychological factors. Individual and team sports have a valuable contribution to make to all who discover the fun, challenge and adventure in playing them such riches are equally available to both the sex.

The last decade has seen a growing interest in physical fitness and its relationship to good health recent significant developments seem to indicate that a new era may be drawing for physical education as the public slowly
becomes aware of the damages of physical deterioration.\textsuperscript{18} Suppleness and agility on the ball can be seen from the angular and uneconomical movements. The need for special training is evinced by the woodenness with which young player's move, because it has become clear by now that all those gymnastic exercises do not increase suppleness and agility on the ball. This can only be achieved through appropriate exercises with the ball. A start has already been made with the basic techniques. These involve total movement in which both the ankle and hip joints are used. While the spine gets a lot of exercise in all the quick turns that have to be made.

The term fitness implies a relation the performed and the individual capabilities to perform it.\textsuperscript{19} A totally fit individual must have the motor ability also. Motor ability is also one of the important aspects for physical education activity. The components at motor ability are speed, explosive power, agility, coordination, strength, endurance etcetera. Motor fitness has been defined as the present acquired and innate ability to perform motor skill of a general or fundamental nature, execution at highly specialized sports or gymnastic techniques.\textsuperscript{20} Motor fitness/ability is the third classification of motor behaviour. Sometimes, it is referred to as general athletic ability. Motor ability is a combination of the innate acquired ability. Motor ability is general in nature and is made up of general abilities, and does not involve highly specialized skills as related in such activity is made up of factors which may be more dynamic and changeable. This seems to imply that motor ability

\begin{flushright}
\textsuperscript{18} Bill Trancred and Geoff Trancred. “\textit{Weight Training for Sport}” (London, Hodder Arnold H&S 1976), P.43.

\textsuperscript{19} Laurence E. Morehouse \textit{Op.cit.}, P.224.

\end{flushright}
status would come about relatively slowly and over a period of time. Improvement would come about and be in proportion not only one's potential but also in the amount of time and practice devoted to activities also, as one approaches his potential, change would come about more slowly.

Motor Fitness refers to the ability of an athlete/player to perform successfully at their sport. The components of motor fitness are (Davis 2000)\textsuperscript{21}

- **Agility**: Agility is the ability to change the direction of the body in an efficient and effective manner and to achieve this you require a combination of:

- **Balance**: The ability to maintain equilibrium when stationary or moving (i.e. not to fall over) through the coordinated actions of our sensory functions (eyes, ears and the proprioceptive organs in our joints); Static Balance - ability to retain the centre of mass above the base of support in a stationary position; Dynamic Balance - ability to maintain balance with body movement

- **Speed**: the ability to move all or part of the body quickly

- **Strength**: the ability of a muscle or muscle group to overcome a resistance

- **Co-ordination**: The ability to control the movement of the body in cooperation with the body’s sensory functions e.g. catching a ball (ball, hand and eye co-ordination)

Motor fitness might be referred to as efficient performance in such basic requirements as running, jumping, dodging, falling, climbing, swimming,

lifting, weights, carrying loads, and enduring sustained effort in a variety of situation

Fitness is that state which characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. Ability to function depends upon the physical, mental, emotional, social and spiritual component of fitness Evelyn L. Schur.

Physical fitness is defined as “a set of attributes that people have or achieved that relates to the ability to perform physical activity” (US DHHS, 1996). In other words, it is more than being able to run a long distance or lift a lot of weight at the gym. Being fit is not defined only by what kind of activity you do, how long you do it, or at what level of intensity? While these are important measures of fitness, they only address single areas. Overall fitness is made up of fine main components cardio respiratory endurance, muscular strength, muscular endurance, Body composition and Flexibility

Thus motor fitness, along with the components of physical fitness includes power, agility and balance. The various components of motor fitness can be understood as follows.

Cardio-vascular endurance is the ability of the body’s circulatory and respiratory systems to supply fuel during sustained physical activity (USDHHS,
Muscular strength is the ability of the muscle to exert force during an activity (USD HHS, 1996) as adapted from Willmore and Castill 1994. Body composition refers to the relative amount of muscle, fat, bone and other vital parts of the body (USDHHS, 1996 as adopted from Corbin and Lindsey 1994). Muscular Endurance is the ability to continue muscular exertions of sub-maximal magnitude. Example Chinning. Muscular endurance is a universally accepted component of physical performance. Flexibility is the range of movement in a joint. The degree of flexibility determines the extent of extension and flexion of a joint and consequent body actions in terms of bending, reaching, twisting and turning. The degree of flexibility is first determined by the nature of joint itself and then by the ligaments and muscles related to the joint. Agility is the ability of a person to change direction or body position quickly and regain poise or control to proceed with another movement. Agility is highly dependent upon or interrelated with speed, strength, balance and co-ordination. Agility is development through practice and confidence in movement. Power is the capacity of the body to release maximum force or muscle contraction in the shortest possible time. Power

---

26 Ibid.
27 Ibid.
denotes explosive movements, a release of Maximum force at maximum speed

Evelyn L. Schurr.\textsuperscript{31}

**Psychology and its Importance**

In the modern era of competition, the psychological preparation of a team is as much important as teaching the different skills of a game on the scientific lines. The teams are prepared not only to play the games but to win the games and for winning the games, it is not only the proficiency in the skill which brings victory with which they play and perform their best in the competition. The study of psychological characteristics of sports person is being given due attention by sports psychologists. All those interested in the development of sports are keenly analyzing the psychological profiles which are used for identification, placement, selection and preparation of a sports person for competition.

Psychological behaviour can play a positive role in sports performance. Psychology aim to develop a better understanding of human behaviour and experience. Psychology has been shaped into a greatly diversified field by the ideas of literally thousands of original and creative thinkers and researchers.

According to Gupta\textsuperscript{32} “Psychology is a science of human behaviour or the study of the complete form of human behaviour, including its integration, organization and manifestation”.

\textsuperscript{31} Harrison H. Clarke, Loc.Cit.

According to Cox\textsuperscript{33}, a field of study is one in which principles of psychology are applied in a sports setting.

Etymologically motivation stems from the root “Movere” (Latin) which means “to move” therefore to motivate is a comprehensive term encompassing varied aspects of behaviour. In a way it might be designated as “The tendency for the direction and selectivity of behaviour to be controlled by conditions and consequences and the tendency of this behaviour to persist until a goal is achieved. Since all behaviour is purposive, motivation too is not without purpose. As a psycho-physiological phenomenon motivation comprises motive, drive and need.

\textbf{Sport Psychology}

It is a specialization within psychology that seeks to understand psychological/mental factors that affect performance in sports, physical activity and exercise and apply these to enhance individual and team performance. It deals with increasing performance by increasing motivation and minimizing the psychological effects of injury and losing the game. One of the most important techniques is relaxation. While playing players have to relax their mind and concentrate to the game. Most researchers and practitioners focus on sport and/or exercise activities.

Wiggins (1996)\textsuperscript{34} has described sports psychology as studying “the effect of psychological factors on behavior in sports, or the psychological effect that participation in sports or physical activity has on the performer.”


Over the last two decades, psychology has become increasingly involved in athletics and sports, both as an area of scientific study and as an applied field.

Applications of psychology to sports and athletics are numerous. They focus both on the individual athlete and on the team. Psychology is increasingly involved with athletes, coaches, and trainers to enhance athletic performance through improved physical and mental training. Examples of psychological techniques applied to helping athletes acquire motor skills and improve performance range from visual motor behavior research where athletes mentally practice movements, to anxiety reduction techniques like thought stopping and relaxation training. Knowledge of psychology is essential for understanding each individual's motivation and developing that motivation to an optimal level for athletic performance. In addition to facilitating athletic performance, psychology is important in rehabilitating athletes from physical injuries and psychological trauma, as well as in providing more routine counseling services.

Sports psychologists work not only with the individual athlete but also with the team. How best to meld a group of individual athletes into a cohesive team performing at its best is an ongoing question and challenge for coaches and team leaders. A knowledge of group dynamics, social perception—how people perceive, think about, and respond to each other, and individual differences in personality are all essential to motivating and leading a collection of athletes into a smoothly functioning team that makes the best use of each individual player's strengths. In addition to the interventions that are part of applied sports psychology, sports psychologists also study topics
like achievement motivation, sports completion anxiety, aggression
developmental antecedents of interests in sports and athletics etc.

**Achievement Motivation**

Over the years, behavioral scientists have noticed that some people have an intense desire to achieve something, while others may not seem that concerned about their achievements. This phenomenon has attracted a lot of discussions and debates. Scientists have observed that people with a high level of achievement motivation exhibit certain characteristics. Achievement motivation is the tendency to endeavor for success and to choose goal oriented success or failure activities. Achievement motivation forms to be the basic for a good life. People who are oriented towards achievement, in general, enjoy life and feel in control. Being motivated keeps people dynamic and gives them self-respect. They set moderately difficult but easily achievable targets, which help them, achieve their objectives. They do not set up extremely difficult or extremely easy targets. By doing this they ensure that they only undertake tasks that can be achieved by them. Achievement motivated people prefer to work on a problem rather than leaving the outcome to chance. It is also seen that achievement motivated people seem to be more concerned with their personal achievement rather than the rewards of success.

It is generally seen that achievement motivated people evidenced a significantly higher rate of advancement in their company compared to others. Programs and courses designed, involves seven "training inputs." The first step refers to the process through which achievement motivation thinking is taught to the person. The second step helps participants understand their own individuality and goals. The third assist participants in practicing
achievement-related actions in cases, role-plays, and real life. A fourth refers to practicing of achievement-related actions in business and other games. A fifth input encourages participants to relate the achievement behavior model to their own behavior, self-image, and goals. The sixth program facilitates participants to develop a personal plan of action. Finally, the course provides participants with feedback on their progress towards achieving objectives and targets.

Anything a person does is driven by some certain desire to acquire a predetermined goal. Cognitive psychology theorists endeavor to study and to fully conceive the nature of motivation or desire. People do one thing in order to achieve a specific goal; however understanding that doing one thing is necessary to achieve another thing, is insufficient for a person to start doing the “one thing”. This fact leaves nothing else but to bring out the idea of desire. Therefore, the knowledge, or the cognition, about particular characteristics of actions and objects is required but it is not enough to motivate a person to start doing relevant things. Another important component is person’s personal desire coming from within a person; otherwise the nothing will be done.

The main differences between the folk cognitive psychology concept and Maze’s instinctual theory are the following; folk psychological concept of desire suggests that the mechanism from its inception till the achievement is mental. In other words, a person fully understands actions, means, their goals, and ends. What Maze offers, is that processes in a person behavior are ‘eutral.’ What he meant is a human has certain centers in his or her brain, which are responsible for things like thirst, hunger, self-defense, sex, and others. And so
whenever a person’s get excited, the person immediately receives a signal and does everything necessary to satiate the need. Of course, people would not defend themselves when are thirsty, rather they would try to get something to drink, which means that they understand what is going on, but have no control over the phenomenon. Folk psychology, on the other hand, suggests that people consciously motivate themselves to get a drink, but Maze offers another view, which completely satisfies the needs of the science to explain human behavior. Of course both folk psychology and Maze’s theory claim that a person does one thing in order for the other thing to happen, but the approaches and mechanisms are completely different.

In the words of Guilford, “Motive is a particular internal factors or condition that tends to initiate and to sustain activity”.  

“Achievement motivation may be characterized as the tendency to maintain and increases individual proficiency in all areas in which a standard or quality is taken as bending”. Desai (1970) Murray (1938) defined achievement motivation as the need to “accomplish something difficult, to overcome obstacles and attain a high standard, to rival and surpass others to increase self regard by the successful exercise of talent”. Achievement motivation is defined as “an athlete’s predisposition to approach or avoid a competitive situation” Crooks and Stein (1988).


**Importance of Achievement Motivation**

“Development of achievement motivation is affected by a number of variables in home, school and society. Home plays an important role in the early training of children for the development of attitudes and motives. Parents expectation and guidance to the child development leads to high achievement in life”.  

Although, the achievement motivation is a complex construct, it is explained as a learned personality characteristics which is demonstrated when a person shows one of the three types of behaviour (a) He shows competition with a standard of excellence and is concerned with winning or doing better than others (b) He demonstrate a long term involvement in the attainments of an achievements goal (c) He is involved in accomplishing other than the common daily tasks that will mark him as a personal success. This can be of inventions artistic creations and other extraordinary accomplishment”.  

**Development of Achievement Motivation**

McClelland prepared a list of various propositions and conditions for developing achievement motivation, some of which are as described below.

1. Reason to develop a motive the individual should have any advance many reasons to believe that he should develop and achievement motive.

---


2. Realistic and reasonable motive, the individual should understand that this motive is realistic and reasonable.

3. Clearly understanding and describing various aspects of the motive.

Achievement motivation can be seen in many areas of human endeavour on the job, in a school, in home or in athletic competition. Role of achievement motivation is relatively a new concept in the world of motivation. It is essentially a type of motivation that is personal in nature. In the sports and games activities, the desire to improve his performance in game situation or to get a good job in anywhere or to become the team captain and so in as known as achievement motive.

In general achievement motive is expectancy of finding satisfaction in mastery of difficult and challenging performance whereas in the field of education or sports in particular its stands for the pursuit of excellence.

Achievement motivation has a research tradition that provides insight applicable to sport competition is the most common achievement situation in sports, but achievement also occurs in non-competitive situation when individuals compare their performances to personal standards.

Achievement motivation cannot be described as something that occurs during competition but mostly as a trait having ‘permanent character,’ being formed during the preceding weeks, months and years. It is an essential element of human personality and it directs a person's activity and makes it more (or less) dynamic. This property, the “driving power of activity”, should be understood as the joint function of the motive power (which is a permanent property of personality) and the consequences of what a given
individual expects of his own actions (Franken, 1993). This action is a product of two tendencies: (1) to achieve a success and (2) to avoid a failure. People with greater achievement motivation prefer tasks and situations where they can do their best. Such people continue long lasting insoluble tasks more effectively and reveal greater persistence (Atkinson and Feather, 1966). Achievement motivation leads people to set realistic but challenging goals. High-achievers have a great desire to succeed and are not put off by the fear of failure. High-achievers tend to enjoy challenges (opponents who are equal to them or slightly superior to them); they need feedback and respond well to constructive criticism; and they do not fear failure, which means they persist at sports. To become an elite athlete in any sport requires hours upon hours of training. Often this training is rigorous, painful, or injurious. However, the athletes who have reached the pinnacle of their sport have more than likely put in their time to get to achieve that high level of success. To do this, these athletes must have something that motivates them to continually push their bodies and come back from whatever struggles or setbacks they may experience along the way (Kamlesh, 2004). On the other hand, achievement motivation often causes disappointment of those players who are not predestined to participate at high level performance by the basics of their personality. These players who do not possess high level of achievement motivation do not reach the highest levels of their game despite good results at a young age. In a match situation they usually tend to evoke excessive

---


stimulation which affects the quality of their sports performance adversely. In the long term this often leads to a lack of progress or even giving up practicing. Perhaps, leadership developmental based orientations on emotional and social competencies and group strategies may be adopted instead of traditional approaches in training and coaching for such players (Cherniss et al., 2010). Research indicate that achievement motivation can facilitate the development of a self-determined, more task-involving climate and the ensuing support of perceived competence in sport settings, may encourage positive affective states and reduce negative affective states among individual performers (Quested and Duda, 2009; Reinboth and Duda, 2006). Goal orientation perspective may represent a dispositional tendency towards judging one's competence or it may be fostered within the situational context creating a perceived motivational climate.

**Sports Competitive Anxiety**

From a review of the literature it is clear that the most popular conceptual paradigm in sports psychology is a cognitive-behaviour one. Anxiety results when the individual doubts his or her ability to cope with the situation that causes him or her stress (Hardy 1996). Another important point that

---


needs to be clarified is the difference between state and trait anxiety (Spielberger, 1966).^{49}

Anxiety can be described as the tension and worry that results from distress. Anxiety is a negatively charged emotional state characterized by discomfort and nervousness. Generally speaking, there are two forms of anxiety trait and state. Trait anxiety is a personality characteristic that is relatively stable over time, predisposing the individual to be anxious across a wide variety of situations. State anxiety, on the other hand, refers to a “right now” kind of anxiety that is situation-specific. One of the factors that are believed to have a significant effect on performance is the level of state anxiety experienced prior to an contest.

This is referred to in the literature as pre-competitive anxiety. The development of sportsman to enable him to achieve high is not only confined to physical process of physical fitness rather it is an accepted phenomena that psycho-socio traits are also required to maintain the balance. Psychology as a behavioral science has made its contribution in improving sports performance. The success and failure of an individual athlete depends upon his/her physical ability, conditioning, training, mental preparation and the ability to perform well under pressure. It is not uncommon to hear, coaches and athletes express disbelief on how poorly their team performed against a certain opponent or how they feel apart in a crucial situation. In modern competitive sports, the anxiety developed in sportsmen and sportswomen affect their performance. The sportsmen like other athlete are anxiety prone while participating in competitive sports. Anxiety is a type of emotional

disturbance, it may be a motivating force or it may interfere with successful performances. From the above discussions the researcher intended to compare the selected anthropometric, motor fitness, physiological and psychological variables in Kabaddi game at inter-university level of achievement.

1.1 STATEMENT OF THE PROBLEM

The purpose of the study was to compare selected anthropometric, motor fitness, physiological and psychological variables in Kabaddi game at the Inter-university level of Achievement.

1.2 DELIMITATIONS

1. The study was delimited to the inter-university male Kabaddi players.

2. The study was delimited only for inter-university contributed for success in league teams only.

3. The study was further delimited to the following parameters :

   Anthropometric Measurements
   
   1. Height
   
   2. Weight
   
   3. Chest Girth
   
   4. Upper Arm Length
   
   5. Thigh Girth
   
   6. Outer leg length
   
   7. Fat Percentage
Motor Fitness components

1. Speed
2. Agility
3. Movement Time
4. Strength
5. Leg Power
6. Flexibility

Physiological Variables

1. Vital Capacity
2. Forced Expiratory Value
3. Pulse Rate

Psychological variables

1. Sports Competitive Anxiety
2. Sports Achievement Motivation

1.3 LIMITATIONS

1. This study was limited only to inter-university Kabaddi players.

2. The study was limited only to male inter-university Kabaddi players.

3. The study was limited only to inter-university Kabaddi players age ranged between 18 to 25 years.

4. The study was limited to inter-University Kabaddi players League-entered teams i.e. winners, runners, III and IV place players only.

5. The subjects were from different socio-economic conditions. Their ways of living, food habits, and daily routine have been not considered limitation of the study.
1.4 **HYPOTHESES:**

On the basis of the available literature and discussion with different experts and on the personal understanding of the research scholar it was hypothesized that

1. There may not be significant difference in the anthropometric measurements of Kabaddi players of inter-university league entered teams.

2. There may not be significant difference in the motor fitness of Kabaddi players of inter-university league entered teams.

3. There may not be significant difference in the physiological variables of Kabaddi players of inter-university league entered teams.

4. There may not be significant difference in the psychological variables of Kabaddi players of inter-university league entered teams.

1.5 **SIGNIFICANCE OF THE STUDY**

1. This study will help to compare the anthropometric measurements, motor fitness, physiological and psychological variables of kabaddi players at inter-university level of achievement.

2. It will also help in formulating the training programs for the ALL India Inter University Kabaddi Players.

3. The result of the study will help to assess the fitness of the Kabaddi players.

4. The findings of this study might act as guide to the coaches, experts to select the players who will be more suited or competent for other level
1.6 DEFINITION OF THE TERMS

Comparison

The state of being compared; a relative estimate; also, a state, quality, or relation, admitting of being compared; as, to bring a thing into comparison with another; there is no comparison between them. The act of comparing: an examination of two or more objects with the view of discovering the resemblances or differences; relative estimate, that to which, or with which, a thing is compared, as being equal or like; illustration; similitude. A figure by which one person or thing is compared to another, or the two are considered with regard to some property or quality, which is common to them both; e.g., the lake sparkled like a jewel.

Inter-university players

The players who are selected to represent the university team in the inter-university Kabaddi tournament, which have been organized by respective various universities as per the regulation governing A.I.U. Sports board.

Kabaddi

Kabaddi game is group game and this game is international level game. A team consists of 12 players out of which seven players play at a time and continue throughout a substitution can be made with referee's permission any time during the game. The game of Kabaddi is a game of attack through alternate raids into the opponent court altering continuous word of “Kabaddi”, without losing the breath.\(^5\)

---

**Anthropometric Measurements**

Anthropometric is the science of measuring the human body and its parts. It is used as an aid to the study of human evaluation and variations.

According to Philips and Hornok the measurement of the structure and proportion of the body is called anthropometry.\(^{51}\)

In this study height, weight chest girth, biceps girth, thigh girth, length of body has been selected as anthropometric measurements.

**Motor Fitness**

Motor fitness has been defined as the readiness or preparedness for performance with special regular for big muscle activity without undue fatigue.\(^{52}\) Motor fitness variables refer to the player's status on those components which are essential for efficient functioning in the psychomotor domain. These components are performance oriented and are dependent upon functioning of different system of the body in an integral manner. In this study speed, agility, movement time, strength, leg power and flexibility variables have been selected as motor fitness variables.

**Speed:** Speed is the ability to execute motor actions, under given conditions, in minimum possible time.\(^{53}\)

---


Agility: Agility is the capacity to change the directions quickly and control body movements.\textsuperscript{54}

Movement Time (Co-ordination): Movement Time may be defined as the ability of the performer to integrate types of movements into specific patterns.\textsuperscript{55} The essential quality of this factor concerns the capacity of the student to perform specific movements in a series quickly and accurately. Good co-ordination is associated with insight into the nature of the movement with kinesthetic sense and with a learner perception of relationships and it can be improved through training and practice. The bar snaps for distance has been used to measure this factor.

Muscular Endurance: t is the capacity of the individual to bring into play maximum muscle contraction at the fastest rate of speed.\textsuperscript{56}

Leg Power: Power is the capacity of the individual to bring into play maximum muscle contraction at the fastest rate of speed.\textsuperscript{57}

Flexibility: Flexibility is the ability to move the body and its parts through a wide range of motion without undue strain to the articulations and muscle attachments.\textsuperscript{58} “The Range of Motion of a Joint or Group of Joints”\textsuperscript{59}


\textsuperscript{57} Barrow and McGee. “A Practical Approach to Measurement in Physical Education” p.574.


Physiological Variables

Physiological Parameters are used here to refer to measurements of human physiological functions such as those provided by heart exchange data or human response to such environmental factors as contaminants.\textsuperscript{60}

Physiological fitness includes non-performance components of physical fitness that relate to biological systems that are influenced by one's level of habitual physical activity. Physiological variables are the amount that can change frequently in which the bodies of animals or plants work. In this study, physiological variables would include subjects' vital capacity, expiratory flow and pulse rate.

**Vital Capacity**: Vital Capacity is defined as the largest volume of air that can be exhaled after deepest possible inhalation.\textsuperscript{61}

**Expiratory Flow**: Expiratory flow rate is the measure of maximum inspiration, or how much the lungs can push out the air from lungs.

**Pulse rate**: Pulse rate is a wave of arterial expansion which spreads with each heart beat from the root of aorta peripheral ward in all of the branches of the arterial tree.

Psychological Variables

A variable is something that can be changed, such as a characteristic or value. Variables are generally used in psychology experiments to determine if changes to one thing result in changes to another.

---

\textsuperscript{60} Merriam-Webster's Medical Dictionary, 2002.

In this study, psychological variables would include subjects’ sports competition anxiety and sports achievement motivation.

**Motivation:** It is the tendency for the direction and selectively of behaviour to be controlled by the conditions to consequences and the tendency of this behaviour to persist until a goal is achieved.

**Achievement Motivation:** Achievement motivation defined as the need to perform well or the striving for the success as the need to perform well or the striving for success and evidenced by persistence and effort to achieve high performance in sports.\(^{62}\) Achievement Motivation is an effective arousal state directing behaviour in an achievement-oriented activity cognitively appraised as potentially satisfying.\(^{63}\)

**Anxiety:** Cratty opines that anxiety appears to be a general or foreboding personality trait marked by a lower threshold to stressful events. Anxiety refers to that emotional state of mind where a fear of danger or loss of hearing is a prominent feature, it generally arises as a result of fear of something unknown that creates tension and disturbance in the homeostasis on the individual Kocher and Pratap\(^{64}\)

**Competition:** Competition is a situation in which two or more individual or groups struggle for complete or larger share of a particular goal in which the success of their performance is related to each other.

---


Sports Competition Anxiety may be considered as an open conflict when the individual or group makes effort so surpass the other individual or the group in any sporting activity for which the competition is held. Anxiety has both positive as well as negative effects on the performance of the players/athletes.