CHAPTER I

INTRODUCTION

Cricket is basically a bat and ball game played between two teams of eleven players. It is one of the oldest sports in the world and has its origin in 16th century in England. The expansion of the British Empire spread this once colonial recreational sport into a spirited game to all corners. Today cricket seems to be a virtual lifeline of many commonwealth nations. Cricket is a game in which each team has to bowl and bat according to certain rules and regulations. A team which scores greater number of runs will be the winner.

In olden days, the game was played in different names in different countries. The game of Cricket is developed from a simple game of hitting an object with a piece of wood. Basically it is the battle between bat and the ball, but the approach has changed from time to time. Cricket is played in many forms such as Test, One day International, First class Twenty 20, Super Six, Eight-a-side, Indoor Cricket Max Cricket, Double wicket and Single wicket. Cricket is played in more than 105 countries around the globe.

The word “training” means different things in different fields. In sports the word “training” is generally understood to be synonym of doing exercise. In a narrow sense training is physical exercise for the improvement of performance. Training involves constructing an exercise programme to develop an athlete for a particular event. This increasing skill and energy capacities are equal consideration (Singh, 1991).
Training is the main component and the basic form of preparing the athlete for higher level of performance. It is a systematically planned preparation with the help of the exercise which realizes the main factors of influencing athlete’s progress. The content of training includes all the basic types of preparation of the sportsmen such as physical, technical, tactical and psychological.

**SPORTS TRAINING**

Sports performance is complex mixture of genetic make-up and environment influences like training etc. Performance in cricket is determined by several factors namely skill, technique, tactics, fitness, training, etcetera. Training plays an important role in modern day Cricket. Harre et.al (1982) opine that Sports training is the physical, technical, intellectual, psychological and moral preparation of an athlete by means of physical exercise.

The main aim of training is to prepare the Cricketers for outstanding performance in competition. Nowadays, technico-tactical training has become very highly scientific and systematic. Physical fitness is the sum of numerous factors, which can vary from individual to individual.

Different sports required different type of fitness emphasizing on a particular fitness factors. Similarly the training varies sports discipline to sports discipline. Field training is a highly co-ordinate and well planned exercise. Generally in military this type of training is very common. In modern sports training the game-specific field training is gaining tremendous popularity, which focus on game-specific fitness as well as performance related skill factors.
PHYSICAL FITNESS AND CRICKET

Cricket is a sport in which fitness is traditionally not thought of as very important. However, the success in the 1990s and 2000s of the world beating Australian team has been attributed to their professionalism, and in part to the way they address their fitness. The other test playing nations have rightfully put more emphasis on fitness recently and are reaping the benefits.

With the introduction of one day Cricket and more recently Twenty20, the game has gone through major changes and the physical demands made on a Cricketer's body have also increased dramatically. Depending on the version of the game being played and the role of the player in the team, the importance of fitness will vary: the fitness requirements of a fast bowler will be greater and also different than that of an opening batsman, and one-day Cricket will be more demanding than a test match.

Kapil Dev former Indian Cricket team captain and one of the best all rounder’s in the world of cricket started training at a very young age and he firmly believes that it is complete physical fitness that has contributed to his overall success in all aspects of the game-bowling, batting and fielding. He contends that physical fitness achieved during off-season periods helped him in bowling long spells over and over again without fatigue or lapse of concentration. Kapil began his test career in 1978. A truly remarkable accomplishment! Even as a boy, he would go in for energetic jogging, springing and stretching exercises. Also he would bowl at the nets for as long as possible till the point of exhaustion (Amarnath, 1996).
Bompa (1996) observe that, almost all physical activities incorporate one or more of the elements of force, quickness, duration and the range of motion. When a given exercise is required to overcome resistance, it is called a strength exercise. When quickness and high frequency is maximized, it is referred to as a speed exercise. If distance, duration or the number of repetitions is high, an endurance exercise is performed. On the other hand, if the range of motion is maximized, a flexibility movement is being performed. And finally, when in a given exercise a high degree of complexity is required, this is known as co-ordination exercise.

Buchanan (2010) former Cricket Australia national coach says that there are four major performance skills for all elite sportsmen and women, these being technical, physical, tactical and mental. The later skill is one that can make the crucial difference for athletes performing consistently to their abilities. Sport psychology has played a significant role in the understanding, training and ultimately the use of mental skills for peak performance.

Batsmen stay at the crease for as long as possible, sometimes for periods of over four hours. In order to occupy this position, a good batsman must be able to stay focused, have good ball / eye skills, and have the strength and fitness to make each played shot productive. On the other hand, power comes from having a strong core, abdominal mid-section and the ability to generate explosive upper body actions. While on the other, the kinetic energy of the ball may be used to score four runs by the batsman by a slight change in direction. Unfortunately this skill has only been given to a few class batsmen. Fielders need the ability to
sustain a concentrated effort for a period of six hours or more without fatigue and
in sometimes very warm conditions. The body must be capable of explosive bursts
at any given time - such as racing for a ball, jumping for a catch. Every cricket
player can contribute his part to fielding unlike batting and bowling. In a tight
game, fielding performance will invariably be the decisive factor between winning
a match and losing it. (Muralikrishnan, 2010)

Cricketers while progressing through different stages of their development
should find fielding enjoyable rather than a tiresome chore. Fielding drills and
mechanisms thereof are taught from a very young stage. Even in international
cricket one could observe fielders picking up the ball with improper balance and
finding it difficult to make accurate throws to effect a run out. Learning to pick up
the ball on either side will make the fielder confident to stop the ball and this
makes the batsman a little nervous to start for a run especially when the ball is
within the 30 yards circle. Fielding too is an important skill of the game. In recent
times, more attention is being paid to fielding.

The thrill that spectators get with a brilliant piece of fielding can seldom be
matched by a huge six or the sight of the stumps sent flying by a quick bowler. Good fielders like Rhodes are always more popular than big hitters. Fielding is a
regular part of every cricket game, big hitting may not always be seen in every
match (Gavaskar, 2009).

Bouters require both explosive strength and speed, combined with good
muscular endurance, in order to be able to maintain a high count of number of
overs. Poor fitness and muscular strength will result in inaccurate bowling and
greater risk of injury, especially for high speed bowlers and also allows the batsmen to settle down in the wicket to score more runs. All players will at some time in the game, bat and field. A cricket training programme shall be designed with these as objectives in the mind.

Flexibility is very important for a fast bowler. Dennis Lillee (1984) says "Flexibility is designed to give the bowler full freedom of movement when bowling a full speed, without threatening damage to his muscle".

In Cricket, we find an excellent integration of these physical attributes in different actions executed by batsmen, wicket keepers and fielders. In general, strength is required when executing a powerful hit out of the ground or to bowl a bouncer; speed is required to take a quick single, to stop a ball before it crosses the boundary line; flexibility is shown by an acrobatic fielder; a square drive, a square cut speeding through the cordon of fielders shows a high degree of co-ordination and a pace bowler bowling through the entire session shows ample evidence of endurance. Even a single stroke executed by a master batsman shows an excellent combination of all these characteristics, when, to a casual observer what was apparent was only good timing. Let us take an example of a well-executed cover drive. As a bowler runs in, the batsman has to concentrate & watch and then in a split second he lunges forward showing speed and flexibility times the ball well, showing strength and co-ordination. If he sees a chance to take a quick single, he speeds off to take one, and he does this, ball after ball showing stamina. (Sharangapani, 1992)
The game is spread over five days (in tests) and the result is often dependent on what happens on the fifth day. An opening batsman, wicket-keeper, fast bowler and an all-rounder need ample endurance. A player who gets breathless after taking two runs cannot have a proper co-ordination or strength to execute a good stroke when facing the next ball. A bowler who is breathless after bowling three balls loses his line and length for the next three. Developing these attributes is different for different muscle groups, as also for different individuals in respect of the individual requirement. Even though a training schedule tends to be generally uniform, it has to be individualized taking into consideration the need for it.

Running, jumping, throwing are referred to as the fundamentals of natural human locomotion (Romanov, 2008). An essential element of successful cricket performance is the ability to accelerate, change direction quickly and move one’s feet quickly while at the crease. This requires development of speed and agility.

A Cricketer needs static and dynamic strength in an altogether different way. In Cricket, one does not need such strength but proper development of strength is very important. (Sharangapani, 1992)

Tendulkar stressed the importance of physical fitness and mental toughness which has helped him to have a prolonged successful career in International Cricket. "Physical fitness helps you in being mentally tough, enhancing you confidence level," the 37-year-old said.
SPORTS PHYSIOLOGY AND CRICKET PERFORMANCE

When physical training is done, the physiological changes occur in almost every system of the human body. These changes depend on frequency, duration and intensity. Sports Physiology tells about the complete story of various internal functions of the body during rest and play.

Traditionally, Cricket has been perceived as a relatively mild sport from a physiological point of view. The intermittent nature of the game with its long rest intervals provides plenty of recovery time between any short spells of higher intensity activity. However, the demands of cricket may be underestimated (Noakes & Durandt, 2000).

High level of performance of a Cricketer might be dependent upon his physiological make up and it is recognized that physiological fitness is much needed for high level performance. It has numerous parameters such as aerobic capacity, anaerobic capacity, pulse, vital capacity, blood pressure, breath holding time and etcetera. Certain physiological variables play important role in Cricket. Most of physiological variables can be tested only in laboratory. Foster et.al (1986) opines that fast bowling is predominantly an anaerobic activity which requires an aerobic base. In one study of the 1999 South African World Cup side, a number of physiological tests for explosive power and aerobic endurance capacity showed they were as 'fit' as the South African national rugby side.
SPORT PSYCHOLOGY AND CRICKET PERFORMANCE

Cox et.al (1993) defines Sports Psychology as the Science of applying psychology to sports. It is a study of behavioral science in sports setting. Sports psychology is gradually and steadily gaining momentum in the field of training of high level sportspersons. Today, sport is no more a recreation. It is not just a game of nerves as well. With the winning margin of competitive sport narrowing down to fraction of seconds, modern day sport warrants an essential supply of psychological support to come to term with reality.

Tendulkar, a current Indian Cricketer, who holds the record of most number of runs both Test and One day International Cricket, In press conference (2010) he said, "When pressure builds up in the game I try to focus on the next ball with calmness without thinking of the future course of the match. My mood undergoes a change before every match as I start mentally preparing myself for the game," he added.

Weinberg et.al. (1995) wrote that in any sport, a player’s success or failure results from a combination of physical and mental abilities. Most coaches consider that sport is atleast fifty percent mental, with certain sports such as golf, tennis and figure skating, consistently receiving percentages in the 80 percent to 90 percent range. According to Smith (1994), a former English Cricketer, “Cricket is played in the mind, more than any other game”.

Anxiety and Self confidence also play important role in Cricket. Anxiety is a negative emotional state with feelings of nervousness, worry and apprehension associated with activation or arousal of the body. (Weingberg and Gould, 1995).
Anxiety depending upon the degree is defined indifferent ways such as tension, panic, etcetera.

Self confidence is being confident of one’s own abilities. In other words, it is the Cricketer who realistically believes that he is capable of performing well. Gould, Weiss & Weinberg, (1981) opine that the most consistent factor distinguishing highly successful from less successful athlete is ‘confidence’ This means that top athletes, regardless of the sport, consistently display a strong belief in themselves and their abilities.

Preponderance of scientific evidence obtained from different investigations has revealed that apart from physical and physiological variables, techniques and tactics, high level performance of a sportsman is dependent upon his psychological makeup. Different psychic abilities play decisive roles in achieving top level performance in track and field athletics. Therefore superb psychological fitness and training of the “individual” are important factors, which help in achieving outstanding performance (Manicam,2009)

The concept of Anxiety occupies a very important place in the study of human personality and multitude activities of the mind. Trends were the first to define Anxiety within the context of Psychological theory. According to him, “Anxiety is something felt unpleasant effect of state or Condition”. Spielberger (1966), had defined Anxiety in different angles. These definitions lead to the conceptualization of ‘Anxiety’ as “a combination of apprehension, uncertainty and fear”. Many studies of the past reveal that anxiety plays influential role in Cricket.

Success in sports depends on trust in your own strength and ability. If an athlete is well prepared for competition from a physical, technical and tactical
point of view, the most important factor deciding about his/her degree of success is Self-Confidence. Self-Confidence is considered to be one of the leading elements for a successful athlete. Believe in one’s self is the centre of sports performance. One of the most important factors determining Self-Confidence involves trust in our ability to execute a task. Like any other sport, in Cricket also self-confidence as well as Sports Achievement Motivation plays critical role.

YOGA

Yoga is the oldest known science of self-development, originated in ancient India. Yogic practice is a physical and mental exercises practiced throughout the world. Many research studies of the past report that yogic training improves the physical & mental fitness level as well as the performance of sports persons in various sports disciplines.

Yoga is an ancient physical and spiritual discipline and branch of philosophy that originated in India reportedly more than 5,000 years ago. The word yoga comes from the Sanskrit word yuj, which means to yoke, join, or unite. The Iyengar School of yoga defines yuj as the "joining or integrating of all aspects of the individual—body with mind and mind with soul—to achieve a happy, balanced and useful life." The ultimate aim of yoga, they claim, is to reach kaivalya (emancipation or ultimate freedom).
Sri Aurobindo says “Yoga helps us to become conscious of the great complexity of our nature and the different forces that make it”

There is no written record of the inventor of yoga. It was practiced by yogis (yoga practitioners) long before humans knew how to write. Yogis over the millennia passed down the discipline to their students, and many different schools of yoga developed as it spread. The earliest written record of yoga, and
one of the oldest texts in existence, is generally believed to be written by Patanjali, an Indian yogic sage who lived somewhere between 2,000 and 2,500 years ago. Patanjali is credited with writing the Yoga Sutras (utra means "thread" in Sanskrit), which are the principles, philosophy, and practices of yoga that are still followed today. Although many schools of yoga have evolved over the centuries, they all follow the fundamental principles described by Patanjali more than 2,000 years ago. Buddhism and other Eastern spiritual traditions use many of the yoga techniques or derivations of those techniques.

After the Bhagavad Gita, the next seminal work on Yoga is the Yoga Sutras of Patanjali. The Yoga Sutras are a compilation of Yogic thought that is largely Raja Yogic in nature, it was codified sometime between the 2nd century BC and the 3rd century by Patajali, and prescribes adherence to "eight limbs" (the sum of which constitute "Ashtanga Yoga") to quiet one's mind and merge with the infinite.

**Yoga for Complete Physical Fitness**

It would be an interesting fact for you that, people who carry out yoga regularly, can markedly grow up taller and it is because of the truth that they can hold themselves well and their vertebrae stretches. There are innumerable benefits which people get from yoga and because of this reason yoga has become one of the fastest growing activities of the world. Yoga, in reality, creates balance in the mind as well as in the body. It helps in developing flexibility and strength. Different poses or asanas of yoga has different physical
and mental benefits. There are numerous of aasans of yoga and each gives amazing benefits to the people.

- Yoga can make you more flexible, robust, and stronger. Due to the techniques used for breathing in yoga, all your joints get movement in full range. You will not feel painful when you get awake in the morning. Yoga will completely rejuvenate you.
- Yoga can help you to improve your posture. It can not only realign your body but it can help you even to grow taller.
- Yoga can improve your looks and makes you feel fit and fine. Your muscles will become firm and your complexion will grow up.
- You can discover much more about your body and its functions with the help of yoga. You can understand that how yours conscious and unconscious mind affects your body. As more you will practice yoga you will discover more insight.
- If you have sleep disorders then yoga can prove to be very beneficial. Yoga is a soothing activity. It makes your muscles relaxed. Various kinds of sleeping disorders can be cured by practicing yoga regularly.

The various Yogic practices maybe classified into:

1. Asanas
2. Pranayamas
3. Meditation
1. Asanas

These are special patterns of postures that stabilize the mind and the body through stretching. Their aim is to establish the proper rhythm in the neuromuscular tonic impulses and improve the general muscle tone.

2. Pranayamas

These practices bring control over the respiratory impulses which one of the channels of the follow of autonomic nerve impulses. The main purpose of Pranayama is to gain control over the autonomic nerve system and through it influence the mental function.

3. Meditation

Meditation is the practice involving control of the mental function which starts from the initial withdrawal of the senses from external objects to the complete oblivious of the external environment.

Meditation is a great tranquilliser. The basic principle of meditation is to develop internal awareness.

The nature of all Yogic practice is Psycho physiological. Some practices which emphasize on the direct control of mental process are more psychological other practices are more physical or psychological.
Yoga for the promotion of sports

Application of Yogic Exercise has considerable scope in the promotion of sports. Promotion of sports depends on

1. Basic fitness factors
2. Specific sports skill and
3. Psychological factors

1. Promotion of Basic fitness factors through Yoga

Excellent performance in any sports is governed by several factors of physical fitness. The important one may be mentioned as speed, strength, stamina, suppleness, stability and neuromuscular co-ordination. Although not many scientific researchers have been done, the works of Herbet A.devries (1961a,1961b, 1962), Gharote (1964,1976), Dhanaraj (1974), Giri (1966), Gharote and Ganguly (1976) have shown enough evidence about how yoga could be gain fully employed in the promotion of basic fitness factors. Using elaborate Fleishman Battery basic fitness test, Gharote (1974) has shown how even short term Yogic training could improve different basic fitness factors.

2. Promotion of specific sports skills

Development of sports skills depend on the proper neuromuscular coordination. This co-ordination seems to be better the yogic exercise. Stretching improves the performance of all sports. It has now become almost customary to say: If you stretch your muscles, you can run faster.
3. Promotion of Psychological factors

Emotional factor is very important in the performance of sports. If rightly used emotion can contribute to the improvement of the performance in sports. Emotions are governed by working of autonomic nervous system. Control over the autonomic nervous system brings the emotional disturbance down. Yogic exercises as a group pay a significant role in training of the autonomic nervous system. Stretching exercise like Asanas, relaxation techniques and breathing exercise in the form of Pranayama are excellent in conditioning the autonomic nervous system. A few studies made on the effects of short-term Yogic routine have shown the utility of Yoga in the achievement of emotional stability.

Maintenance of physical fitness during participation period and in off season. Physical fitness is must for any good performance in sports. Different sports require different type of fitness emphasizing on a particular fitness factor. However, general level of physical fitness is necessary for every sportsman. The law of use and disuse that if you want to be fit you must exercise. The routine of exercise differ from individual to individual according to purpose. Sportsmen also select different routines of exercise during the season of participation.

CONTRIBUTION OF YOGIC EXERCISES IN THE FIELD OF SPORTS

Yoga can be practiced by males and females of all ages and it can be taken up at any stage of life. It is never too late to begin. Through yoga one can achieve the success of life. It is the fact that yoga plays an important role for reducing stress, tension and anxiety of common man as well as of athletes. Mainly the
stress and anxiety play an important role in sports, as these are an integral part of the "motivation for peak performance" in a sports activity. In recent competitive situation, impose tremendous stress and tensions on sportsman while aiming of winning a medal. The high level of sports anxiety disturbs body awareness and affect physiological functions which resist the smooth movement of muscles, joints etc. Different type of yogic exercises increase the flexibility of back, spine, hip, improve the concentration and balancing ability, improve the efficiency of liver and digestive system, cure the neurosis and cardiac diseases, remove the blood pressure problems, strengthen the back and shoulder muscles, improve breath and release the mental tension and centering emotions of the sportsmen, which are the main essentials related to the performance of the athletes in different games and sports. of immense use in improving the sense of aesthetics in sports. However, till-to-date neither any information nor research report on yoga in relation to aesthetics in sports is available so far. It was, therefore through desirable to see if yoga can contribute to enhance the aesthetic aspects so that an athlete improves case in movements and skill for performance. Yoga can be practiced by males and females of all ages and it can be taken up at any stage of life. It is never too late to begin. Through Yoga one can (Sharma, 2010)

The vital role played by yoga i.e. physical fitness, fitness related to health, skill and performance has assumed tremendous importance in recent times. The life style changes leading to positive energy balances has been the causative factor for many of the metabolic disorders like hypertension, diabetes malites, cardio vascular diseases and obesity and related problems. Yoga, which is a time-tested method, has shown great positive influence on physical, mental,
psychological, social and spiritual personalities of a person. With the above in background various research works have been undertaken to measure the changes that take place during yoga practice.

**BENEFITS OF YOGA**

Yoga is a system that benefits body, mind and spirit by teaching self control through series of postures and exercises as well as through breathing and relaxation and meditation techniques. The most important benefit of yoga is physical and mental therapy. The aging process, which is largely an artificial condition, caused mainly by autointoxication or self-poisoning, can be slowed down by practicing yoga. By keeping the body clean, flexible and well lubricated, we can significantly reduce the catabolic process of cell deterioration. To get the maximum benefits of yoga one has to combine the practices of yogasanas, pranayama and meditation.

1. **Yoga works for the entire body**

   In sports such as Football, hockey, or tennis, one tends to utilize only 10 to 15 per cent of the body, whereas yoga provides a workout that covers every muscle, joint and organ.

2. **Yoga works for every size**

   It does not matter how one look when practice yoga. Whether you're a 250-pound linebacker or a 150-pound triathlete, yoga will push one’s personal boundaries by increasing your own flexibility, endurance and muscle strength
3. Yoga decreases muscle soreness

Yoga is hugely beneficial in working out stiffness from other sports. When muscles are fatigued, they build with lactic acid, and yoga, which stretches and releases tension, helps flush that away. Runners in particular find yoga the best activity after a long endurance jog.

4. Yoga restores energy levels

Yoga practice doesn't deplete energy completely, like a gym workout, where one’s body is entirely tired after the session. Instead, it actually increases the vigor, making to feel more aware and revitalized.

5. Yoga balances the mind

Yoga has such a great sense of community to it and it really allows for mental clarity and focus. After the yoga practice, one can feel more grounded, less self-absorbed and peaceful. This type of mental clarity really helps in other sports or activities involved in. (Ceroni, 2009)

Yoga places a huge emphasis on balance, flexibility, and mental discipline, traits essential for a sport like soccer too. Simple yoga exercises are a great way to warm up before soccer practice or loosen up after a game. The incidence of injuries can also be reduced if one practice yoga as it also sharpens reflexes.

Specific exercises include poses like the spread-leg forward fold or ‘Upavista Konasana’. In this pose, players sit on the floor with your legs parted as wide as possible. Then lean forward and place hands on the floor. Maintain this
stretch for 15 seconds and rise back up. Repeat this about 10-15 times. With this posture, the hamstrings and calf muscles are stretched making them more flexible. This is a good yoga pose to begin soccer practice with.

In order to provide the necessary power to legs back muscles need to be strong. The dog pose or the Adho Mukha Svanasana is useful for this. To do this pose, sit on the floor on all fours. After this, gently lift up hips alone while keeping legs and hands completely stretched out. Make sure that back is fully straight. Return to the original pose and repeat this 10-15 times as well. This exercise strengthens back muscles of the players.

A good exercise to finish cricket practice with is the hero pose or ‘Virasana’. This is a simple pose where player need to kneel down with feet pointing backwards. Keep back straight and take in deep breaths. This pose will loosen hips, knees and ankles and relax joints after a tiring workout.

Cricket players can also practice breathing techniques like ‘Ujjayi’ breathing to help to be calm. For this exercise, take in full deep breaths through both nostrils for at least 10 minutes. This will increase breath-holding time and strengthen lungs thus increasing endurance levels.

So we've all heard that many pros practice yoga for sports training. But who exactly does yoga benefit the most? Does it work better for some sports rather than others? I was quite curious to find out, so I did a little bit of research and found a very impressive (and diverse) list of famous professional athletes who practice yoga to improve their game performance. In no particular order:
1. **Le Bron James.** Perhaps the most well-known player in the NBA, Le Bron attributes his good health to his regular yoga practice.

2. **Maria Sharapova.** Famous for her grace and performance in tennis, she says:"When I travel to tournaments I put the disk in my computer three or four times a week and do yoga for about an hour. It helps my flexibility and gets me more relaxed, especially after a good workout. I enjoy it, and it helps my game tremendously."

3. **The entire Philadelphia Eagles NFL team.** The famous Baron Baptiste yoga guru led the team through their yoga for sports training for four years!

4. **Tim Thomas.** The Boston Bruins and US Olympic goaltender says he "had no idea what [he] was getting [himself] into" and he was sweating within 5 minutes."My whole career has been about proving to people that I can play in the NHL and that I can be very successful in the NHL so yoga's part of that journey."

5. Ex-Laker **Kareem Abdul-Jabar.** He has been quoted saying "There is no way I could have played as long as I did without yoga."

6. **Daylan Childress,** Cincinnati Reds Pitcher. This baseball player uses yoga to relieve stresses in his body and cure back pain.

7. The **Ottawa Senators NHL team.** They reported that the fewer injuries in the 2006-07 seasons were the fruit of their yoga training.

8. **Shaquille O'Neal.**

   Wow! What a diverse group of well-known professional athletes! In this list, we have got basketball, tennis, football, hockey, and baseball players who all
use yoga for sports training. I think it is safe to say that no matter what sport you are playing, you will benefit from practicing yoga.

RATIONALE FOR SELECTING THE PROBLEM

The investigator, being a Cricketer, coach, selector, and Yogic practitioner was motivated to find out the impact of field training with and without yogic practice on selected physical, physiological, psychological and performance variables among the Cricket players. Moreover, very little research had been done on field training and yogic practice among Cricket players. This also motivated the investigator to take-up the study.

STATEMENT OF THE PROBLEM

At present most of the Cricket players lack physical, physiological, psychological and performance components in terms of speed, strength, endurance and flexibility; resting heart rate, aerobic power, anaerobic power and breath holding time; anxiety, self confidence and sports achievement motivation and Cricket playing ability which can be overcome by special exercises such as Asana, Pranayama and Meditation. Most of the researchers haven’t hitherto tread upon this field. So the investigator attempts to take-up this problem.

The purpose of this study was to determine the impact of field training with and without yogic practice on selected physical, physiological, psychological and performance variables among Cricket players.
HYPOTHESES

1. There would be a significant improvement on the selected physical, physiological, psychological and performance factors among Cricket players due to the influence of field training with and without yogic practice package.

2. There would be a significant difference between the experimental groups on selected physical, physiological, psychological and performance factors after the training period.

SIGNIFICANCE OF THE STUDY

1. The study would help to explore the effectiveness of field training and yogic practice on selected physical, physiological, psychological and performance variables among Cricket players.

2. The field training and yogic practice schedule designed in this study would help the yoga experts, physical educators and coaches in designing these packages.

3. The findings of the study would add to the quantum of knowledge in the area of Sports training and Yoga.

DELIMITATIONS

1. Forty eight male inter-collegiate Cricket players studying in various colleges affiliated to Madurai Kamaraj University, Madurai, Tamilnadu state in India were randomly selected as subjects their age ranges from 18 to 25 years.
2. The subjects had past playing experience of at least three years in Cricket and only those who represented their respective college teams were taken as subjects.

3. By using the matching procedure on the basis their initial test performance scores on Cricket playing ability, the subjects were divided into three equal groups in which each group consisted of sixteen subjects and named Group-I was involved field training, Group-II was given field training combined with yogic practice, Group-III (Control group) was not exposed to any training/conditioning other than their daily routines activities.

4. The experimental groups underwent field training for twelve weeks. In addition to the above field training, Group-II had also undergone yogic practice package schedule.

5. The selected variables for the present study are Physical fitness components namely speed, endurance, explosive strength and flexibility; Physiological variables namely resting heart rate, aerobic power, anaerobic power and breath holding time; Psychological variables namely competitive state anxiety, cognitive, somatic, self confidence and sports achievement motivation and performance was subjectively rated by three qualified Cricket coaches were only selected as variables.

6. Only pre and post tests were taken. The following standardized tests were used to measure the Physical fitness components namely 50 metres run, 12 minutes run, standing broad jump and sit & reach. Physiological factors was measured by standard protocol using Digital heart rate monitor, Astrand-Astrand Nomogram (bench stepping), Margaria-Kalamen power
test and Digital Stop watch used to measure breath holding time. Psychological factors were measured by standardised questionnaire, namely Sports Competitive Anxiety Test (SCAT) developed by Martens (1990) and Competitive State Anxiety Questionnaire II (CSAI-2) developed by Martens, Burton, Vealey, Bump and Smith (1990), Sports Achievement Motivation test Questionnaire developed by Kamlesh (1983). To measure the batting, bowling and fielding performance in Cricket, the subjectively rating by three qualified coaches was used to measure their performance in playing ability.

LIMITATIONS

1. The subjects selected for the study were non-residential Cricket players with different economic background. Therefore, variations in their living conditions, life style and diet were recognized as a limitation of the study.
2. The previous experience of the subjects in the field of Cricket which might be influencing on the training and data collection were not considered.
3. The investigator did not take any effort to control or assess the quality and quantity of food ingested separately by each individual.
4. The quantum of physical exertion, physiological & psychological stress and other factors that affect the results were also considered as limitations.
5. The meteorological variations such as air, temperature, atmospheric pressure, relative humidity during the testing periods could not be controlled and their possible influence on the results of the study was recognized as a limitation.
6. The responses to the subjects to the statements in the Questionnaire would depend upon various factors such as understanding of the statements, seriousness and sincerity of the subjects.

DEFINITION OF TERMS

FIELD TRAINING

The physical training which was specially designed to improve the technico-tactical part of the game and also the fitness components essential for Cricketers.

YOGIC PRACTICE PACKAGES

Yogic practice package refers to a set of yogic techniques (*asana, pranayama and meditation*) that are completed sequentially (one exercise after another). Each exercise is performed: slow, relaxed, rhythmic and with total awareness for a specific period. The duration of the yogic exercise package training is 45 minutes.

YOGA

Patanjali defined in his second Patanjali's aphorism Yoga : Citta - Vrtti - Nirodhah. Yoga is a process of gaining control over the mind. In Yoga – Vasistha one of the best texts on yoga, the essence of yoga is beautifully portrayed thus 'Manah Prasamanopayah Yoga if yabhidhi yate' - yoga is called a skillful trick to calm down the mind. It is an (UP A YAH), a skillful subtle process and not a brutal, mechanical gross effort to stop the thoughts in the mind. (Nagarathna and Nagendra, 2001).
ASANA

"Asana is a steady and comfortable posture of body". The word Asana comes from the Sanskrit root "Aas" meaning to sit. The two characteristics of Asana are 'stability' and 'comfort'. It practically answers all questions related to asana. So pathanjali defines 'asana' in his yogasutras as "STHIRA Sukham Assanam".

PRANAYMA

"Pranayama means controlling the prana".

Chandrasekaran (1999) opined that Pranayama is an exercise that prolongs life. The word pranayama is derived from the Sanskrit root called 'Prana' and 'Ayama'. The syllable prana denotes the air that leaves from the body. Ayama has two meanings.

(i) to elongate

(ii) to withhold

MEDITATION

Overcoming the fluctuations is meditation. Meditation is the study of deep concentration, calmness and tranquility of the mind.

SPEED

Speed may be defined as the capacity of the individual to perform successive movements of the same pattern at a fast rate. (Yobu, 1988)
**STRENGTH**

Strength is the ability to overcome resistance or to act against resistance. (Singh, 1991)

**ENDURANCE**

Endurance is the capacity of a muscle to exert force repeatedly against some resistance over a period of time. (Yobu, 1988)

**FLEXIBILITY**

It is defined as the range of possible movement about a joint or sequence of joints. (Clarke, 1978)

**EXPLOSIVE STRENGTH**

The ability to expend energy in one explosive act or in a series of strong, sudden movements as in jumping or projecting some object, as far as possible (kent, 1994).

**AEROBIC POWER**

Maximum rate at which an individual can consume oxygen during the performance of all-out, exhaustive exercise, the “best” index of cardio respiratory fitness. (Kennet, 1996)
ANAEROBIC POWER

The maximum rate of energy released for muscle work. (Fox et al., 1993)

RESTING HEART RATE

The heart rate beat or heat frequency is defined as the frequency of heart beats in one minute, when a player is in resting condition. (Geddie, 1964)

BREATH HOLDING TIME

This is the duration of voluntary holding of the breathing after the maximum inhaling. The holding of breath is performed for a maximum period, which an individual is able to withstand, without restoring to normal breathing.

PSYCHOLOGY

Psychology is defined as “the scientific study of behaviour and mental process” (Crider, 1989).

SPORTS PSYCHOLOGY

Sport psychology is the branch of sports and exercise science that seeks to provide answer to questions about human behaviour in sports.

ANXIETY

It is a negative emotional state with feelings of nervousness, worry and apprehension associated with activation or arousal of the body (Weinberg, et al., 1995).
Anxiety is defined as a tense state of such severity. The work efficiency was interfaced with wand medical advice which is characterized by one or more of the following complaints. Persistent feelings of tension and strains, irritability, unremitting worry, restlessness, inability to concentrate, feelings of panic in everyday life situations.

**COGNITIVE ANXIETY**

“Cognitive anxiety is mental component of anxiety and is caused by negative self-evaluation”.

Cognitive anxiety is characterized by “conscious awareness of unpleasant feelings about oneself or external stimuli, worry, disturbing visual images”. In sport, cognitive anxiety is most commonly manifested by negative performance expectations and thus negative self-evaluation (Martens et al, 1990).

**SOMATIC ANXIETY**

“Somatic anxiety refers to the physiological and affective elements of the anxiety experience that develop directly from autonomic arousal. It is reflected in such responses as rapid heart rate, shortness of breath, clammy hands, butterflies in the stomach, and tense muscles” (Martens et al, 1990).

**SELF CONFIDENCE**

Self-confidence is the belief that one that aids an individual to perform any desired behaviour successfully (Weinberg and Gould, 1995).
ACHIEVEMENT MOTIVATION

Achievement motivation is dominant motivational orientation in situations characteristised by the attainment of clear success or failure. The two motives are either to achieve success (mass) or to avoid failure (Bird and Cripe, 1992).