Chapter I

INTRODUCTION

By God’s grace the great Siddhars gave many arts to the world. They are 64 in numbers which include Yogam, Medicine, Astrology, Psychology etc… there is nothing in the world above this 64 arts. All the human activities are based on the 64 arts only. These 64 arts are combined together to form a unique art which is called as Varmaniam.

Medical treatment in the southern styles is identified with siddha, the traditional Dravidian system of medicine distinct from north Indian ayurveda. The Siddha medical system, otherwise known as siddha vaidyam, is also attributed to Agastya. Folklore traces Varma kalai to the god Shiva who is said to have taught to his son Murugan. While disguised as an old man, Murugan passed the knowledge of varmam to the sage Agastya who then recorded it and disseminated the skill among his students. It is mainly practiced in Southern kalaripayattu, where Agastya is worshipped before practising.

Historically, Varma kalai has been one of the arts taught to those of royal blood. However, even royalty were required to pass the stringent requirements for discipleship. The schools received nivandhanams (donation with high respect) from the ancient Sangam age Tamil Kingdom. The ancient Sangam age kingdoms of Cheras, Cholas and Pandyas had a long tradition of Martial Chivalry just like the Kshatriyas of the northern regions. Warriors refused to attack an unarmed opponent, instead meeting him on equal terms without weapons. Tanjore “Kuthu Varisai” was the domain of the Cholas. This was the ancient unarmed, kickboxing like art using rapid percussive strikes to bring down an
opponent. The Chera kingdom was closer to the borders of Middle and southern Kerala and had their own tradition of unarmed combat and affinity towards pressure point systems (Varmakalai.org). The warring states in South India refined the fighting skills and techniques prevalent in the area into a martial art form. The art flourished between the 13 and 16 centuries, becoming a part of the education of youngsters of that age.

The art was taught only to selected individuals, but due to the strict recruitments for new students it never gained large numbers of adherents. Due to its secretive nature, Varma kalai remained largely unknown even in India. Currently Varma kalai is practiced in almost all parts of Tamil Nadu and in the Travancore region of Kerala. In fact, the stronghold of Tamilian Varmam art is the area around Kanyakumari districts, which share borders with Southern Kerala, where the Thekkkan Kalari (Southern Style Kalari) system which devotes lesser time to weaponry and lays more emphasis on unarmed combat and Marma Adi techniques that the other two styles of Madhya Keralam (Central Style of Kalari – Palakkad-Cannanore- Malappuram areas) and Vadakkan Kalari (Northern Style– Malabar etc).

Travancore is not only a home of siddha medicine; it is the birth place of varmam. This healing art is transferred through generations by Guru Sishya method. From the place of origin (Travancore) the martial art varmam has migrated to several countries. Due to the infiltration of modern medicine varmam is not put to good use and has been stagnant (Subitha, 2012). Government and private organizations should take necessary steps, so that the great ancient endemic art, varmam could be saved from its verge of extinction and reach the goal (Subramaniam, 1994)
South Asian martial arts underwent a period of decline after the full establishment of British colonial rule in the 19th century (Zarrilli, 1992). More European modes of organizing kings, armies and governmental institutions, and the increasing use of firearms, gradually eroded the need for traditional combat training associated with caste-specific duties (Zarrilli, 1998). The British colonial government banned kalaripayat in 1804 in response to a series of revolts (Luijendijk, 2005). Silambam was also banned and became more common in the Malay Peninsula than its native Tamil Nadu. Nevertheless, traditional fighting systems persisted, sometimes even under the patronage of enthusiastic British spectators who tended to remark on the violence of native boxing and the acrobatic movements characteristic of South Asian fighting styles.

1.1: Varmaniam

Varmaniam is an ancient South Indian art, which is introduced by Siddhars; the varmam points and varmaniam thadaval are a part of the varmaniam art.

1.1.1: Divisions of Varmaniam

Varmaniam is mainly divided into two divisions namely, knoi nilai (diseased conditions) and kaaya nilai (injury conditions (trauma)). In both the divisions treatments are available in the form of both internal and external medicines. The internal medicines may be in the form of herbal powders, decoctions, medicated oils, rasayanams, lehyams, senthooram, parpam, etc. The medicine names indicated here are tamil language names.

The external medicine methods may be in the form of varmam point’s (vital energy points) stimulation treatment, thadaval murai (massage), adangals (releasing methods of vital energy blockage), otradam (giving heat energy by various methods),
suthiram (formulation of treatment method), poochu (external herbal paste application), oil application, etc.

1.1.2: Varmam (Varma Kalai)

In the Siddha system varmam area of medicine is an elaborate and perfected science called Varma Kalai or the art of vital points, where massage forms just one area of treatment. The depth of this varma science in Siddha is evident from the elaborate and extensive texts of Anatomy, Physiology, Diagnostic and treatment methodologies written on palm leaf manuscripts.

Varma kalai is an Indian word meaning "art of vital points". It is a component of traditional massage, medicine, and martial arts (Tamilnadu-Varma kalai, 2012) in which the body's pressure points (varmam or marma) are manipulated to heal or cause harm. The healing application called vaidhiya murai is used to treat patients suffering from paralysis, nervous disorder, spondylitis and other conditions. Its combat application is known as varma adi or marma adi, meaning "pressure point striking". Usually taught as an advanced aspect of unarmed Indian fighting systems (Stevens, 2009), strikes are targeted at the nerves, veins, tendons, organs and bone joints (Murugan & Chillayah, 2012)

Varma kalai (the art of varmam) has also been used to treat patients suffering from different problems. Diseases treated include Asthma, Diabetes, Spine problems, kidney problems, obesity, paralysis, neuro problems and many more. Varma kalai is considered to be very sacred. It is one of the oldest form of South Indian martial art and healing system. The aim of Varma kalai is to produce healthy individuals. The main purpose of this rare ancient art of varmam is to save the precious human lives.
The rationale of Varmam is that Varmams are energy points in the body mainly located on the skin and adjacent tissue. Injury to these points is one of the causes of illness in the body according to Siddha sages. The prana force or vital current of electrical energy flowing through the individual naadi is of very low voltage. Given the normal resistance of the skin, it would be impossible for the current to travel very far without the loss of signal strength. Here the Varmams come into play by acting as signal-boosting routing stations or step up transformers. The varmaniam thadaval process may seem quite simple, but very few people actually teach the real locations, the technique of approach and the degrees of manipulation of these points. Quite simply a wrong, method of stimulation or the direction of massage or even the amount of pressure applied can not only be useless but may cause serious blockages leading to manifestation of diseases in the long run.

The human body has 108 varmam points and is divided into two main divisions and two sub divisions. The main divisions are Padu Varmam (12 points) and Thodu Varmam (96 points), the sub divisions are Uzh Varmam (6 points) and Thattu Varmam (8 points) (Rajaram & Mohanaraj, 2010). These varmam points are Pranan (Vital energy) points and are medically considered as the most effective and the best psychological problem reliever. It is even an essential part of the complementary and alternative medicine. The varmam point therapy has a very vast scope and it encompasses of many different types of techniques.

1.2: Massage Therapy

Massage is also claimed to have more global effects on health. Massage therapy, the manual manipulation of soft tissue intended to promote health and well-being, has a
history extending back several thousand years. Recorded in writing as far back as 2000 B.C. (Fritz, 2000), massage was a part of many ancient cultures including that of the Hindus, Chinese, Egyptians, Greeks, Japanese, and Romans, and was often considered to be a medicinal practice (Elton, Stanley & Burrows, 1983). The Greek physician Hippocrates (460–377 B.C.) advocated rubbing as a treatment for stiffness; later, the physicians Celsus (25 B.C.–A.D. 50) and Galen (A.D. 129–199) wrote extensively on the medicinal and therapeutic value of massage and related techniques such as anointing, bathing, and exercise (Fritz, 2000; Salvo, 1999).

The benefits of massage such as improved circulation, relaxation, feelings of well-being, and reductions in anxiety and pain, all of which are endorsed as benefits of massage therapy by the American Massage Therapy Association (AMTA, 1999b). At the same time, numerous studies across several fields including psychology, medicine, nursing, and kinesiology support massage therapy therapeutic value. Field (1998) reviewed the effectiveness of massage therapy in treating symptoms associated with a host of clinical conditions, including pregnancy, burn treatment, postoperative pain, juvenile rheumatoid arthritis, fibromyalgia, back pain, migraine headache, multiple sclerosis, spinal cord injury, autism, attention-deficit/hyperactivity disorder, posttraumatic stress disorder, eating disorders, chronic fatigue, depression, diabetes, asthma etc.

1.2.1: Ayurveda Massage Therapy

Massage as a healing science has witnessed great popularity and increasing acceptance all over the world during the past decade. The popularity of massage therapies as an effective anti-stress programme is one of the major factors leading to its
commercialization. Recently therapeutic massage started becoming very popular, notably Ayurvedic massage which is being offered in almost all major spas in the world. Massage is a simple act of restoring blood circulation, muscle relaxation, lymphatic drainage and to some vital point stimulation. Very few people know that the massage practice followed by Ayurveda originated from the Siddha system.

In Ayurvedic massage therapy, Susruta has mentioned that vyayama makes the body stout and strong, helps the symmetrical growth of the limbs and muscles, improves the complexion and digestive fire (power), prevent laziness and makes the body light and glossy, firm and compact. It gives the power of ending fatigue and weariness and the variations of temperature (cold and heat) thirst etc… and ultimately leads to health existence. According to Ayurveda, physical and massages are very closely related with each other. Massage which is positive treatment of vyayama forms preliminary measure of abhyanga as it consists of lubrication, rubbing and bath and form an important method in preventive and curative of many diseases. Massage is generally divided into three main divisions viz. (a) Dhehamardhanam or Athletic massage for development of strength and formation of the body, (b) Samvahanam or Medical massage which include pressing of limbs comfortably in a soothing position, when the subject is retired to bed, (c) Keshamardhanam or Shampooing of the hair. Apart from these three several other process of dexterous manipulation in massage which are said to be useful in the treatment of various diseases or being practiced in India from time immemorial.

1.2.2: Varmaniam Massage (Varmaniam Thadaval) Therapy

Varmaniam massage therapy is an ancient form of treatment that is now gaining popularity as part of the complementary and alternative medical therapy movement.
Massage is mainly used to promote relaxation, treat painful muscular conditions, and reduce anxiety (often described in terms of “relief from stress”). Practitioners also claim to bring about short term improvements in sleep disorders and pain, conditions known to be exacerbated by anxiety, and varmaniam massage is widely used for these indications.

Varmaniam thadaval massage is an integral part of the varmaniam system of healing. Massage promotes physiological and psychological changes in the subjects and adults. It also maintains health and vigor, and is an aid in preventing the onset of degenerative diseases in the aged. Various forms of massage play a significant role in varmaniam treatment and in self-maintenance regimes.

1.2.2.1: Psychological Concepts of Varmaniam

The proper flow of vital energy throughout the body is much needed for maintaining the normal physiological and psychological coordination of the body.

The psychological problems may arise if any blockage or injury to the saram concerned for psychological part as well as to the physiological part to some extent. Due to the blockage or injury to the flow of energy there may be a decrease in pranan (energy) which in turn affect temperature maintenance of the body which ultimately affect the suzhumunai saram. This is responsible for the development for psychological disorder.

1.2.2.2: Saram

Saram is the flow of energy which regulates the 64 kalaigal (64 arts) in the human body. Saram flows through the pathways of 3 naadis, they are idakalai, pingalai and suzhumunai. Idakalai is the cold energy, pingalai is the hot energy, and these two energies are kept in harmony by the suzhumunai.
1.2.2.3: Diagnosis of Psychological Disorder

The key parameter for the diagnosis of psychological disorders is the analysis of bootha naadi. Bootha naadi is one of the methods of pulse diagnosis system. This is located in between the thumb and index finger, the pulse felt there is bootha naadi.

1.2.2.4: Treatment

The ultimate varmaniam treatment for psychological disorder is nokku varmam (highly concentration technique), suthiram (formulation of treatment method) and vaasi (breathing concept technique).

1.3: Psychology

Psychology (From Greek ‘breath, life and soul) is an applied discipline involving the scientific study of mental function and behavior, with particular emphasis placed on the relationship between thought and physical action. It includes many subfields of study and application concerned with such areas as human development, sports, health, industry, media, and law. Psychologists explore concepts such as perception, cognition, attention, emotion, phenomenology, motivation, brain functioning, personality, behavior, and interpersonal relationships including psychological resilience, family resilience, and other areas. They attempt to standardize the role of an individual in social behavior by exploring the underlying psychological and neurological processes and employ empirical methods to infercausal and correlational relationship between psychological variables. Stress, anxiety and depression are the most common psychiatric conditions seen in the general medical setting.
1.4: Sports Psychology

Sports psychology is defined as the scientific study of human behaviour in sport. Similarly the other discipline within sports and exercise science, sports psychology can be applied to varied skilled movement, physical activities and exercise programmes such as, corporate fitness, exercise rehabilitation and health oriented exercise programmes as well as traditional physical education and competitive athletics (Cell, 1972).

Sports psychology is the study of the psychological and mental factors that influence and are influenced by participation and performance in sport, exercise, and physical activity, and the application of the knowledge gained through everyday settings. In sports performance, psychology is playing an important role, particularly with respect to the improvement and maintenance of athletic performance.

Sports, besides requiring certain physical attributes on the part of the athlete, also require specific psychological characteristics. To take part in sporting activity, an athlete needs to manifest competitiveness, self assertion, independence, controlled aggression, the will to win and the ability to dominate his or her opponent. These attributes are the same as those that are designated stereotypically ‘musculine’ – that is normal desirable and appropriate in the male and by contrast, abnormal, undesirable and in appropriate in the female.

Sports psychology is an aspect of sport treatment and preparation; this science is primarily directed at assisting individual athletes and teams maintain an optimal balance between mind and body, both in terms of the physical execution of the technical aspects of the sport and the related functions of emotion and mood. Many athletes who possess superior physical gifts are rarely able to seemingly combine athletic talent and mental
control; sports psychology is directed at the building and reinforcement of that connection.

The main focus of social issues in sports behaviour is exploring the socio-psychological issues relating to sports performance. As a holistic approach, health psychological theories emphasize the fact that behavioural change is anchored in a psychological, social and physiological context (Biddle & Fox, 1998). The importance of the interaction between these factors is underlined by health psychology research, which shows that these factors in combination influence the individual’s health status and ability and will to change behaviour (Biddle & Nigg, 2000; Roessler & Ibsen, 2009).

### 1.5: Neuropsychology and Biopsychology

Neuropsychology is a branch of psychology and neurology that aims to understand how the structure and function of the brain relate to specific psychological processes. It is scientific in its approach and shares an information processing view of the mind with cognitive psychology and cognitive science. Neuropsychology is seen as a clinical and experimental field of psychology that aims to study, assess, understand and treat behaviors directly related to brain functioning.

Biopsychology is a branch of psychology that analyzes how the brain and neurotransmitters influence our behaviors, thoughts and feelings. This field can be thought of as a combination of basic psychology and neuroscience. Many psychology programs use alternate names for this field, including biopsychology, physiological psychology, behavioral neuroscience and psychobiology. Biopsychologists concentrate their research on how the biological processes interact with emotions, cognitions and other mental processes. The study of biopsychology includes understanding the brain,
neurotransmitters and the nervous system. The Central Nervous System is composed of the brain and spinal cord. The outermost part of the brain is known as the cerebral cortex which is responsible for functioning in cognition, sensation, motor skills, and emotions.

Broadly, regular exercise results in physiological changes and adaptations in the human body. Studies have shown that regular aerobic exercise is associated with lower sympathetic nervous system and hypothalamic-pituitary-adrenal (HPA) axis reactivity (Crews & Landers, 1987; Åstrand et al., 2003; Jackson & Dishman, 2006).

The brain parts which are involved in psychological disorders and their functions are given below

1.5.1: Frontal Lobe

The main purpose of the frontal lobe is control of movement (co-ordination). It is also thought to be responsible for behaviour, character, emotional state, short-term memory and planning. Think of the behaviours that are often displayed when someone is psychotic. They often have poor concentration, they can be emotional or lack emotion and display odd behaviours. Movement can also be random and disjointed.

1.5.2: Parietal Lobe

The parietal lobe is involved in long-term memory, obtaining and retaining accurate knowledge of objects, sensory speech (responsible for perceiving the spoken word). When a person develops certain mental illnesses, these pathways/speech may be affected. Hence someone with schizophrenia, when psychotic, may develop a language of their own or words of their own, called neologisms. Often people’s ability to retain information is limited.
1.5.3: Temporal Lobe

Roles of the temporal lobe include, auditory (*hearing*), the area that receives and interprets impulses from the inner ear, olfactory (*smell*), the area that receives and interprets impulses from the nose, taste, the area that interprets nerve impulses from the tongue. The cells in this area receive and interpret impulses from the various parts of the body, i.e. nose, taste buds and ear. When someone is psychotic they may be hearing voices, but the parts of the ear usually involved in hearing (*the anvil hammer, etc.* ) are not physically moving from sound waves. However, the impulses in the brain are working and sending messages, as if the person is hearing. This also occurs in relation to smell and taste – people may think the food is being poisoned because it tastes different.

The Cerebellum or "little brain" is similar to the cerebrum in that it has a highly folded structure and is separated into two hemispheres, deep inside the cerebellum is the limbic system or "emotional brain" and contains the following structures. Thalamus- has sensory and motor functions. Almost all sensory information enters this structure hypothalamus- involved in functions including homeostasis, emotion, thirst, hunger, circadian rhythms, and control of the autonomic nervous system.

1.5.4: Amygdala- involved in memory, emotion, and fear.

1.5.5: Hippocampus- This part of the brain is important for learning and memory for converting short term memory to more permanent memory, and for recalling spatial relationships in the world.

1.6: Stress

Stress has been identified as crucial in sport, influencing performance as well as social functioning (Jones & Hardy, 1990). Increased anxiety and burn-out are symptoms
which have been associated inability to manage stress in sport, as well as decreased self-esteem and performance difficulties. Stress is a normal physical response to events that make athletes feel threatened or upset athletes balance in some way. Stress leads to serious mental and physical health problems; stress response also reduces a sportsman rise to meet challenges. Stress affects the mind, body, and behavior in many ways, and every athlete experiences stress differently.

The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. They may become tense, their heart rates raise, they break into a cold sweat, they worry about the outcome of the competition, they find it hard to concentrate on the task in hand.

As the study of stress in sport has continued to develop, research has primarily focused on the athletes’ experience. While a focus on the athlete may be appropriate, it could be argued that there are other individuals who have to perform, such as the coach. Because of this, several researchers have devoted study into the stressful nature of sports coaching. Coaches’ performances are often judged by the success of their athletes (Gould et al., 2002).

1.6.1: Stress Indicators

Commonly in the sports field or in social life, stress occurs in certain occasions and this creates some signs and symptoms in the body. So far five stress indicators are studied they are; Physical indicator, sleep indicator, behavioral indicator, emotional indicator and personal habit indicator.
1.7: Anxiety

Anxiety is an unpleasant emotional state consisting of psycho-physiological responses to anticipation of unreal or imagined danger, ostensibly resulting from unrecognized intrapsychic conflict. Physiological concomitants include increased heart rate, altered respiration rate, sweating, trembling, weakness and fatigue; psychological concomitants include feelings of impending danger, apprehension and tension (Corsini, 1999).

Anxiety plays an important role in the acquisition of motor skills as well as in athletic performance. Anxiety can either enhance or inhibit performance whether its effect is positive or negative depends on how an individual athlete perceives the situation. Anxiety is a general term for several disorders that cause nervousness, fear, apprehension, and worrying. These disorders affect how we feel and behave, and they can manifest real physical symptoms. Mild anxiety is vague and unsettling, while severe anxiety can be extremely debilitating, having a serious impact on daily life (Neil, 1987).

Anxiety is one of the important psychological factors influencing sports performance. Anxiety which is a complex emotional state may be characterized as a general fear of foreboding usually accompanied by tension. Anxiety is related to facture, either real or anticipated. Conflicts among athletes can lead to unpleasant anxiety feeling and abnormal behavior as a result of faculty defensive mechanism by failure to fulfill ones personal potential. In athletes anxiety is characterized by fear of winning and losing, fear of aggression and pain. Nervousness can be experienced at various levels of intensity. Tension is another term used to describe the chronic, usually low level anxiety. Most of the athletes are susceptible for it.
1.8: Depression

Depression is a mental state characterized by feelings of extreme sadness or despair, a pessimistic sense of inadequacy and a despondent lack of activity that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration last for at least two weeks or longer. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. At its worst, depression can lead to suicide, a tragic fatality associated with the loss of about 850,000 lives every year (Corsini, 1999). Athletes are at risk for depression, high pressure sporting events, personal and team expectations and individual disposition may increase bouts of depression in susceptible athletes.

According to the traditional medical understanding of lifestyle, in regards to behaviour, the focus is on the individual’s responsibility for one’s own life and health. This can be achieved by stimulating the varmam points of the brain and by varmaniam massage using varmaniam techniques.

1.9: Need of the Study

The human life has become complex due to various reasons in the modern world. The modern way of life has lowered people’s biological fitness levels. People lead sedentary lives, as machines have made their life easy and comfortable. Lack of physical exertion has become a storehouse of unreleased tension. Modern man in the electronic and computer age tends to become complacent and forgets the need of physical treatment for his survival. Due to his luxurious, easy and comfortable life, has become an easy prey
to various fatal diseases. This can be made possible by paying due attention to physical and mental health and fitness. So, scientists, researchers and health experts have devoted their precious time to the field of physical, mental health and fitness.

Psychological preparation for sports is an essential aspect of successful sports performance at all levels. Elite sports performers make great use of psychological techniques before, during and after sports performance, both consciously and unconsciously. The higher the level of competition, the greater the psychological demands on the performer(s). Indeed, many sport psychologists would argue that psychological preparation for sports performance is the most important part of sports performance. Psychological preparation for sport is dependent on a wide range of factors, which differ for each individual sports performer. Therefore, understanding the underlying psychological principles and models will enable strategies to be adapted for a wide range of specific situations.

Anxiety, stress and worry are major areas of concern in sports. It was estimated that many athletes drop out of organized sports each year due to frustration and fear of failure. Many athletes thrive on the pressure and tension associated with competitive sport, a too many find that the experience precipitates feelings of apprehension and stress. Sport psychology is a separate but related study from sports medicine. A physically and mentally fit sportsman will achieve well in his life time. The improvement and maintenance of mental fitness or condition is perhaps the most important aim of Varmaniam treatment.

Varmaniam medical system has many disciplines one among them is varmam. Varmam a traditional south Indian art is now at the verge of extinction. The researcher
got interest in this medical system and he learned varmaniam at his younger age with many traditional practitioners from various parts of Tamilnadu and Kerala. In this part, he studied the varmaniam anatomy and physiology, diagnosis particularly by pulse monitoring, medications, psychiatry, body fitness, developing vital energy, health activities etc.

Being a physical educationist, the researcher introduced the varmaniam therapy with sports psychology. As this varmaniam therapy is applied in the brain area, it stimulated the brain parts and in turn reduced the psychological disorders. This art when introduced in the sports field, tremendous results can be obtained, which improves the psychology and fitness of sports persons. Based on the above concept an attempt has been made by the investigator to analyze the changes on selected psychological parameters subsequent to eight weeks of varmam treatment among men athletes.

1.10: Statement of the Problem

The statement of the problem was the effect of south Indian ancient art of varmam points and massage therapy to develop selected psychological variables for men athletes.

1.11: Objectives of the Study

1. To find out the psychological process which can be simply explained as the mental relaxation and relaxation of the muscles and tissues of the body which increases the oxygen and blood delivery to those areas of the body where the varmam points and varmam massage would be applied.
2. To find out the effect of varmaniam techniques in reducing the psychological variables (stress, anxiety and depression) in men athletes; if changes occurs, how they are related to brain.

3. To analyze whether the varmaniam techniques stimulate the brain areas, to reduce the psychological disorders for men athletes.

4. To recognize the varmaniam technique, varmam points or varmam thadaval which one is best for reducing the psychological problems?

1.12: Significance of the Study

The significance of the study would be to find out the purpose behind the varmam points and massage therapy, to alleviate pain and relieve stress, anxiety and depression.

The ultimate goal of research in physical education is to help coaches and physical educators to train their players based on the new concepts to improve their performance. The results of the study may be useful to the professional colleagues of physical education and sports in the following ways.

1. The findings of the study add the existing knowledge with regard to the selected variables among selected players.

2. The results of the study may provide guidelines, which help the physical educators and coaches in preparing the treatment schedules for their players in their respective games.

3. The finding of this study will add to the quantum of knowledge in the area of sports.

4. The study may help to assess the status of psychological variables of all athletes.
5. The unique aspect of this work is that it includes recommendations for the practical use of research findings.

6. This study may give assurance to the players to know his/her capacity for further improving the performance.

7. This study may bring a change in the views of the player on psychological abilities.

8. The research finding will bring to light the effectiveness of personality traits to increase the performance of players.

9. This study will create an awareness related to mental fitness and personality traits.

1.13: Hypotheses

1. It was hypothesized that the study would be given significant changes on selected psychological variables such as stress, anxiety and depression in men athletes due to the impact of varmam points and varmam massage therapy.

2. It was also hypothesized that there would be significant differences between varmam point and varmam thadaval treatment in altering the selected psychological parameters.

1.14: Limitations

The following limitations were considered while interpreting the results of the study.

1. The previous experience of the subjects in the field, which might have influenced on testing the variables were not considered.

2. Psychological factors, food habits, rest period, life style, extracurricular activities, etc., could not be controlled.
3. The atmospheric temperature, humidity and meteorological factors during treatment were also not considered.

4. Though the subjects were motivated verbally, no attempt was made to differentiate the motivation level during the period of treatment and testing.

5. The responses of 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' etc.

6. The accuracy and reliability of the subjects' responses to the questionnaire could not therefore be assessed.

7. The subjects for this study may differ in weights, geographic conditions, sociological factors and economical conditions.

8. The diet and nutrition of the subjects were not taken into consideration.

1.15: Delimitations

The study was delimited in the following aspects:

1. This study was only on male athletes from the different colleges of Kanyakumari district, Tamil Nadu, India.

2. The subjects were of the age group between eighteen to twenty three years and had played inter Collegiate level competition in various disciplines.

3. The study was spread over for a period of eight weeks.

4. The following criterion variables were selected for this study such as

   1. Stress
   2. Anxiety
   3. Depression
5. Only volunteer athletes were selected as subjects.
6. The subjects were motivated to take treatment properly.
7. The treatment was conducted in the evening, before warming up.
8. The selected variables were tested with standardized questionnaires as mentioned in the methodology.
9. Before and after treatment the subjects filled up the questionnaires.

1.16: Definitions of Technical Terms

The important terms used in this research study are defined below:

1.16.1: South Indian Art

As in other respects of Indian culture, South Asian martial arts can be roughly divided into northern and southern styles. The northern systems may generically be referred to as shastra-vidiya, although this term is often used synonymously with gatka. The main difference is that the north was more exposed to persianate influence during the Mughal period, while the south is more conservative in preserving ancient and medieval traditions. The exceptions to this rule are the northeastern states which, due to their geographic location, were closed off from most pre-European foreign invaders. As a result, northeast Indian culture and fighting methods are also closely related to that of Southeast Asia. In addition to the major division between north and south, martial systems in South Asia tend to be associated with certain states, cities, villages or ethnic groups.
1.16.2: Varmam Point

Varmams are the vital points in the body that act as energy transformers or batteries. They form centres for boosting the vital life-force Uyir Sakthi (pranan) flow through the intricate naadi system of the body. Nature, by its design, has protected these vital centers by placing them deep inside the body or by covering them with tissues inaccessible to normal attempts of breach. A varmam therapist needs to have a deep knowledge about the body's nervous, physiological and physical structures to do an effective treatment. There are only a few therapists existing in this world, and the modern siddha world is trying to preserve this art of healing.

1.16.3: Varmaniam Thadaval

Varmaniam thadaval is based on the fact that there are numerous vital points (Varmams) in the human body that are interconnected by channels in a definite way. The life force energy or prana flows through these channels and gets boosted at the said vital points or varmams. Any imbalance to this flow can cause diseases. This flow has many levels of governing capacities on various vital activities of human body and manipulating this flow can be used to destroy or cure the body. The act of restoring or damaging the vital flow can be achieved by varying pressures of pressure directly on to the varmams. In general massage these points and channels are stimulated to certain degrees, in a defined pattern to achieve a smooth flow.

1.16.4: Physical Indicator

The physical symptoms in the body is characterized by rise in heartbeat, chest pain, diarrhea or constipation, dizziness, nausea, aches and pains, loss of sex drive, frequent colds, etc.
1.16.5: Sleep Indicator

Regularly in the social life or in sports area, sleep indicator in stress field make some signs in sleeping related symptoms which are trouble in falling asleep, taking pills to get to sleep, nightmares or repeated bad dreams, awake feeling tired, more sleep or less sleep, etc.,

1.16.6: Behavioral Indicator

The behavior of an athlete with stress in sports area are isolating themselves from others, eating more or less, sleeping too much or too little, procrastinating or neglecting responsibilities, using alcohol, cigarettes or drugs to relax, nervous habits (e.g. nail biting, pacing), etc.

1.16.7: Emotional Indicator

The emotional symptoms of stress is characterized by moodiness, irritability or short temper, agitation, inability to relax, feeling overwhelmed, sense of loneliness and isolation, depression or general unhappiness, etc.

1.16.8: Personal Habit Indicator

The personal habit of an athlete with stress are memory problems, inability to concentrate, poor judgment, seeing only the negative, anxious or racing thoughts, constant worrying.

1.16.9: Pure Anxiety

Sufferers with this type feel stirred up, anxious, or nervous. They often feel uncomfortable in their own skin. They are plagued by feelings of panic, fear and self-doubt, and suffer the physical feelings of anxiety as well as muscle tension, nail biting, headaches, abdominal pain, heart palpitations, shortness of breath, and sore muscles. It is
as if they have an overload of tension and emotion. Pure Anxiety is increased activity in the basal ganglia, seen on both the concentration and baseline studies (Amen, 2009).

1.16.10: Pure Depression

The symptoms of “pure depression” include: a persistent sad or negative mood, a loss of interest in usually pleasurable activities, periods of crying, frequent feelings of guilt, helplessness, hopelessness, or worthlessness, sleep and appetite changes (too much or too little), low energy levels, suicidal thoughts or attempts, and low self-esteem. The SPECT findings that correlate with this type are markedly increased activity in the deep limbic area at rest and during concentration and decreased prefrontal cortex activity both at rest that improves with concentration. Deactivation of the prefrontal cortex at rest and improvement with concentration is findings that are very commonly, but not always present (Amen, 2009).

1.16.11: Mixed Anxiety and Depression

The combination of both pure anxiety symptoms and pure depressive symptoms shows excessive activity in the brain’s basal ganglia and deep limbic system. One type may predominate at any point in time, but both symptom clusters are present on a regular basis (Amen, 2009).

1.16.12: Over Focused Anxiety and Depression

People with this type have trouble shifting attention and tend to get locked into negative thoughts or behaviours. When this is combined with excessive basal ganglia activity, people get stuck on anxious thoughts. When it is combined with excessive deep limbic activity, people get stuck on negative, depressing thoughts. This type also tends to occur more frequently in children or grandchildren of alcoholics. SPECT findings that are
associated with this type show increased anterior cingulate gyrus activity and increased basal ganglia and/or deep limbic activity at rest and during concentration (Amen, 2009).

1.16.13: Temporal Lobe Anxiety and Depression

Temporal lobe anxiety and depression results too much or too little activity in the brain’s temporal lobes, in addition to too much activity in the basal ganglia and/or deep limbic system. The temporal lobes are very important to memory, moods, and emotions. When there are problems in this part of the brain people struggle with temper outbursts, memory problems, mood instability, visual or auditory illusions, and dark, frightening, or evil thoughts. There may be a family history of these problems or they can be triggered by a brain injury. SPECT findings in this type show increased or decreased activity in the temporal lobes and increased basal ganglia and/or deep limbic activity at rest and during concentration. When the temporal lobes become less active with concentration often people struggle with learning problems. When they are less active on the left side there is a tendency toward reading problems and irritability, when they are less active on the right side there is a tendency to have trouble reading social situations. It is possible to have decreased activity on both sides (Amen, 2009).

1.16.14: Cyclic Anxiety and Depression

Cyclic Anxiety and Depression result from too much activity in the brain’s basal ganglia and or deep limbic system. These “hot” areas in the brain act like “emotional seizures” as the emotional centers hijack the brain for periods of time. Like typical seizures, patients have little or no control over these episodes (Amen, 2009).
1.16.16: Unfocused Anxiety and Depression

Unfocused Anxiety and Depression may start in childhood and can be seen consistently throughout a person’s life. The SPECT findings show decreased activity in the prefrontal cortex at rest and during concentration along with increased basal ganglia and/or deep limbic activity (Amen, 2009).

1.16.17: Atypical Depression

Atypical depression is a subtype of major depression or dysthymic disorder that involves several specific symptoms, including increased appetite or weight gain, sleepiness or excessive sleep, marked fatigue or weakness, moods that are strongly reactive to environmental circumstances, and feeling extremely sensitive to rejection. People with atypical depression have often experienced depression first at an early age, during their teenage years (http://www.webmd.com).

1.16.18: Seasonal Depression

Seasonal depression is a mood disorder that happens every year at the same time. A rare form of seasonal depression, known as "summer depression," begins in late spring or early summer and ends in fall. In general, though, seasonal affective disorder starts in fall or winter and ends in spring or early summer. It was believed that certain hormones made deep in the brain trigger attitude-related changes at certain times of year (http://www.webmd.com).