CHAPTER - 1

INTRODUCTION

Physical activity and sports have emerged from a long historical background. It is a process that has taken place, and still takes place in various informal and formal ways. It has been a culture from the time of a primitive man to the present. Physical activity has played a vital role either directly or indirectly in the lives of all people.

Primitive men’s physical activities were devoted mainly for food gathering and recreation while in the modern competitive world, in the every sport men and women are in a race to excel other and competition has become a fundamental mode of human expression. Competitive sports have been one of the important means to achieve international recognition and prestige.

The challenge in education is not only to pass the knowledge of culture, but also teach for transfer by helping student to generalize their behaviour through commitment and responsibility according to their perception of the knowledge. This challenge, today, is becoming more glaring as the present day complex life style makes it increasingly less effective in promoting. Unlike past generations when crises occurred only occasionally, modern human beings live in crises economic, political, social, ecological both at home and world. These crises are natural spin- off from the great changes that are occurring. To survive them we are told even greater changes must take place. As old value dim and in same case fade completely there has involved a value crisis in the world today what to believe and whom to believe.
Health and Sports are major requirement for all the role of sports is achieving good health. Sports must become a part of a systematic learning process and its procedures practiced knowledge, skills and attitude must be developed as a basis for achievement of this goal.

Performance of a player in a sport competition is depends combinedly upon many factors. These physiological factors are - technical skill of player, tactics used by him and state of mind of the player. All these factors are crucial for utmost performance. The state of mind of the player has an executive function because at the time of sports competition it is mind which determines what is learn by one during past few years training.

In spite of the importance of this last physiological factor in the sports performance very little attention has been paid on this. State of mind of is very important aspect of sports performance because in the world of sports where many players are physically, technically and tactically similar, it is state of mind of players which plays a decisive role.

After increasing commercialization of sports on international level, the role of mind become much more decisive. Due to commercialization of sports, new types of pressures have been put on the sportsperson. The mind of sportsperson can be improved by training like the other factors. When more mental skills are learned by the sportsperson, he or she can apply this and gives his/her optimum performance.Undoubtedly, in future proper mental preparation of the players will become an integral part of the sports training programmes because of its importance.

Games and sports are a popular pastime for the young and the old, for boys and girls and for men and women. Sports are as old as the human society and it has achieved a universal status in the modern society. If now enjoys popularity which outstrips any other form of social activity. It has become an integral part of the educational process because in the regular syllabus of education physical education and sports have been included. The students are taught various games and sports in a systematic manner. Besides teaching the students are evaluated in their performance. Many
people participate in games and sports for getting enjoyment besides deriving physical, mental, social and emotional benefits.

Mental and behaviour functions of human and animal scientifically studied in psychology. A person who practised psychology and do research in this field is known as psychologist. These are also classified as social or behavioural scientists. Mental function and social behaviour of an individual tried to understand by psychologists together with physiological and neurological processes.

Many researches have been done in the psychology. These researches include functioning of brain, personality of an individual, attention paid by individual, motivation, emotion, behaviour and inter-personal relationships. Unconscious mind has been the topic of research for some psychologists. To determine co-relational relationship between many psychological variables these psychologists used empirical methods while in addition/opposition to these methods clinical psychologists depend upon inductive techniques and symbolic interpretation.

Assessment and treatment of mental health problems done by psychological knowledge. Psychological knowledge also applied for understanding and solving many problems related to different types of human activities. Psychologists involve in different areas, majority of them involved in providing clinical advice and counseling while some others are engaged in the industrial and organizational setting, human development, sports, health, media and legal fields.

Sports psychology is primarily interested in the analysis of behavior of sportsmen. Sportsmen are those who go into play field and play some game with the aim of higher competition in that particular game

Sports psychology in many ways is a fortunate scientific field of enquiry. Psychologists got enough chances to observe, describe and explain different psychological factors which influence multiple aspects of physical and sports activity. Athletes and coaches have often described the crucial
"Psychological factor" that results in a momentum shift during a game, or explained in important loss on the road as a function of the influential force of game location. While these "arm chair" opportunities are often afforded to us the fact that sport psychology is viewed as a science mean that the process of observation, description and explanation must be conducted in a systematic, repeatable and valid manner. Science allows us to go beyond speculation or opinion that is based upon subjective experience. Through scientific methods we can test our hunches about new psychological factor influences sports performance or new sport participation may influence the athlete's psychological development.

In all human beings there is a built in ambition to achieve, to mount the next step on the ladder and this flame of ambition must be so ardent that no obstacle can extinguish it. If sports and competition have social values, then each individual has the right to be successful. Proper setting of goals and evaluation of attainment can facilitate this right. Each human involved with sports has the responsibility to promote the right to be successful.

Sports involve extremely complex behavioral issues. As a consequence of intense competition sportsman's behavior may undergo important changes. Physical education scientists and coaches have not to be expert only in the matter of skill learning but also to be engineers who understand the mechanism of human behavior on the playfield, under extremely diverse situations. The modern sports training lays a greater emphasis on preparing the athletes psychologically than physically and thus lot of emphasis is being given to the psychological research dealing with psychological characteristics of the top level athletes, mental rehearsals of training task etc. Not only that, new field of psychology which has come up very fast and is still progressing in leaps and bounds is "Sports psychology". It has helped coaches to coach more effectively and athletes to learn more efficiently.

No training in the sports field is complete without reference to the psychological study and psychological training of athletes. All other factors-
biological and sociological being equal, psychological conditioning of an athlete decidedly determines his success or failure of competition.

Physical Education is a psycho social field. It has both psychological and social dimensions; it has both psychological education and technical aspects. Present time is the time of competition in all walks of life including sports activities. Therefore it is much more important to teach different types of skills of a game on technical and scientific ground.

Today performance in Sports not only demands systematic training to develop physical, physiological variable and technical aspect of Sports but also demands training and consideration of Psychological characteristics for success in this field.

All Sport is psychological as well as physical because it is led by mental images and thought patterns, your head, as psyche or physical conditioning. It will, however allow you to draw the most from the conditioning you have. If you have trained more and better, your present capacity will be higher than if you have trained less or less well. However, regardless of what your psyche in order to get the most from what you have. You have to rely on your head, your thoughts images, and mental patterns act as the control mechanism. Negative thought is particularly effective for destroying skilled performance.

In sports psychology we study behaviour of people related to sports. Actually, this is a specialization of a person within the brain psychology and kinesiology. In this psychologist tries to understand psychological and mental factors that affect sports performance, exercise and physical activity of the player and use these to enhance performance of a team or a player. By minimizing the psychological effects of injury and expected poor performance and controlling the emotions it improves the performance of a sports team or a player individually.

In fact, the psychologists are of the view that a certain amount of anxiety is helpful in raising the level of achievement or performance of
an individual but if its level is too high, it is going to hamper the performance of the same individual. Anxiety may be defined in two ways. It is a trait of the personality as well as a state of mind. Anxiety state means emotional state characteristics by apprehension of some danger right now. An anxious person thinks about the danger then and there. It may disappear after some time. Thus, anxiety is transitory in nature. Trait anxiety means a disposition to understand certain dangerous situation and make responses in this situation in different levels of anxiety. This idea has been elaborated by Spielberger (1966). “Sportspersons anxiety level also follows this pattern; players have trait anxiety in general when they think of success and failure in the outcome of the game. They also have state anxiety when special situations arise during the game or there are high stakes involved in the competition.”

A person who is a sportsman, he has good quality. Human being, who has physical and mental capacities, can be increased with the help of a competitive game. In Morden era each game is improving the level of standards means it increase considerably. It is difficult to maintain their dominance in the respective games. Performance of a sportsperson affected by their mental state which can be seen in the presentation of their games. Anxiety exists when a player doubt on his or her capacity which create the situation of stress. In this situation talent of the players do not play a decisive role. Of course, performance depends upon the way the sportsmen deal with ups and downs of the competition. ‘Athletic Insight’ is a journal of sports psychology it says- anxiety is of two types; trait anxiety and state anxiety. State anxiety is situational stress can be seen in the situation of the game. In the state of anxiety autonomic nervous system is aroused due to the natural reaction in any individual. On the other side of this journal, it discussed about the trait anxiety which is used by an individual when he or she is in stress. When the players who are in the stage of state anxiety and low level of trait anxiety deliver their better performances in a sports event. On the other hand, the players who have higher level of trait anxiety with a little state anxiety give lower performance than expected. Before the
beginning of a sports event, there is a pre-defined area known as ‘region of anxiety’. A player gives his or her better performance when anxiety level is at optimum stage. The fact that performance influenced by anxiety has more impact in a team game than a game with single player. This can be explained by an example: a badminton player has higher level of performance anxiety than a basketball player. In a game, in which many players participated, dominant and top players convert their performance anxiety into excitement. This excitement generated by performance anxiety stimulates positive hormones, in body of players. Stimulation of positive hormones ultimately paves the way of better performance for winning a sports event. A sportsperson whose mind interprets anxiety as a debacle often end up losing (Magar Prashant, 2009).

Anxiety affects the performances of the individuals ‘Encyclopaedia of Sports Science and Medicine’ (1971), states that, anxiety affects emotional stability, tough mindedness and self-confidence. If a person is emotionally stable, has a tough mind and high level of self-confidence, he can handle his anxiety in such a way as it becomes an asset and increases the level of performance. Catty (1983) has investigated the effects of anxiety on the performance finds that in simple performance, it has facilitating effects. But if its level is high, the effect is adverse. Effect of anxiety on performance depends directly on the type of task considered. In most cases, a heightened arousal state has been found to facilitate simple performances. On the other hand, as anxiety reaches a certain level, a breakdown of psychological and physiological integrative mechanism is often seen to occur, resulting in less efficient performance in more complex tasks. Anxiety has temporal relationship with performance. In general, anxiety level increases prior to a dangerous situation until they become relatively high just before it is encountered. During performance, anxiety is often lessened. The individual must concentrate on his own actions rather than on his internalized fears.
There is a close association between anxiety and motivation. Anxiety has both motivating and de-motivating effects. So, proper care is needed to use anxiety as a motivating factor. To make anxiety an asset for the sports person, anxiety training is helpful. In this field Marten’s (1977), work based on the theory of competitive anxiety is a significant contribution.

The close relationship between anxiety and sports-person performance is accepted by most of the researchers and need to be included as one of the variables for the present investigation.

In the sports psychology study of the application of many psychological factors, principles of learning and performance related to the human behaviour have done. In the present time of competition the psychological preparation of a team or player is much more necessary besides to teach the different skills of a game scientifically to the players. The preparation of a team should be done not only to play but also to win the sports event. For winning the game proficiency in the skills of player are necessary.

The study of the psychological characteristics of sports persons 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 selection and preparation of sports person for competition. Horn (1992) describing the nature of sports psychology is a difficult task because so many different perspectives on the field exist. Not only there are differences in definition of the term but there are also in the role that sports psychologists are presumed to play.

Performance of a player can be determined by the psychological variables like, stress, anxiety and achievement motivation etc. The psychological theories, given in the sports psychology and accepted by sports psychologists, for psychological evaluation techniques and
intervention manoeuvres as an effort to help the players to get their optimum performance. The human behaviour and their mental aspects of performance are studies and analysed in the sports psychology. Josiver (1986) states that psychology can help the sportsmen in the activity of sports excellence. Sports psychology plays an excellent role in the selection of players and for choosing methods to train players besides choosing training material for players. So it is very important to make emphasis on the fact that psychology and sports can be obtained optimally by using suitable manoeuvres.

Anxiety may be positive motivating force or it may interfere with successful athletic performances. As a positive motivating force it can be instrumental in motivating the athlete to work harder to find new and better ways to improve performances and to help set goals. The athlete who uses his anxiety in this way will seek out ways to improve himself. This not only reduces his anxiety but helps him increase his athletic skills and self confidence. As a negative motivator anxiety may interfere with productive as well as constructive thinking. Athletes may attempt to handle anxiety by denying the need to work hard. This can lead to the development of poor work habit or athletic techniques. These often lead to failure and, in turn, lack of confidence and increased anxiety.

Motivation is essential to the learning process. The old saying "you can lead a horse to the water but you cannot make it drink," is an excellent way to describe the function of motivation in learning. People can be placed in learning but if they are not motivated, they will not learn. In the absence of proper motivation, not only the learning process but life itself becomes an uphill task. Motivations then is considered as that process by which a child may be prepared to respond to the situations which are directed towards the achievement of certain pre-determined goals or objectives. In the field of physical education and sports, no athletes can win or show better performance without motivation.
An understanding of the nature of achievement motivation is helpful in understanding kinds in general as well as individually in terms of what they do, how well they do and how long they continue in sports. Once, one comes to know as to what works as a "driving force", it becomes easier to guide the athlete into achieving excellence. When the ambition for better achievement dominate over a player then restless driving energy, yielded by driving force, try to achieve excellent performance, to improve upon his/her past records, to beat his/her opponent player, to do better things and to find an unique solution of difficult problems.

Achievement needs often interact in positive ways, but may also produce excessive task related anxiety, achievement motivation scores are not always highly predictive of superior athletic performance, but do provide a psychological tool with which an overall pattern of behaviour may be assessed.

In general, motivation reveals the reasons of people’s participation in the sports and games. Motivation urges the young people to play game, to do good when competing to struggle, when many to prove something, when challenged to escape, when obliged to be aggressive and to pass through life’s many dangerous situations.

Motivation is a process by which an individual is inspired, guided or coaxed to do something. It is one of the important conditions rather than the central core of life. In other words it is that psycho-physical condition of the organism which causes an individual to work or strive to fulfill his needs. In the absence of proper motivation not only learning process but also life itself becomes an uninteresting uphill task. Motivation then is considered as that process by which a child may be prepared to respond to situation which is directed towards the achievement of certain predetermined goals or objectives. In this field of physical education and ports, no athlete can win or even show better performance without motivation.

According to Atkinson, achievement motivation actually combines two personality constructs. The motive to approach success is the capacity to
experience pride or satisfaction in accomplishment, and the motive to avoid failure is the capacity to experience shame or humiliation as a consequence of failure. Everyone has both characteristics. We all like to be successful and we all feel good when we accomplish something. On the other hand, we all feel badly when we make mistakes, perform poorly or are unsuccessful in our achievement efforts.

As we can see, motives influence decision and in turn practice is more effective and efficient in activities when athlete is highly motivated for his purposes. In turn it can be expected that skill will be improved and that athlete will develop more favourably in the interest of sports. But not all athletes reveal the same motive, nor are they developed to the same extent.

Further more a person can show a high achievement motive for one activity. Characteristics have been modified that are associated with those people who have been termed high achievers. Through an analysis of their behaviour it becomes possible to formulate notions about the training of others who do not demonstrate same behaviour. If we can assume that achievement demonstrated in any given situation is reflected by capabilities and motivation than we readily reduce the importance of understanding motivation and how to improve the need to achieve in those who are apparently poorly motivated for special activities and responsibilities.

Aggression is a part of human behaviour and is necessary for an individual to live and struggle for higher achievements. Struggle for supremacy, dominance and excellence in sports obviously involve aggression. Aggression, in one form or the other, is inevitable and inescapable in sports activities. When hostility takes over aggression, the situation becomes alarming and it becomes an anti-social behaviour. Aggression may help in the performance of an athlete because it arouses the athlete to put in harder effort for the success of the team. Athletes must be helped to reduce and control aggression in order to play calmly and perform the best. Appropriate level of aggression, as permitted under the rules
governing the game, tends to improve the skill and enhance the effort, and on the other hand, high or low level of aggression will hamper and retard the performance in sports.

Athletes who are motivated by aggressive neurotic or competence elements will exhibit these components in their personal styles and expressions. Competitive styles are characterized by certain personality traits such as individualism, egocentricity and tight, rigid, restrictive defences. In common usage the term "personality refers to vaguely conceived human quality which everyone recognizes as a special importance in interpersonal relation. It is a term frequently used in conversation, particularly when the topic involves social interaction. Individuals are spoken of as having difficult personalities "charming personality", "pleasing personalities", "ugly personalities" and the like people are also changed having "no personalities" or are said to be "full of" or radiating personalities in common conversation then personality is what one has or lacks as a person.

Most believe that aggression like many other forms of motivation is elicited by a wide range of external events and stimuli. In other words, it is often "pulled" from rather than "pushed" or driven from within. One factor that has often been suggested as an important cause of aggressive motivation is frustration the thwarting or blocking of goal directed behaviour. In other words, people experience the desire to harm others when these individuals or perhaps other have prevented them from obtaining what they want. Frustration does increase the likelihood of aggression, especially when it is unexpected and viewed as unfair or illegitimate (Berkoitz, 1989). Another cause of aggressive motivation involves direct provocation from others.

The aggressive constructs is a complex one, that there are individual difference in the innate, potential to aggress and that the aggression can also be learned or stimulated by specific situations. When aggressive energies are expressed within the rules of a sport and channelled into skill by a mature athlete, then one may witness a powerful and inspiring performance.
Aggression for aggression sake should not be sanctioned. It is self-defeating and debilitating to others. The outstanding athletes enter competition with control and not with impulse. The aggressive athlete will be more active, eager, strong, highly motivated and likely to seek to vanquish any opponent.

Sports may be arranged in a scale according to the intensity and type of aggression inherent in each. Some sports require that a great deal of physical force to be directed against one’s opponent whereas others require forceful actions against the environment. Many sports however require that individual aggression should be within structure rules and specified conditions. Sometimes in order to overcome stress caused due to competition players become aggressive. As in life, in sports there is an important problem: how to encourage aggression of optimum amount at the time of its need and to control it at the time when it is called for? Thus, the aggression in sports should be considered of ambiguous nature. This ambiguity is in the form of physical action against the players within the rules of the concerning game, like: American Football, Boxing and Wrestling; whereas in other sports like: Basketball, Handball, Water-Polo and Ice-Hockey the directions, amount and incidences of aggression are highly subjective and dependent on the degree of aggression tolerated by officials, fans and the team mates. The later groups seems to offer the most problems when attempting to curb aggression because in these sports aggression is a somewhat vague construct, an idea left to each player and coach to explore within each contest and within various sets of social cultural sanctions (officials, fans and national settings etc.).

Along with aggression a great deal emphasis in sports is also placed upon competing against some standard of excellence and this is exact focus of achievement motivation theory.

Aggression among human is as old as human race. Beginning with Cain’s murder of Abel and extending throughout history, people have fought each other in tribal wars, ethnic and religious wars, and in worldwide conflicts. The word aggression which is also a psychological factor comes
from the Latin root aggredial (or toward) and gradior (walk) which means to walk with the intent to “hurt” or “harm”. Aggression has directional components some aggressions are directed in word and in its extreme form many culminate in self destructive behaviours including suicide. The idea that aggression and performance are thought to be positively related in sports setting is not surprising. Aggression is defined as the expression of stimulus in the human being. This expression may be either physical, verbal or gesture upon one person by another person. Actually aggression is not an attitude of an individual but it is behaviour of an individual. The reflection of aggression can be seen in the acts of a person with the intention to injure other. Thus, in its broad meaning aggression includes all acts such as physically hitting another and verbal abuse used by athletes, coaches or spectators.

Aggression could have positive influence on the performance outcome of an individual or team if the aggressive behavior harmed the opposition either physically or psychologically weakening their resources. Aggression could also improve a team's performance outcome by improving the process of that group. Aggressive behavior is quite visible in sports. To observe aggressive sports behavior we could attend a kabaddi game and watch player’s fights for points or we could watch runners throw elbows and Jostle of Position in 1500 mts race.

More recently the instinct view of aggression has received its impetus from ethnologists such as Lorenz. He believes that aggression builds up within an individual and that this builds up needs some form of release. The release may occur through either on acceptable or an unacceptable (antisocial) act. Sports would serve as a suitable vehicle, for example, whereas war would not. According to Lorenz, sport is sought as a substitute of war because in all sports, due to competitive situations, some degree of opposition between opposite teams and players allows aggression to be dissipated in an acceptable manner.
According to Singh (2008) aggression is a characteristic of negative nature. This characteristic is also associated with sports. Of course, aggression is an intentional physical or psychological behaviour to harm another person. It is an important topic of academic research to study aggression in sports on all levels. Now a day’s aggressions in sports become a social problem. The international society of sports psychology also recognised aggression as a social problem both on and off the playing field and also recommended ways to curtail this behaviour. Due to gender biasness, research on aggression is limited in the sports with collision are traditionally only available for male not for female and so no research have been done on female aggression. Many collision sports related to male have amended rules and these modified rules disallow certain types of contact in the female collision sports, for example- ice hockey, lacrosse. A gap in literature regarding aggression and contact sport type is created due to this type of activity.

The relationship between aggression and female collision sport athletes may be different from the relationship for male athletes. The Revised Frustration-Aggression Theory would predict that through participation in sport, females would learn to be as aggressive as their male counterparts because of the opportunity for observational learning and the presence of situational cues and reinforcements. More specifically, if women played the same collision sports as men they would show similar aggression levels because of the similar sport socialization processes. (Keeler, 2007)

Stress is an important psychological factor. It is an important part of life and so it is natural by product of all our activities. As life is dynamic process forever changing and consequently stressful. Our body secrets many chemicals due to many psychological reasons. Due to acute stress adrenal gland of our body secrets a chemical known as adrenaline hormone. This hormone is also known as fight-or-flight response of the human body. The effects of adrenaline hormone can be seen in the form of physiologic changes like- increased heart rate and high blood pressure, faster breathing, tension in muscles, dryness in mouth and high blood sugar. In other words,
stress is a state of increased arousal, which is essential at the time of danger. Besides adrenaline hormone substance like: testosterone and HGH (human growth hormone) also secreted by the human body. Stress is advantageous up to a certain amount because one can perform with greater energy with the effects of these hormones.

Performance of sportsperson depends upon the level of stress. At a certain level of stress a player can give his or her best performance while under too much stress it is difficult to motivate oneself to give better performance. When the level of stress is optimum then one will get benefit of alertness and activation which ultimately pave the way for better performance. On the other hand when the level of stress is excessive it not only lower down performance but also disturbs sports-enjoyment. In the following situations excessive stress occurs:

- Firstly, when one thinks that what is being asked I out of his/her abilities.
- Secondly, when much more is asked in a very small time span.

Stress can also affect negatively the performance of a player. There are following negative effects of stress:

- In the way of judgments, sometimes quick judgment and sometime late judgment.
- Stress causes competition to be seen a threat not a challenge.
- Negative thinking promoted by stress ultimately damage the positive frame of mind which one need for the competition of high quality, stress damage self confidence of sportsperson, stress narrow down attention towards sports competition which ultimately lower down skills and performance of the players.

Dr. Hans Seley(cited by Anspaugh,D.J.,Hamrick,M.H. & Rasato, F.D.1994) was the first to define the term stress as the ‘nonspecific response of the body to any demands made upon it’ which can be characterized by
diverse reaction such as muscle tension, acute anxiety, increased heart rate, hypertension, shallow breathing, giddiness, and even joy. From a positive perspective, stress is a force that generates and initiates action. Using Seley’s definition, stress can accompany pleasant or unpleasant events. Seley referred to stress judged as “good” eustress. This form of stress is the force that serves to initiate emotional and psychological growth. Eustress provides the experience of pleasure, adds meaning to life, and fosters an aptitude that tries to find positive solutions to even complex problems. Eustress can accompany a birth graduation new car, a new friend, accomplishment of a difficult task and success in an area that has previously produced anxiety. Distress on the other hand is stress that result in negative responses. Unchecked, negative stress can interfere with the physiological and psychological functioning of the body and may ultimately result in disease or disability. Stress also provides humans with the ability to respond to challenges or dangers. It is vital to self protection and also serves as a motivator that enhances human ability.

Stressors can be considered to be beneficial when they lead to accomplishment and creativity. The stressors should be viewed as challengers and obstacles to be overcome on the path leading to success. On the other hand, when stressors control the individual, a feeling of helplessness develops in them that could result in failure.

Each one of us has our own level of stress, a level of equilibrium within which stress could be stimulating experience. It is only when stress goes beyond this level it become distress and difficult to manage. ‘When it happens everything appears to go wrong, in this situation, one will feel hopeless, helpless and his action become dull. This results in reducing individual efficiency and effectiveness in playing his assigned role in the family, institution, and organization, which further compounds his misery.

All of us face stress at some point of time in our life. Irrespective of profession, strata of society to which we belong, or our position in which
organizational hierarchy stress affects everyone. We can say that life is full of stress and strain and cope up with it is a continuous struggle.

Stress can either be friend or foe. It can bring or intensify heart disease, peptic ulcers, and hypertension. Unfortunately, too many people react destructively to stress. Stress can lead to significant loss in body weight. Many do not know how to deal. Medical progress in recent years has not been one that keeps man imbalance as a bio-psycho social being.

Every age has its own problems or consequences and this century is no exception. Stress is one of the biggest problems of the present times. Each person has to face enormous environmental demands. Whenever a person finds that he is unable to cope up with the environmental demands of the time, he feels stressed. In case of players prospects, performance, energy and being left out of the team creates stressful for him. The stress may be of three types; acute, episodic, and chronic. In the case of sports person’s mostly episodic stress is experienced. It refers to the stress during the time of playing a match or participation in a tournament or going for championships. It may subside or eliminate after the competition is over. However the other two types of activities are sustainable and can affect episodic stress. According to Sandhu, (2002) “Sports competitions, involving individuals and teams, are full of stress encounters. While physical work may produce some stress in an individual; the psychic aspect of sport may indeed be the most powerful stressor operating in the situation.”

The level of stress varies from training session to actual performance session. Crisfield (1976) contends that there is a need to develop psychic stress tolerance in the players on the one hand, and on the other, we need a method to reduce it, if possible without any loss to performance.

Can there be a life without some kind of stress, is a question which is always answered in affirmative. As Symond (1981) says, “stress is an integral part of our lives. It is a natural by product of all our activities.
Life is a dynamic process and thus forever changing and stressful. Our body responds to acute stress by liberation of chemical. This is known as the fight-or-flight response of the body, which is mediated by adrenaline and other stress hormones, and is comprised of such physiological changes as increased heart rate and blood pressure, faster breathing, muscle tension, dilated pupils, dry mouth and increased blood sugar.” To defend oneself in the situation of danger organism occurs due to arousal caused by stress. As at the time of danger adrenal gland secrets adrenalin hormone like testosterone and HGH (human growth hormone) also secrets from endocrine glands of human body. Stress is good up to certain limit. Under this limit sportsperson perform with greater energy and give better performance.

Ferris (1981) asserts that the sports, besides requiring certain physical attributes on the part of the player, also require specific psychological characteristics. To be able to participate in sporting activity, a sportsperson 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 ‘masculine’ that is normal desirable and appropriate in the male and by contrast, abnormal, undesirable and in appropriate in the female.

There is a close relation between stress, pressure and performance.

Stress caused by the pressure and demands gives dual effects—positive and negative both. Following “Inverted U” graph explains the relationship between pressure and performance of a sports team or a sportsperson with respect to a sports event.
First half i.e. left hand side of the above “Inverted U” graph between pressure and performance, shows that as pressure increases to do certain job or task, a person or player focuses his/her more attention on the task. Thus intensity of attention increases up to the optimal stage that is, the area of the best performance.

Second half of the above graphs i.e. downward curve shows that after optimal stage, as pressures going to increase performance begin to decrease. This shows that after a certain stage enough pressure on us gives negative effect on our performance. This is due to the fact that one cannot be more conscious more than few thoughts at a time. In this situation we become uncomfortably stressed and anxious. In this situation negative thoughts begin to come in our mind and at this moment we begin to feel that our needs exceed the personal and social resources that an individual able to mobilize. Such type of feelings and thoughts compete with our performance of the task for our attention capacity. Consequently, our brain becomes overloaded due to negative thinking.
This shows that ability to deal with large amounts of information received by the mind of a person is reduced due to the stress. Thus, in this situation a person is unable to take account of all available information and consequently his/her decision making capacity and creativity impaired. This type of inability of a person accounts for common observation that a person, who is highly stressed, will persist in a course of action even when better options are available for him. This can also be explain by an example that when an anxious person put under a little extra stress give the best performance while a calm person may need additional pressure to give better performance.

Male and female sports people not only differ physiologically but also psychologically. Many traits that are considered normal for the male and female possessing these traits are considered to be deviant. The typical feminine temperament includes being passive, non-competitive, submissive, nurturing and non-achievement oriented. These characteristics are supposed to be possessed naturally only by women and have been designed feminine as a result. Men manifesting such traits are deemed to be out of the range of the normal male, and indeed are treated derogatorily, just as so called ‘masculine’ women are treated as social misfits.

Gill (1948) asserted that even the most documented sex differences are neither universal nor absolute. Most investigators acknowledge that biological factors have some influence on behavior. But those biological factors are not the absolute determinants. Even those gender differences with the strongest supporting evidence do not parallel the dichotomous biological sex differences. Instead the behaviours of females and males overlap considerably. About 40% of females are more aggressive than the average male. Similarly, many females are more competitive than many males. Even if biological sex has some influence on competitive behaviour, the social psychological aspects of gender in sport and competition pose more questions and implications for sports participants.
Monagan (1983) suggested that many women are leaving co-ed sports situations and are favouring single-sex activities. It is possible that this is a manifestation of the desire to avoid situations of social comparison and situations where the opponent is perceived as being high in ability. But of course, not all physical activities and exercise are of this nature. Many women run, cycle, work out in the gymnasium, attend aerobics and keep fit classes. Research evidence has shown that many women are likely to become involved in activities which focus on health, appearance and which provide social out. All this warrant for extending the study to both male and female sports person.

Sports performance of players is also determined by the attitude of the players. If the attitude of the players are less and they cooperate their fellow players in their performance the satisfaction is good because at last team wins but if attitude is more performance is decreased.

Attitude towards Physical activity, which includes the set of beliefs that an individual has about the personal and social worth of participation, the possible health benefits, the expected nature of participation in terms of satisfaction and self-fulfillment, is a decisive factor in the development of an individual's overall outlook with regard to physical activity.

The development of attitude is a cyclic process with considerable modifications especially during childhood. It is now universally agreed that one's childhood years are important in determining attitudes and habits in later life, including those related to physical activity. If one is concerned not only with the present all round development of children but also their continued participation in sports, games and other physical activities, the development of a positive attitude becomes an important factor.

The shaping of positive and habit patterns toward physical activity is crucial because relationship with the motivational set of the learner. Many factors, including the cognitive and psychomotor, determine what is learned, but attitudes usually determine the consequences of physical education. The
learning of such skills was part of education and development of the body through various physical activities and vital for existence.

The characteristics of physical education are also such the many of the existing problems are similar to other areas of education. Physical education has many shared objectives with other disciplines of the school, and other community agencies. These shared objectives mainly concern attitudes, human values and knowledge. However, physical education is non-verbal in nature and has the primary purpose of teaching gross motor skills rather than verbal oriented skills. The unique function of physical education is the education of youth through the improvement of motor behaviour.

**Haque (1980)** conducted a study to determine the attitude of heads of secondary schools of Bangladesh toward physical education. The results revealed that the study as the heads of government and non-government schools had favourable attitude towards physical education. The study indicated that the greater majority of the respondents had favourable attitude towards all aspects of physical education. The heads of government schools had more favourable attitude than those of non-government schools toward educational, economic, vocational and personality aspects of physical education, while the heads of non-government schools had more favourable attitude toward physical, mental, social, political, cultural and general aspects of physical education. The differences between the favourable attitudes of the heads of government and non-governments schools are significantly with respect to the physical, social, economic, emotional, and general aspects of physical education whereas, they were in-significantly in the case of mental, educational, political, vocational, personality and cultural aspects. Majority of the heads of both categories of schools believed in the all-round development of the children through physical education highlighted the physical, social, educational, and emotional contributions of physical education. They opined in favour of physical education as a compulsory examination subject, and did not consider it as an extra-curricular and pre-school activity. They believed in the possibility of
general physical education programmes in schools even without extra found. Viewed physical education as drill/mass P.T./free hand exercise and some recreational games. Favoured the need of teaching physical education in schools even without being asked by the government or school authority. They opinioned the bachelor degree should be the minimum general qualification for a physical education teacher in secondary schools. They supported the eligibility of physical education teachers to be the assistant head and heads of secondary schools expressed their beliefs that the status of physical education in school depends mainly on the attitude of the heads of the school towards this subject. They opinioned in favour of introducing physical education as one of the major important subjects in teachers’ training colleges. They expressed the need of theoretical knowledge and some practical background in physical education for heads of the secondary schools. They did not believe in the interference of politics in games.

The aim of Acord’s (1978) study was to assess attitude toward physical activity of secondary students in co-educational and non-co-educational physical education programme. A questionnaire was constructed to identify co-educational and non-co-education; physical education programme in the thirty one southern-most counties in Illinois, and solicit participation in the attitude study. Four hundred eighty subjects were randomly selected from fourteen public high schools chosen at randomly; seven schools had co-education programme and seven schools had non-co-education programmes.

He concluded that (1) Secondary schools in Southern Illinois held a generally favourable attitude toward physical activity. (2) On five of the six measures there was no difference in attitude between students in co-educational and non-co-educational programmes. (3) On four of the six measures there was a significant difference between the men and women, men score higher than the women. (4) On two of the six dimensions, differences among grade levels were significant. (5) On one measure, the aesthetic sub-scale, a significant interaction existed between
grade level and type of programme and (6) No difference in attitude toward physical activity among the fourteen schools existed on any of the six sub scales.

**Melcher (1976)** conducted study to find out (i) an understanding between attitudes of girls and their mothers and fathers towards the six dimensions of physical activity on the basis of Scott motor ability test, in the lower or upper motor ability grouping, as measured by Kenyon’s semantic differential scales of ATPA i.e. attitude toward physical activity and (ii) the attitude of tenth girls towards physical activity related to their mothers and fathers. In his study Melcher concluded that (i) when girls in the upper 31% or lower 32% of motor ability scores of upper middle class tenth grade girls then father’s attitudes towards physical activity are more related to their daughter’s motor ability scores than mother’s attitudes; (ii) tenth grade girls’ attitudes towards physical activity are significantly related to their own motor ability scores; (iii) attitudes of mothers and their tenth grade daughters are similar towards six dimensions of physical activity of Kenyon, the low significant relationship indicates that familial attitudes in regard to physical activity can be identified.

Sports like: cricket is dominated by men to such an extent that word cricket gives indication of numbers of events exclusively related to male, like that the female play some other game. However, it is truth that the rules for female players are same as for the male players. There is no concession made in this regard and women have also fulfilled the same eligibility criteria and their performance is also scaled on the same measurement stick.

**Netto (1979)** conducted a study to assess the attitude of graduate trainees toward physical education. She prepared an opinionative constructing of 70 statements based on the model of Likert and distributed those opinionative to 578 teachers trainee studying in the six training colleges in Madras. The analysis of the data revealed that
graduate teacher trainees, men and women did have a positive attitude towards physical education.

Broer, et. al.’s (1955) article presents the results of a survey of the attitude of 1,149 college freshmen women toward physical education as an activity. Study of total scores shows that they indicated a very favourable attitude. The student in swimming and tennis seem to have a more favourable attitude than average and those in archery a less favourable attitude. The high percentages of these students who indicated that physical education activity classes contribute to social development, mental and physical health agree with results found at the University of Michigan.

There are two important factors to study and to find out psychological causes for a big gap between male and female players in the same game. Firstly, if it apply to a team then the female players stand nowhere near the status of female players in the same game, actually this is an universal tendency and so can apply to the other game; while in games like tennis and athletics, which demands personal brilliance, there are female superstars also. Secondly, the status, to which they belong, of these players. There were the causative and motivating factors for the researcher to undertake the present study.

STATEMENT OF THE PROBLEM

Analysis of selected psychological variables between College Men and Women Basketball players.

AIM OF THE STUDY

The aim of the study is to analyze the selected psychological variables between College men and women Basketball players.

DELIMITATIONS
• The study was delimited to the selected psychological variables i.e. Achievement Motivation, Aggression, Anxiety, Attitude and Stress.

• The study was again delimited to the 50 Men College Basketball and 50 Women College Basketball Players, making total of 100 players.

• The study was again delimited to the state of Uttar Pradesh only.

• The study was again delimited to the Basketball players of 18-25 years of age group.

LIMITATIONS

• Questionnaire research has its limitations. As such bias if any pertaining to the subject be considered as a limitation of the study.

• The tests were administered at different points considering the availability of the subjects, their mood states which might have had influenced their response pattern on a particular scale/instrument. This was another limitation imposed on the investigation inadvertently.

• Certain factors like diet, rest, sleep etc. were beyond the control of the investigation and were considered as limitations of the study.

• As the subject come from different socio-economic groups their dietary habits, life style, routine of study and play were different which were considered as limitations of the study.

• No special motivation technique was used during the test, therefore the difference that may have occurred in performance due to lack of motivation was recorded as the limitation of the study.

HYPOTHESIS
Keeping in the view the objectives of this study, it is hypothesized that there will be significant difference between college men and women Basketball players on all the five selected psychological variables.

OPERATIONAL DEFINITIONS AND EXPLANATION OF THE TERMS

Attitude:

The positive or negative evaluation of people towards objects, events, activities, ideas, or just about anything in environment is known as an attitude. An attitude is defined by Eagly and Chaiken as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. Jung defined an attitude as "readiness of the psyche to act or react in a certain way". It comes in pairs: one conscious and other unconscious. The attitudes are examined by many measurements and scales. Due to arbitrariness of the measurement it is difficult to measure attitude. This can be explained in other words as people have to give attitudes a scale to measure it but one cannot observed it directly as it is a hypothetical construct. As for as components of attitude are concerned, according to William J. McGuire, it contains many components such as cognitive, affective and behavioral. The clear distinctions between thoughts, emotions and other intentions related to behaviour of a person cannot be made on basis of empirical research. Attitude can serve "instrumental, adjectives or utilitarian, ‘ego-defensive,’ ‘value-expressive,’ or ‘knowledge’ functions”.

Attitudes can be changed through persuasion. In psychology the effects and impacts of attitudes on behavior of the people is a topic of research. In the study of this topic two types of theoretical approaches have been dominated: first, theory based on reasonable action and second, theory based on planned behavior. Both these theories propounded by Icek Ajzen. In these theories Icek Ajzen describe the connection between attitude and behavior as a deliberative process in which an individual actively choose to involve in an attitude related
behavior. Russell H. Fazio developed an alternative model called “MODE” that is, motivation and opportunity as determinants. The model developed by Russell H. Fazio makes emphasis on motivation and opportunity for deliberative attitude related behavior.

Thus, attitude is defined as a tendency to react in certain way towards a designated class of stimuli or an object. Attitude of a person is degree of like and dislike for something and it may be positive and negative. A person may have possessed positive and negative attitude simultaneously towards the item in a problem. Attitude is a judgment which develops on affect, behaviour and cognition. A person who is emotional gives effective response and behavioral intention of a person is typical behavioral tendency of an individual.

In the broad sense, aggression is defined as forceful, hostile or attacking behaviour or disposition of a person or living species. Aggression in behaviour occurs either due to retaliation or due to provocation. In the narrow sense, which in used in social sciences and behavioural science, aggression is defined as an intention to harm someone else or an act intended to increase relative social domination. Aggression due to defensive behaviour in the different living species may not be considered in the same sense. Aggression may occur in different forms that is, physically or communicated verbally or non-verbally.

**Aggression**, in its broadest sense, is behaviour or a disposition that is forceful, hostile or attacking. It may occur either in retaliation or without provocation. In narrower definitions that are used in social sciences and behavioural science, aggression is an intention to cause harm or an act intended to increase relative social dominance. Predatory or defensive behaviour between members of different species may not be considered aggression in the same sense. Aggression can take a variety of forms and can be physical or be communicated verbally or non-verbally. Aggression differs from what is commonly called assertiveness.
Like the general people, aggression is very common among sportsperson also. Physical offensive action against others is defined as aggression by Barimani (2009). Aggression can be shown by using offensive words which are motivated to do psychological damage to others. Aggressive behaviour used by an individual or a player with the intention either to harm others or opponents or to prevent oneself from being harmed. Aggression occurs in two forms: one is instrumental and other is hostile. In the first type of aggression a sportsperson made an attempt to harm his or her opponent player to win the event. On the other hand in hostile aggression a player or a person madly committed to physically harm his or her opponent player or person. Thus, instrumental aggression is the aggressive behaviour which is planned by someone or a player to achieve goal or task given to him/her. The instrumental aggression is understood by an example: a hockey player kicks his/her teammate down to control the ball.

**Achievement Motivation:**

‘Achievement’ refers to a measure of ability or attainment that reflects progress or an accomplished goal while ‘Motivation’ refers to the impulse or desire to behave in certain ways. Therefore achievement motivation refers ambition to do good job, got success in the desired mission and to reach on a level which is standard level in an individual’s eyes and in the eyes of others. Achievement motivation reflects willingness in an individual in his/her behaviour that enables him/her on reaching higher standard despite the possibilities of unsuccessful. Atkinson defined achievement motivation as a personality trait- differing between individuals but remaining fairly consistent within each person and thus stable across different situations they might encounter. Achievement Motivation interacted with situational factors: 1-The difficulty of the tasks faced- measured in terms of the probability of success or failure. 2- The incentive value of success- measured in terms
of the importance to the individual of success or failure in a particular task. Achievement Motivation has many implications for sporting attitudes, training and performance. Those showing high levels tend to show: (1) desire for challenge-seeking challenging opponents or task and demanding but achievable standards or goals, (2) concern for excellent standards and value of feedback, meaning they may respond better to constructive criticism in coaching, training for skill acquisition and practice for skill refinement, (3) lower fear of failure and more positive internal attribution regarding failure and success-leading to greater persistence in sport endeavours, (4) positive attitude towards evaluation-combination with all the above factors may lead to higher standard of performance.

Stress:

Stress is an important psychological factor. It is an important part of life and so it is natural by product of all our activities. As life is dynamic process forever changing and consequently stressful. Our body secrets many chemicals due to many psychological reasons. Due to acute stress adrenal gland of our body secrets a chemical known as adrenaline hormone. This hormone is also known as fight-or-flight response of the human body. The effects of adrenaline hormone can be seen in the form of physiologic changes like- increased heart rate and high blood pressure, faster breathing, tension in muscles, dryness in mouth and high blood sugar. In other words, stress is a state of increased arousal, which is essential at the time of danger. Besides adrenaline hormone substance like: testosterone and HGH (human growth hormone) also secreted by the human body. Stress is advantageous up to a certain amount because one can perform with greater energy with the effects of these hormones.

Thus, stress can be defined as a physical, mental or emotional demand, which tends to disturb the homeostasis of the body.

The anxiety plays an important role in the performance of a person whether it is a player in the tense moments of a championship game or a
science student in his/her examination. Due to anxiety many changes occur in the human body. These changes finally affect our performance. These changes in our body can be identified by certain indicators. There is a miss-concept that stress caused by pressure adversely affects performance of an individual. The stress of competition, many times, may cause negative anxiety in one person but positive excitement in another. In other words, we can say that effects of stress may differ from one person to another person. That is why elite players’ do good performance under pressure while most others would ruin. However, on some occasion pressures and demands, which caused stress can be positive in their effect because in this situation bodies of sportsmen and sportswomen flooded with fight or flight adrenaline to power explosive performance. Another example of positive effect is where deadlines are used to motivate a person who seems bored or unmotivated. In most of our work situations responses of stress adversely affect our performance. Most of the difficult problems at work can be dealt with a rational, controlled and sensitive approach. Our social relationship are very complex and these relationship not to be damaged by our aggressive behaviour or approach while a calm and withdrawn response to stress means that we fail to assert our rights.

Sports performance not only depends on physiological factors, for example- stress and fitness and biomechanical factors like- techniques but also on psychological factors, such as- anxiety, attitude, achievement motivation, aggression and stress etc. However, certain level of is needed to optimise performance of players in a game. This level of stress depends on some factors like- past experiences, coping responses and genetics. Thus psychological preparation of players and coaches are necessary, which is often neglected by the players and coaches alike. Many researches have shown that mental preparation of players is very important factor for Olympic ranking. In athletics, mental preparation of athletes is also play a crucial role in their better performance. Thus, certain level of stress is needed, for the optimal performance. Very small
level of stress is boring because it is not being challenged i.e. stress caused by pressure of competition does not necessarily lower the performance of the players and in some circumstances, can improve it. When the level of stress is optimum, then an individual becomes more alert and active to improve his/her performance.

**Anxiety:**

Anxiety means feeling physically and mentally anxious. Fear, nervousness and stimulation of sympathetic nervous system in an individual caused anxiety. The sympathetic nervous is nothing but a system of nerves sympathetic to both mood and environment of an individual. Flight or flight responses in the body occurred when something hits this nervous system but this doesn’t mean that our sympathetic nervous system hit in the situations of personal danger. Our minds are complex and danger might translate psychologically just like as a speaker give his/her speech in front of audience or as a player, playing in the big game. Many times, an individual, who is over anxious might suffer from a disorder of anxiety and frequently feeling ‘panic attack’. Due to over anxiousness our respiratory system become more active and due to this increase in respiration and adrenaline caused some physiological changes in the body. These physiological changes serve to heighten the fear of the situation. The parasympathetic nervous system of our body does the job of calming down from anxiety attack, which in some individual, especially when they are over stimulated for long periods; it takes a long time to calm down.

Generally, most of the neuroscientists are of the view that long term anxiety is harmful; therefore it is argued that anxiety for a short duration during play might also have negative mental effect. If a player is constantly before, during and after playing a game then it is harmful for their personal lives also.

Thus a general fear of preloading a personality trait by an individual to successful event is defined as anxiety. The sports
competition may cause players to react both physically and mentally in a manner which can negatively affect their performance abilities.

**SIGNIFICANCE OF THE STUDY**

1- The study may determine the variations in selected psychological variables viz. Achievement Motivation, Aggression, Anxiety, Attitude and Stress among male and female sportspersons.

2- The study may also help to assess the differences in the selected psychological parameters among sportspersons of the sports discipline chosen in the study.

3- The results of the study may provide useful information and guidance to coaches, physical education teachers and athletes regarding the behavioral characteristics of sportspersons and may thus be instrumental in effective psychological parameters of athletes.

4- The study is a useful information in the field of sports psychology and may help trace the psychological profiles of inter collegiate level sportspersons.

5- The study may throw new light on the field of sports psychology highlighting need for and direction of further research.

6- The study may motivate other athletic lovers and scholars to take-up similar studies so that the sports may become more scientific in India too.
CHAPTER - 2

REVIEW OF LITERATURE

After a detailed description of the problem and its aim and objectives the important step is the decision regarding the strategies that will be adopted for the completion of the work. This leads to the vast area of the work that has already been completed by other researchers. This comes under the review of literature. In the present chapter an attempt has been made to review auto play a number of studies computed in the past. The relevant studies were gleaned from libraries of different Universities and from electronic sources. The literature, which has been found to be directly or indirectly related to present investigation. As there are five variables covered in this study. In the review studies connected with each of these variables have been covered systematically.

*Ghaderi and Ghaderi (2012)* – The purpose of Ghaderi and Ghaderi (2012) study was to find out relationship between big five factor, happiness and sport achievement in athletes of Iran. For this purpose 72 athletes were selected. Out of these 72 players; 21 players were of national team athletes, 25 players were professional athletes and 26 players were non-professional athletes. These athletes were selected by using an access sampling and assessed by using Big Five Factor Inventory (FFI) developed by Costa and McCrae (1992), Happiness Scale developed by Argyle (2001) and Sport Achievement. Pearson correlation quotient, regression and ANOVA test were applied for the analysis of the results. The analysis shows that:-

i. The amount of neuroticism in non-professional athletes ($P< 1\%$),
ii. The amount of extraversion, happiness and openness in the athletes of national team is greater as compare to professional and non-professional athletes (P< 1 %),

iii. The amount of agreeableness and conscientiousness of athletes of national team was significantly greater as compare to the professional and non-professional athletes (P< 1 %),

iv. National team athletes and professional athletes were negative and significant correlation between sport achievement with neuroticism (P< 5 %),

v. National team athletes and professional athletes were positive and significant correlation between extraversion, agreeableness, conscientiousness, openness and happiness with sport achievement (P< 1 %),

The analysis of data by applying regression showed that sports achievement in the athletes of national team and professional athletes, predicted by agreeableness and conscientiousness.

Anand Bhatt (2012) has conducted a study to examine the stress of senior & junior national male Hockey players and the stress of senior& junior national female Hockey players. For this purpose Arun Kumar Singh's Stress Inventory administered to 200 male & female (18-21 years and 22-25 years). The effective sample consists of 200 subjects. The age ratio is 1:1. The test consisted of 35 questions with three options: seldom, sometimes & frequently and the subjects were required to respond on one of these options. The reliability coefficient of the test was found 0.792. The validity coefficient was found 0.784. The data was collected by calling subjects in the small groups of 20 to 25 subjects and seating arrangements were made in a class-room. Variables: Independent - variable- Sex- male & female Dependent- variable- Stress. The finding, on the basis of hypothesis, showed that:-
i. Mean of stress score of senior male hockey players was 53.52,

ii. Mean of stress score of junior male hockey players was 76.10,

iii. The difference between mean of stress score of senior and junior male hockey players is highly significant ‘t’=28.58, df=398 and significant at 0.01 level.

The results related to the hypothesis have been recorded. Mean of Stress score of the Senior Male Hockey Players is 53.52 and that of the Junior Male Hockey Players 76.10. The difference between the two mean is highly significant ‘t’= 28.58, df =398 and significant at 0.01 level. Thus the hypothesis is confirmed Junior Male Hockey Players have significantly High Stress (Personality Characteristics) than the Senior Male Hockey Players. Similarly, mean of stress score of the Senior Female Hockey Players is 59.03 and that of the Junior Female Hockey Players 73.49. The difference between the two mean is highly significant ‘t’= 19.54, df =398 and significant at 0.01 level.

Thus the hypothesis confirmed that-

1- Junior male national Hockey players have high stress than senior male national Hockey players.

2- Junior female national Hockey players have high stress than senior female national Hockey players.

Nigam (2011) investigate the effects of self-efficacy on sports competition anxiety. A total of forty students of psychology belong to D. P. Vipra College, Bilaspur (CG) affiliated to Guru Ghasidas University, Bilaspur were randomly selected for the purpose of study. Sports Competition Anxiety Test and the Physical Self-Efficacy Scale were administered upon all subjects who volunteers to participate in the experiment. Results of the study revealed that females who are high in self-confidence will have low levels of competitive trait anxiety. The
findings from this study also indicated that private and public self-consciousness and social anxiety are all contributing factors in predicting competitive trait anxiety.

**Kumar and Prabhakaran (2011)** The aim of study was to compare psychological profiles of International and National level male cricket players of Rajasthan and Madhya Pradesh. For the purpose of data collection subjects of age ranged between 18-25 years were selected from the Under-19 and Under-22 cricket teams’ of Rajasthan and Madhya Pradesh. Two groups of 49-49 players has been made, who are continuously participating at National and International level. One group made up of Madhya Pradesh cricket players and another group made up of Rajasthan cricket players. Questionnaire of Rainer and Martin’s Sports Competition Anxiety Test and Eysenck, Maudsley Personality Inventory were used to analyse the data. The questions consist of various aspects of sports competition Anxiety and Personality of the cricket players respectively. For evaluation of questionnaire two sample ‘t-test’ was applied and the findings show that:-

i. There was a significant difference i.e. 2.8 in their personality parameter, that is, Rajasthan cricketers were better in their personality as compare to Madhya Pradesh cricketers,

ii. There was insignificant difference i.e. 0.11 in the SCAT (Sports Competition Anxiety Test), that is, there was no difference in the sports competition anxiety of Rajasthan and Madhya Pradesh cricketers,

These findings of Kumar and Prabhakaran (2011) show that sports psychology can help a lot in assessing the personality and sports anxiety of the players to develop physical and physiological variables but also training of the players on the basis of psychological variables.

**Singh et al. (2011)** The aim of study was to determine pre-competitive and post-competitive anxiety in inter university Basketball Players. For the purpose of data collection 30 players (15 male and 15
female) with the age group of 18-25 were selected from Amritsar, Punjab through purposive sampling technique. Sports Competition Anxiety Test was applied for the analysis of collected data. The findings show that there was significant difference in 0.01 levels of pre-competitive and post-competitive anxiety among the male and female inter-university basketball players.

Ujwala1 and Jigmat (2011) studied was to compare sports competitive anxiety among male and female state level baseball players, who participated in 3rd senior state level Maharashtra baseball champion. In this study Sports Competitive Anxiety Test (SCAT Martin et al., 1990) was used to measure sports competitive anxiety. Questionnaire was distributed among 40 (20 each) male and female players 30 minutes before the warm-up session. Descriptive statistics (mean and standard deviation) and t-test were used to analysis the data. The results showed significant difference (p<0.05) in sports competitive anxiety between male and female state level baseball players.

Singh et al. (2010) studied the psychological profiles of Pace Academy Cricketers. Fifteen male cricketers belonging to Pace Academy selected from different regions of the country by the Board of Cricket Control for India in collaboration with the Sports Authority of India with an idea to produce pace bowers in future; who were undergone well planned training at LNCPE, Gwalior, Cricket stadium, Chandigarh and Pace Academy of Sports Hostel at K.V.K.No. - 01, Gwalior whereas the subjects for the study aged between 16-22 years. The Psychological profiles included Incentive Motivation, Achievement Motivation, State Anxiety, Trait Anxiety and Sports Competitive Anxiety. For the group profiles mean scores and standards deviations of Pace Academy Cricketers on various psychological variables, viz. Incentive Motivation (Excellence M=28.53, S.D. =3.11, Power M= 29.33, S.D. = 3.09, Sensation M=28.06, S.D. =4.87, Independence. M=24.85, S.D. =2.84, Success M=29.33, S.D. =3.75, Aggression M=26.00, S.D. = 2.03, Affiliation M=27.40, S.D. =2.60), Achievement Motivation M=26.46 and
S.D. =2.94, State Anxiety M=35.73 and S.D. =2.94, Trait Anxiety M=38.46 and S.D. =5.82, Sports Competition Anxiety M=17.33 and S.D. =3.84. The aforesaid Study provides base line psychological data which may be used for the individuals training programme for cricketers.

**Yadav (2010)** investigated the comparison of aggression level of players of team games and individual sports of inter-university level. Sports Aggression Inventory developed by Anand Kumar and Premshankar Shukla was selected as criterion measure. The total sample of the study was 110 players of inter-university level. 55 subjects were of individual sports, ten each from Badminton, Judo and Gymnastics; seven from Swimming while three from 100mts, 200mts, 400mts, 800mts, shot put and long jump. 55 subjects were of team games, twelve each from basketball and volleyball; fifteen from hockey and sixteen from football. The data was analysed by using t-test.

**Modrono et.al. (2010)** The researchers in the field of sports psychology paid very small attention on competitive wind-surfers; although this group of players represent an ideal subjects for the study of this psychological topic. The aim of study of Modrono et.al. (2010) was to find out anxiety and self confidence characteristics of windsurfers competing at high levels of competition with respect of gender, age, competitive outcomes and season-long ranking. For the purpose of study 79 professional and amateur windsurfers, competing in the regional and world championships events were selected. The findings of the study show that:-

i. Athletes having a better overall season ranking in their event had less somatic anxiety as compare to those who had poorer performance outcomes,

ii. Athletes who had a top five season long ranking had higher self-confidence level as compare to the athletes who had achieved lower ranking,
iii. There was no gender difference with respect to anxiety or self-confidence characteristics,
iv. Level of cognitive anxiety was higher in younger participants as compare to elder participants.

**Ali et al. (2010)** The aim of study was to find out the level of anxiety between male and female national weight-lifters of Manipur. For the purpose of collection of data 40 weight-lifters, 20 male and 20 female, who has participated in the national championship, were selected as the subjects. These selected subjects were of the age range between 17 to 25 years. The sports competition test, propounded by Martins (1977), was applied to determine the level of anxiety among the weight-lifters. T-test was applied to analyse the data. The findings of study show that there was no significant difference between male and female weight-lifters of Manipur with respect to sports competition anxiety.

**Rokka S. (2009)** The purpose of study of Rokka S. (2009) to find out the levels of intensity and direction of the pre-competitive state anxiety in the junior handball players and also to find out any possible difference between male and female handball players, as well as in relation to their athletic experience.

For the purpose of sampling 115 handball players were selected from 8 handball teams, comprising four male and four female teams, who were participated in the Greek Junior Handball Championship held in Athens in 2008. Competitive State Anxiety Inventory-II (CSAI-II model, developed by Martens, Burton, Vealey, Bump and Smith, 1983; Martens et al., 1990; Jones & Swain, 1992), which was modified for the Greek population by Stavrou, Zervas, Kakkos & Phychoudaki (1998), was used for the collection of data.

The cognitive anxiety, state anxiety, self confidence and the direction of this state anxiety were measured on the specific instrument. The measurement instrument/scale consists of 15 items (5-items, subscales arranged on a 4-point Linkert-type scale ranging 1(none) to
4(very much) for intensity), 7-point Linkert-type bipolar scale ranging -3(hinders performance) to +3 (facilitates performance) to evaluate intensity symptoms as either deliberative or facilitative. The questionnaire was given to the players just before the warm up phase, that is, approximately 30 minutes before the starting of the game.

The Factorial Analysis, the Reliability Analysis and the one-way ANOVA analysis methods were applied for the purpose of statistical analysis of the collected data and to find out whether any of the factors were related to sex i.e. male-female and experience of the players-(a) up to 3 years (n=55) (b) 4 to 6 years (n=60). The level of statistical significance was set at p<.05. Analysis of the data on the basis of factor analysis reveals that:-

i. Three factor interpreted 57.19% of the total fluctuation on the intensity scale and three factors interpreting 61.87% of direction of intensity,

ii. The Cronbach’s alpha internal cohesion indicator of the questionnaire was satisfactory,

iii. The value of Cronbach’s alpha internal cohesion indicator was 0.79 for cognitive anxiety, 0.81 for somatic anxiety and 0.80 for the self confidence,

iv. The values of direction of anxiety were 0.84, 0.86 and 0.91 respectively,

The one-way ANOVA test revealed that:-

- There was an important differences concerning cognitive anxiety, self confidence and its direction between male and female players (F1, 114 = 9.78; p < .01, F1, 114 = 30.28; p < .001, F1, 114 = 42.05; p < .001, F1, 114 = 37.07; p < .001),
- Cognitive anxiety in male players is less as compare to female players,
- Self-confidence and its direction of male players is higher than the female players,
• There were statistically important differences concerning self-confidence and its direction (F1, 114 =19.09; p<.001, F1, 114 =26.21; p<.001), between players of different years of experience,

• Self-confidence and its direction, which facilitated performances, of the players with experience from 4 to 6 years are higher.

Thus, the findings of Rokka S.(2009) show that:-

➢ Cognitive anxiety, which facilitate performance of the players, in the male junior players were lower,
➢ Cognitive anxiety in the female players were higher,
➢ Self-confidence in junior male handball players were higher with positive effects on their performance,
➢ Self-confidence in female handball players was lower, which was neither facilitative nor debilitating to performance,

The players with 4 to 6 years of experience showed higher self-confidence with facilitating direction, while players with less years of experience displayed lower self-confidence, with neither facilitative nor debilitating effects on their performance.

These results are similar to the findings of Scanlan et al. (1979), Wark et al. (1979) which indicates that male players typically display lower levels of anxiety and higher self-confidence than female players.


The aim of study was to find out baseline functional health status as measured by SF-6 (veterans) and to predict new beginning symptoms or
diagnosis of post-traumatic stress disorder among deployed US military personnel with combat exposure.

For the purpose of sampling combat deployed personnel, who completed 6 baseline (2001-03) and (2004-06), were selected. To examine the relation between functional health and post-traumatic stress disorder, self reported and electronic data were used. New onset post-traumatic stress disorder as measured by either meeting the DSM-IV criteria with the 17 item post-traumatic stress disorder checklist-civilian version or self report of a physician diagnosis at follow-up with the absence of both at baseline.

The findings of the study show that:

i. Out of the 5410 eligible participants, 395 (7.3%) had new beginning symptoms or diagnosis of post-traumatic stress disorder at the time of follow-up.

ii. Individual participants whose baseline mental or physical component summary scores were below the 15th centile had two to three times the risk of symptoms or a diagnosis of post-traumatic stress disorder by follow-up compared with those in the 15th to 85th centile. Of those with new onset symptoms or diagnosis of post-traumatic stress disorder, over half (58%) of cases occurred among participants with scores below the 15th centile at baseline.

The results of these findings show that:

i. Mental or physical health status, which was low before the combat exposure, increases significantly the risk of symptoms or diagnosis of post-traumatic stress disorder after deployment.

ii. Members of the population, who were more vulnerable, could be identified and benefit from interventions targeted to prevent new onset post-traumatic stress disorder.
These results showing a relationship between first scores and nocturnal polysomnography and Multiple Sleep Latency Test scores have 3 potential implications:

i. The data demonstrate a characteristic that relates to vulnerability to stress-related sleep disturbance as manifested by a first night in the laboratory;

ii. The elevated latencies on the Multiple Sleep Latency Test in these individuals, despite significantly disturbed sleep, support the notion of physiologic hyper arousal in these individuals and suggests they may be predisposed to developing chronic primary insomnia;

iii. The vulnerability identified may underlie vulnerability to transient sleep disturbance associated with other sleep-disruptive factors.


In this study state and trait anxiety levels in the elite Spanish women basketball players were investigated and possible differences in the sources of anxiety identified between players of National team and First Division players.

For the purpose of analysis of the hypothesis 87 players, 13 among National Team and 71 among First Division players, were selected and a quantitative/qualitative design was used.

The results of the study show that:-

i. National Team members had lower State and Trait Anxiety scores as compare to the First Division players and both groups had lower scores than established population norms;
ii. The time of playing, for both groups of players, was significantly related to state and trait anxiety and those who had more minutes of playing time had lower scores;

iii. Qualitative analyses indicated that the primary sources of anxiety reported by these athletes related to personal issues pertaining to feeling physically and mentally unprepared for practice and games.


The purpose of study of Wilson, M .R. , Vine, S. J. & Wood, G. (2009) was to examine the predictions of attention control theory by using the quiet eye period as an objective measure of attention control. For the purpose of analysis 10 basketball players were selected and all the players took free throws in two counter-balanced experimental conditions designed to express anxiety they felt. By using an ASL Mobile Eye tracker point of gaze was measured and by using frame by frame analysis fixation including quite eye were determined. The findings of the analysis show that:-

i. There was significant reduction in an anxiety in the duration of quiet eye period and free throw success rate, thus supporting the predictions of attention control theory;

ii. Anxiety impaired goal-directed attention control (quiet eye period) at the expense of stimulus-driven control (more fixations of shorter duration to various targets). Anxiety impaired goal-directed attention control (quiet eye period) at the expense of stimulus-driven control (more fixations of shorter duration to various targets).

Thus, the findings of the analysis show that attention control theory may be a useful theoretical framework for examining the relationship between anxiety and performance in visual-motor sport skills.
Kim, K. J., Chung, J. W., Park, S. & Shin, J. T. (2009) conducted a study on the topic “Psycho-physiological stress response during competition between elite and non-elite Korean junior golfers”. The aim of study was to find out the outcomes of completion state anxiety and stress hormone on elite and non-elite junior golfer in the competition. For the purpose of the study 12 Korean junior golfers, six elite (Handicap: 2.67±0.82; 16.20±1.38 years) and 6 non-elite (Handicap: 7.83±1.17; 15.80±0.75 years) were selected. For the purpose of measuring physiological and psychological stress responses Salivary Cortisol and Competition State Anxiety Inventory-2 were used on four occasions i.e. at rest, prior to, during and after the competition respectively.

The analysis in Salivary Cortisol shows that:

i. There was no interaction between groups and the test occasions;

ii. There was significant increased levels between rest and all other occasions and between prior to and after competition between both groups of this finding is limited by the interaction with the diurnal rhythm of cortisol secretion;

iii. There was a significant interaction in the cognitive state anxiety, that is, at rest, prior to and during competition cognitive state anxiety in the elite golfers was lesser as compare to the non-elite golfers;

iv. There was no interaction found in somatic state anxiety, however, there was significant difference among occasions;

v. Somatic anxiety scores prior to and during competition was higher than after competition;

vi. There was no interaction in the self confidence, but the score of elite group was higher as compare to the non-elite group on all occasions.

Thus, the results of study demonstrate the difference of psycho-physiological response in competition between elite and non-elite golfers.
Maxwell, J. P. & Visek, A. J. (2009) conducted a study on the topic “Unsanctioned aggression in rugby union: relationships among aggressiveness, anger, athletic identity, and professionalization”. Aggressive players who intentionally cause injury to their opponents are common in many sports, particularly collision sports such as Rugby Union. Although some acts of aggression fall within the rules (sanctioned), others do not (unsanctioned), with the latter tending to be less acceptable than the former. This study attempts to identify characteristics of players who are more likely to employ unsanctioned methods in order to injure an opponent. Male Rugby Union players completed questionnaires assessing aggressiveness, anger, past aggression, professionalization, and athletic identity. Players were assigned to one of two groups based on self-reported past unsanctioned aggression. Results indicated that demographic variables (e.g., age, playing position, or level of play) were not predictive of group membership. Measures of aggressiveness and professionalization were significant predictors; high scores on both indicated a greater probability of reporting the use of unsanctioned aggressive force for the sole purpose of causing injury or pain. In addition, players who had been taught how to execute aggressive illegal plays without detection were also more likely to report using excessive force to injure an opponent. Results provide further support that highly professionalized players may be more likely to use methods outside the constitutive rules of Rugby Union in order to intentionally injure their opponents. Results are discussed within the context of the increasing win-at-all-cost attitude that is becoming more prevalent in sport and its implications for youth athletes. Copyright 2009 Wiley-Liss, Inc.

Woods, R. (2009) conducted a study on the topic “The use of aggression in primary school boys’ decisions about inclusion in and exclusion from playground football games”. The purpose of the study was to connect Psychological and Sociological literature and to seek whether social process of status formation contribute to the link between popularity and aggression identified sociometrically.
For the purpose of study three boys, aged between 8 to 10 years attending a London Primary School were selected. For the purpose of case study Socio-metric data on liking, disliking and aggression combined with ethnographic and interview data were collected.

The analysis of the data show that way in which aggression aids popularity and dominance is through boys' strategic use of aggression to enforce decisions about inclusion and exclusion in desirable activities. It can be difficult for individual boys to achieve acceptance without resorting to aggression.

The results of the study support for sociological explanation of aggression in terms of status and inclusion. It also repudiates the SIP claim that aggressive children were socially biased and incompetent. 

Adie, J. W., Duda, J. L. & Ntoumanis, N. (2008) conducted a study on the topic “Achievement goals, competition appraisals, and the psychological and emotional welfare of sport participants”. Grounded in the 2x2 achievement goal framework (Elliot & McGregor, 2001), a model was tested examining the hypothesized relationships between approach and avoidance (mastery and performance) goals, challenge and threat appraisals of sport competition, and positive and negative indices of well-being (i.e., self-esteem, positive, and negative affect). A further aim was to determine the degree to which the cognitive appraisals mediated the relationship between the four achievement goals and the indicators of athletes' welfare. Finally, measurement and structural invariance was tested with respect to gender in the hypothesized model. An alternative model was also estimated specifying self-esteem as an antecedent of the four goals and cognitive appraisals. Four hundred and twenty-four team sport participants (Mage=24.25) responded to a multi-section questionnaire. Structural equation modeling analyses provided support for the hypothesized model only. Challenge and threat appraisals partially mediated the relationships observed between mastery-based goals and the well-being indicators. Lastly, the hypothesized model was found to be invariant across gender.
Berkowitz, L. (2008) conducted a study on the topic “On the consideration of automatic as well as controlled psychological processes in aggression”. Without slighting the important role played by controlled psychological processes in human aggression, this paper recommends that considerable systematic attention should also be given to the operation of automatic processes in bringing about this behavior. The concepts of automaticity and impulsivity are discussed briefly and it is proposed that many impulsive actions, particularly antisocial ones, are due to failures of restraint after they were initiated involuntarily. A number of experiments are reviewed in which situational stimuli automatically instigated or heightened aggressive inclinations. These have to do with associations in hostility displacement, reactions to stigmatized persons, and association in aggressive reactions to media violence. The last-mentioned studies deal especially with factors affecting the selection of the target for aggression. In discussing these findings it is suggested that after the crucial situational features had automatically initiated the sequence of determinants, the aggression displayed could have been due either to a hostile appraisal of the target or the activation of aggression-related bodily reactions as well as hostile ideas. It is also hypothesized that in at least one of the studies, an experienced negative affect might have instigated the aggression independently of any appraisals.

Gonzalez, B. R., Salguero, A., Tuero, C., Gonzalez-Gallego, J. & Marquez, S. (2008) conducted a study on the topic “Monitoring the effects of training load changes on stress and recovery in swimmers”. The purpose of the study was to investigate whether monitoring of stress and recovery is useful to detect overreaching in its early stages and to use this in evaluation of effects of changes in training load.

For the purpose of analysis of the hypothesis nine swimmers were selected and the Recovery-Stress Questionnaire for Athletes (RESTQ-Sport) in four different occasions (M₁, M₂, M₃, M₄) along a six week training period to the competition was applied. The study shows that:
i. Recovery scales scored higher than the stress scales during the basal training period (M1);

ii. During second training period (M2), in which training volume reached a maximum, there were significant increases in two stress scales i.e. injury and emotional exhaustion and decreases in the three recovery scales i.e. success, physical recovery and self-efficacy;

iii. During third and fourth training period (M3, M4), in which there was a decrease in training volume and training time, the values again increased and more or less same as compare to the first measure.

The finding of the study concluded the following results:

i. From period M2 to period M4 recovery scale score (success) increases;

ii. There was a significant decrease in the recovery-stress state (i.e. total recovery- total stress) in the M2 period and its values progressively increased in measures M3 and M4 but with no significant difference from period M1.

These results indicate that the RESTQ-Sport is able to show significant changes concurrently with training loads.

On the basis of these results it is concluded that regular monitoring of stress and recovery by these measures may help to detect overreaching in its early stages.

Agawa, H.et al. (2008) conducted a study on the topic “Changes of mental stress biomarkers in ultra marathon”. The purpose of the study was to find out the changes of mental stress biomarkers in Ultra-Marathon, that is the possible affect of tired physical exercise on the bio-markers i.e. serotonin, tryptophan, and beta-endorphin along with dopamine, noradrenalin and free fatty acids in an Ultra-Marathon race, in which 45 km. was run on the first day and 90 km. on the second day. For the purpose of analysis serum samples from 18 Japanese male runners, who completed the
Marathon, at 6 different time points during and after the race, have been taken.

For the analysis of the data ANOVA test was applied. The findings of the study show that:

- There were significant overall change of serum serotonin and tryptophan concentrations for repeated measurement (p<0.05);
- Tryptophan concentration inversely decreased during the race, possibly due to utilization for synthesis of serotonin;
- Levels of beta-endorphin appeared to increase on the first and second day of the race but were not significant statistically.

Thus, findings of the study concluded that serum serotonin, tryptophan and beta-endorphin worked as stress markers in the physical exercise.

Kristiansen, E., Roberts, G. C. & Abrahamsen, F. E. (2008) conducted a study on the topic “Achievement involvement and stress coping in elite wrestling”. The aim of study was to determine the relationship between task involvement and coping with stress in the elite competition. For the purpose of collection of data 82 elite wrestlers, 60 male and 22 female from four different European countries and between age group of 16-37 years, were selected. The data were collected for over 18 months and during this period qualitative in depth interviews (n=6) were conducted and quantitative approaches were used. For quantitative study were applied achievement goal orientation [Perception of Success Questionnaire], perceptions of the motivational climate [Perceived Motivational Climate in Sport Questionnaire] and coping strategies (Brief COPE). The qualitative part explored motivation and coping in depth.

The analysis of the data shows that wrestlers, which were involved in task copied better in the competitive situation because of their use of more adaptive coping strategies, both the problem-focused and emotion-focused strategies in competition.

The aim of study was to examine the relationship between motivation, social support and performance anxiety with handball players.

For the purpose of collection of data 143 handball players, 74 male and 69 female, from 10 elite handball teams were selected and Achievement Goal Theory Test was applied. Three hypotheses were taken in this study and the following results were found out:

i. It was predicted that the female athletes would report more performance worries and more social support use than male. While the findings support the hypothesis for anxiety, but not for social support. However, it was reported by female that they felt more available social support as compare to males;

ii. It was predicted and found that there was a positive relationship between the interaction of ego orientation and perception of a performance anxiety but only for females;

iii. It was predicted that perceptions of a performance climate were related to the view that social support was less available especially for the male athletes. This prediction is supported by Simple Correlation; however the regression analysis did not reach significance.

Thus, mediation of social support could not be tested between motivational variables and anxiety. These results describe that fostering a mastery climate helps elite athletes tackle competitive pressure.

Polman, R., Rowcliffe, N., Borkoles, E. & Levy, A. (2007) conducted a study on the topic “Precompetitive state anxiety, objective and subjective performance, and causal attributions in competitive swimmers”. This study investigated the nature of the relationship between
precompetitive state anxiety (CSAI-2C), subjective (race position) and objective (satisfaction) performance outcomes, and self-rated causal attributions (CDS-IIC) for performance in competitive child swimmers. Race position, subjective satisfaction, self-confidence, and, to a lesser extent, cognitive state anxiety (but not somatic state anxiety) were associated with the attributions provided by the children for their swimming performance. The study partially supported the self-serving bias hypothesis; winners used the ego-enhancing attributional strategy, but the losers did not use an ego-protecting attributional style. Age but not gender appeared to influence the attributions provided in achievement situations.

Agnieszka Wlazło, Milena Szuszkiewicz & Edward Wlazło (2007) conducted a study on the topic “Self-aggression in athletes practicing combat sports”. The purpose of study was to determine the level of aggression related variables especially of self aggression, in the combat sports athletes. For the purpose collection of data four groups of athletes, 27 Boxers, 22 Judaists, 21 Karate athletes and 22 Ju-Jitsu athletes, between age groups of 20 to 24 years and with 5 to 8 years of training experience, were selected.

For the analysis of the collected data Psychological Inventory of Aggression Syndrome (PIAS) questionnaire test and Mann &Whitney U-test were applied.

Findings of the study show that:

i. As compare to the other groups, aggression control was lower and self aggression was higher in the Boxers;

ii. In Ju-Jitsu externalized aggression was lower as compare to Karate athletes;

iii. In Ju-Jitsu athletes emotional self aggression was lower as compare to boxers and Karate athletes.

The findings of the study concluded that differences in aggression-related variables between athletes practicing various combat sports may be
due to diverse philosophical and ethical principles in those sports as well as motivations for those sports.

**Thomas, S., Reeves, C. & Smith, A. (2006)** conducted a study on the topic. “English soccer teams aggressive behavior when playing away from home”. The aim of study was to find out aggressive behaviour amongst English Soccer players and its relation to advantage. Aggressive behavior’s identified by the award of a penalty or disciplinary card as, yellow for caution and red for dismissal. For the purpose of analysis of data chi-square analysis was used and assessment was made whether a greater frequency of aggressive bahaviour was performed by teams away from home.

The analysis of data shows that:

1. In decided matches, teams playing away received significantly more cautions (yellow cards) than home teams;

2. In tied matches, away teams received significantly more cautions (yellow cards) than home teams;

3. There were no significant differences between home and away teams were found for dismissals and penalties awarded;

Reasons for these findings are considered.

**Bekiar, i A., Patsiaouras, A., Kokaridas, D. & Sakellariou, K. (2006)** conducted a study on the topic “Verbal aggressiveness and state anxiety of volleyball players and coaches”. The purpose of this study was to investigate the relationship between verbal aggressiveness and state anxiety (somatic, cognitive and self confidence) in sports settings based on the ratings by volleyball coaches and their players.

For the purpose of collection of data 208 volleyball players; 98 men and 110 women and 20 their coaches, 16 men and 4 women were selected.

Analysis of data showed that:
1. Somatic anxiety in the male volleyball players is higher as compare to female players;

2. Male volleyball players were more affected by the verbal aggressiveness of their coaches as compare to female volleyball players;

3. Mean differences for male and female coaches on somatic anxiety or cognitive anxiety, self-confidence or verbal aggressiveness were not significant;

4. The correlations between verbal aggressiveness and self-confidence and anxiety were positive for these volleyball players, leading them to better behaviour.

The purpose of the study of Neil (2006) was to seek intensity and direction of competitive anxiety symptoms and psychological skill usage in players of Rugby union, of different skills.

For the purpose of analysis 65 elite and 50 non-elite subjects were selected. These participants completed measures of competitive anxiety, self-confidence and psychological skills. Findings of the study show that:

1. The elite group reported more facilitative interpretation of competitive anxiety symptoms as compare to the non-elite group;

2. The elite group reported higher levels of self-confidence and lower relaxation usage as compare to the non-elite group.

3. The elite group reported greater imagery and self-task use as compare to the non-elite group.

The finding of the study made the following suggestions:

1. Non-elite performers primarily use relaxation strategies to reduce intensity of anxiety;
2. Elite performers appear to maintain intensity levels of anxiety and adopt a combination of skills to interpret symptoms as facilitative to performance;

3. Potential mechanisms for this process include the use of imagery and verbal persuasion efficacy-enhancement techniques to protect against debilitating symptom interpretations.

The purpose of the study of Rikard and Banville (2006) was to analyze the attitudes of high school students toward fitness and sports activities taught in physical education, and the perceived effectiveness of their physical education curriculum for improving their fitness and skill levels. For the purpose of study students from six high schools and 17 intact physical education classes and data were collected by using a questionnaire, which were completed by 515 students, 159 of whom participated in focus group interviews.

The findings of the study show that:

1. Students preference for a wider variety in sport and fitness activities;

2. An increase in level of challenge in physical education classes;

3. An increase in students’ motivation for participating in activities outside of school.

Due to known health benefits students’ attitudes were accepting or tolerant towards participation in fitness activities. Most students liked physical education class that included some form of game play. Besides this, these students stressed the need for adding interesting activities that included active participation while having fun. Students’ recommendations included strategies for improving instruction and for grouping students by skill levels for appropriate challenge.
Drake, C., Richardson G., Roehrs T., Scofield, H. & Roth, T. (2004) conducted a study on the topic “Vulnerability to stress-related sleep disturbance and hyper arousal”. The purpose of study was to analyse the presence of a hypothesized trait vulnerability to sleep disturbance and hyper arousal.

For the purpose of study 104 individuals, 46% men among them and between the age group of 40.4±12.90 years, have been selected and polysomnographic assessment of sleep in response to stress during a first night in the laboratory on selected individual have been analysed and subsequent physiologic arousal also studied.

For the assessment of sleep disturbance in response to commonly experienced stressful situations, Linkert-Scale questionnaire, consisting of 27 items, were given to the selected individuals. Factor-Analysis techniques, which identified a single 9-items factor that was representative of the construct of “stress-related” vulnerability to sleep disturbance, was also applied for the analysis of the data. The analysis of data shows that:

1. Reliability of the resulting 9-items scale was high (Cronbach alpha =.83), which shows that individuals with higher Cronbach’s alpha, had a lower sleep efficiency (P=.001);
2. Individuals with higher Cronbach’s alpha had an increased latancy to stage-1 sleep (P=.001) on the first night of nocturnal polysomnography;
3. Individual with higher Cronbach’s alpha showed increased arousal as compare to individual with lower Cronbach’s alpha which is evidenced by elevated sleep latency on the Multiple Sleep Latency Test;
4. The difference between individuals with higher Cronbach’s alpha on the first stage in terms of nocturnal sleep and day time arousal remained significant, after the controlling current and past insomnia;
5. Other stages of sleep, that is stage-2, slow wave sleep and rapid eye movement sleep, were not different between the individuals with high Cronbach’s alpha and low Cronbach’s alpha.

The aim of study of **Humara (2004)** was to determine the relationship between anxiety and performance from a behavioral perspective. Previous research, in this direction, has advised that the majority of consultations conducted by the sports psychologists are related to the anxiety while theoretical underpinnings of anxiety and its relation to the performance was examined and research conducted on the relationship between anxiety and performance was also discussed. Besides this a review of the cognitive-behavioral treatments that have been used for anxiety reduction and performance enhancement within the field of athletics is included. Suggestions for future research and practical considerations are listed in the conclusion.

**Kais, K. & Raudsepp, L. (2004)** conducted a study on the topic “Cognitive and somatic anxiety and self-confidence in athletic performance of beach volleyball”. The purpose of this study was to find out the influence of competitive anxiety and self-confidence upon the performance of athletes’. For the purpose of study 66 male beach volleyball players were selected and modified Competitive State Anxiety Inventory-2 Test, which included the original intensity scale and a direction scale of Jones and Swain, was applied. The performance of the players’ was scored from video records by using standard rating scales.

Findings of the study show that:

1. Correlations indicated scores on Direction subscale of modified Competitive State Anxiety Inventory-2 and Self-confidence were moderately positively (r=.27 to .51) correlated with different skill components and sum of skill components of beach volleyball;
2. Stepwise multiple regressions indicated that, as anticipated, directional perceptions of cognitive and somatic anxiety and self-confidence were significant predictors of beach volleyball performance but accounted for only 42% of variance;

3. Original Intensity subscales of somatic and cognitive anxiety did not predict performance.

Thus, these findings support that direction of anxiety responses must be taken into consideration when examining anxiety-performance association in sport.

**Yoo, J. (2003)** conducted a study on the topic “Motivational climate and perceived competence in anxiety and tennis performance”. The purpose of study was to verify a prediction in the achievement goal-orientation theory in the Korean physical education setting. For the purpose of study it was hypothesized that the interactions of situational induced motivational climate and perceived competence would differentially influence anxiety and performance in the tennis classes. For the purpose of analysis of the hypothesis 60 undergraduate male were selected and they were assigned for 6 week to a Task-involving and an Ego-involving program in tennis classes for 6 week. After first 3 week the perceptions of these male of motivation climates and tennis competence were measured and responses of cognitive & somatic anxiety and skill performance were also examined over the second and third week of the classes.

Findings of the analysis show that:

1. Anxiety responses of these students deceased in the task involving condition while their tennis performance increased;

2. Ego-involving students’ maintained their anxiety responses while their tennis performance decreased.
Thus, these results of above findings support the hypothesis and suggested practical application of the goal-orientation theory in Korea could be explored.

Beck (2002) emphasized in his study as intercollegiate players continue to grow; the pressure placed on athletes to win intensifies. The aim of the study was to find out how state cognitive anxiety levels of Division-I College athletes by incumbent and new head coaches.

For the purpose of the study 201 returning Varsity athletes with incumbent head coaches from three south-eastern NCAA Division-I conferences and 54 returning Division I varsity athletes from five teams that experienced a head coaching change were selected. For the purpose of study sport teams of basketball, golf, lacrosse, soccer, swimming/diving, tennis, and volleyball were selected. 48 males and 207 female, between age group of 18-23 years, were incorporated for the purpose of study. The study included players of second; third, fourth and fifth year of playing eligibility and Collegiate Athletic State Cognitive Anxiety Survey (CASCAS) of the players was conducted. For the purpose of statistical analysis items of the study were categorized into four different groups and state cognitive anxiety, scholarship, coaching relations, competition and performance were analysed.

The findings of the study reveal that:

1. There was no statistical significance found between players who experienced incumbent versus new head coaching changes in the four categories;

2. There was statistical significance found between team sport players (m=1.43, SD=2.60) as compared to individual sport players (M=2.67, SD=2.14, t (220) = 3.10, p <.50) in term of scholarship;
3. Statistically significant differences were also found between females (M=2.34, SD=1.86) and males (M=1.70, SD=1.62, t (207) = -2.21, p<.50) in the competition and performance category;

4. there was statistically significant negative relationship between length of time athlete participated in these sports overall anxiety (r = - .13, p<.50), scholarship (r = -.14, p<.05);

5. Caucasians (M=2.01, SD= 1.44) possessed statistically significant differences in overall state cognitive anxiety level as compared to African Americans (M=1.43,SD=1.31), t (163)=2.64, p<.05);

6. There was a statistically significant negative relationship was discovered between state cognitive anxiety levels and relationship in overall state cognitive anxiety (r=-.26, p<.056).

Findings of the study make the conclusions that Student / players were continuously evolving due to new experiences and exposures to intercollegiate athletics. Although the study found no statistically significant differences between the two groups, further investigation in this area is warranted. Coaches and administrators can utilize the findings to improve the athletic environment and better understand the concerns that student-players face each year.


The aim of study was to find out the differences of stress in the elite tennis players under practice and tournament conditions. For the purpose of study
28 national level players (NR) were selected and their pre- and post-competition urine samples were collected for the analysis of concentrations of epinephrine (EPI) and non-epinephrine (NE) under practice (P) and tournament conditions (T). For the purpose of analysis the values obtained from two internationally ranked players (IR) competing in 6 (player A) and 5 (player B) Davis-Cup matches, respectively were collected. The findings of study show that:

1. The pre and post competition concentrations for epinephrine (EPI) in national level players (NR), were significantly higher under tournament conditions (T: 1.33±0.65 and 3.66±2.51 micro g/100 mg creatinine vs P: 0.61±0.39 and 0.97±0.59 micro g/100 mg creatinine);
2. The ratio of non-epinephrine (NE) and epinephrine (EPI) was significantly inverse (T: 3.53±1.87 and 3.58±1.59 vs P: 8.08±6.99 and 10.03±6.58);
3. The pre and post competition concentrations for non-epinephrine (NE) in national level players (NR) did not differ;
4. There were significant correlations between the level of perceived nervousness (ten-point-Likert scale) and the post competition concentration of EPI (r=0.491, p<0.05) and the NE/EPI ratio (r= -0.595, p<0.01);
5. There were significant lower ratios of non-epinephrine (NE) and epinephrine (EPI) (2.73±1.44 vs 4.49±2.54, p<0.05) in the players who felt affected by nervousness in their performance outcome;
6. The intra-individuality of the Davis Cup Players were found to be constant but inter-individually different concentrations of epinephrine (EPI) (A= 2.2±0.5 vs B= 7.0±0.8 micro g/100 mg creatinine), NE (A= 7.4±2.2 vs B= 15.5±3.2 micro g/100 mg creatinine) and the ratio of NE/EPI (A= 3.7±2.2 vs B= 2.2±0.7).

The findings of the study made the following conclusions:
1. Due to higher psychological stress, in the tennis tournament sympathetic activity increased, which impair the performance of the player;
2. Psycho-regulative methods and psychological regeneration for players dealing with a chromic sympathetic hyper-activation should be focused by the practical efforts.

The main purpose of Jones and et al. (2001) study was to extend present sport psychological research by developing a more comprehensive athlete attitudinal survey. For the purpose of study 274 students athletes of Midwestern University were selected and a multiple item survey, consisting of questions related to attitude, was conducted. These items of the survey were related to the 6 interpretable factors: competitiveness, team orientation, mental toughness, emotional control, positive attitude, and safety consciousness. The findings of the study show that:

1. SPI composite of college athletes were found to be higher as compare to the novice athletes;
2. Attitudes of college athletes were found to be more positive as compare to the novice athletes;
3. College athletes were found to be more competitive as compare to the novice athletes;
4. Team orientation of female were more as compare to the males;
5. Novice males were found to be more competitive as compare to the novice females;
6. College females were found to be more competitive as compare to the college males.

Cockshott et. al. (2001) supported the relationship between the kind of achievement goals established and related competitive anxiety (Ntoumanis et. al. 1997). This dissertation thesis explores the relationship between achievement goal orientations and various competitive anxiety coping strategies and results in the construction and evaluation of a model designed to clarify relationship among achievement-related cognitions, coping strategies and competitive state.
anxiety. Participants (N=247) in the study were ranked and unranked junior tennis players competing in regional tennis tournaments in the south-eastern United States. Participants (137 males, 110 females) completed questionnaires designed to measure goal orientation, trait anxiety, perceived ability, self-efficacy, task difficulty, motivational climate, coping strategies and state anxiety. Internal consistency estimates for the questionnaires ranged from .71 to .94.

Following a confirmatory factor analysis a hypothesized model suggesting the relationship among all variables was tested using structural equation modelling (SEM) for latent variables. The hypothesized model was consistent with the data as the overall chi-square was determined to be 581.1, with 347 degree of freedom. Direct determinants of the intensity were found to have a significant influence on the direction of competitive state anxiety. Task orientation and perceived ability were found to have indirect effects on the direction of competitive state anxiety through the use of problem-focused coping. Increases in the use of problem-focused coping strategies led to more facilitative interpretations of anxiety, while emotion-focused coping strategies led to more debilitating interpretations of competitive state anxiety. Trait anxiety was found to have a significant indirect effect on the direction of competitive state anxiety, through the use of emotion focused coping strategies and appraisal.

The result from this study suggest that tennis players can develop facilitative interpretation of anxiety by striving towards goal attainment and engaging the coping strategies of active coping planning, suppression of emotion and seeking social support for instrumental reasons.

Baker, J., Cote, J. & Hawes, R. (2000) conducted a study on the topic “The relationship between coaching behaviour and sport anxiety in athletes”. The purpose of study was to examine the influences of coaches on various sports outcomes i.e. performance and dropout because coach is an influential element of the competitive experience. For the purpose of study
228 athletes from 15 sports were selected and Sport Anxiety Scale (SAS) and coaching behaviour scale for sport (CBS-S) tests were conducted. With the help of these tests the predictive ability of athletes' perceived frequency of seven coaching behaviours (physical training, mental preparation, goal setting, technical skills, competition strategies, personal rapport and negative personal rapport) on four forms of sport anxiety (total anxiety, somatic anxiety, concentration disruption and worry) was examined. The findings of the study show that:

1. There was a negative personal rapport, which is a predictor of all measured forms of sport anxiety;

2. There were competition strategies, which is a significant predictor for total anxiety, concentration disruption and worry.

These findings suggest that negative rapport between coach and athlete is an important contributor to athlete anxiety while the behaviour that the coach demonstrates relative to competition can be influential in reducing athlete anxiety.

**Kirker, B., Tenenbaum, G. & Mattson, J. (2000).** conducted a study on the topic. “An investigation of the dynamics of aggression: direct observations in ice hockey and basketball”. The aim of the study was to construct a theoretically coherent and ecologically valid framework for research on processes underlying sports aggression and to make contribution in area of the knowledge. For the purpose of analysis of computer observational analysis used as primary research method along with complementary questionnaires and personal reflections, considered aggression in two sports like: ice-hockey and basketball. Collected data were classified by involved and independent experts relative to the factors and behaviours associated with sports aggression. The findings of the study show that:

1. Two-thirds of time aggression was instrumental in nature;
2. According to the game circumstances, aggressive acts typically occurred in clusters and varied frequency;

3. Multiple variables and aggression theories were related to severely aggressive acts.

Misra (2000) has conducted a study to compare stressors and reactions to stressors of male and female students. In the study, he concluded that the students experienced highest stress levels due to pressure, followed by self-imposed stress. Females experienced higher stress than males due to frustration, self-imposed stress and pressure.

Ommundsen, Y. & Roberts, G. C. (1999) conducted a study on the topic “Effect of motivational climate profiles on motivational indices in team sport”. The aim of study was to examine the relationship between different profiles of the motivational climate and achievement among Norwegian athletes. For the purpose of study 148 Norwegian players were selected and sources of satisfaction in team sport, achievement strategies, perceived purposes of sport and conceptions questionnaire were used for the assessment of the perceptions of these players. Findings of the study give the results:

1. Athletes perceiving the climate as high in mastery and high in performance oriented criteria reported psychological responses that were more adaptative as compare to those perceiving the climate as low in mastery and high in performance criteria;

2. Athletes perceiving high in mastery and low in performance were more likely to emphasize self-referenced criteria when judging perceived ability in team sport.

For both social responsibility and lifetime skills as purposes in sport, it was the high performance and low mastery athletes who were least likely to endorse these purposes. And importantly, the high mastery climate
seemed to moderate the impact of being in a high performance climate. The pattern of findings suggests that perceiving the motivational climate as performance oriented may not be motivationally maladaptive when accompanied by mastery oriented situational cues.

**Digelidis, N. & Papaioannou, A. (1999)** conducted a study on the topic “Age-group differences in intrinsic motivation, goal orientations and perceptions of athletic competence, physical appearance and motivational climate in Greek physical education”. The purpose of the study was to examine age group differences in students’ motivation, self-perceptions, task and ego orientations and perception of motivational climate in the lessons of Greek physical education. For the purpose of study 674 students, of age between 10-17 years, were selected. Findings of the study show that:

1. The students of senior high school scored lower on the scales assessing intrinsic motivation, perceived learning orientation in the lesson, task orientation and perceived athletic ability as compare to the students of junior high school and elementary level;

2. The students of high school had lower scores on the perceived physical appearance scale and higher scores on the measure assessing perceptions of students' worries about mistakes as compare to the students of elementary school.

These findings suggest that learning orientation should be strengthened in Greek physical education.

**Griffith, Steel and Vaccaro (1999)** examined the relationship between the anxiety level and performance of 62 beginning Scuba diving students and standardization that there was no relationship between anxiety and performance on relatively simple cost, while there was a
relationship between anxiety and performance on the more complex diving manoeuvres.

**Pedersen, B. H. & Ommundsen, Y. (1999)** conducted a study on the topic “The role of achievement goal orientations and perceived ability upon somatic and cognitive indices of sport competition trait anxiety: A study of young athletes”. The aim of the study was to examine the relationship between achievement goals and indices of somatic and cognitive trait sport competition anxiety between young athletes. For the purpose of study 136 young athletes of north Norway, between the age group of 13 to 18 years were selected and for analysis of data Goal orientation theory and competence motivation were used. Findings of the study show that there was no relationship between achievement goal orientations and somatic & cognitive indices of trait sport competition anxiety. The findings of the study suggest that in order to prevent sport competitions and giving rise to the elevated cognitive anxiety in young athletes, they should be task oriented as well as having a sense of being competent.

The aim of **Greenblatt, S.Shavasana (1999)** study was to examine relationship between meditation and stress and also to examine healthful effects of meditation and stress. The relative importance of different aspects (like length and frequency of meditation) of meditation practice was also assessed by this study. For the purpose of study 180 people from the meditation centres around the US, practicing meditation, similar to mindfulness meditation were selected and self reports measures on meditation habits were completed by them. For the purpose of analysis weekly stress inventory (WSI) and the short form 36 weeks survey were conducted. Two weeks after initial data collection, WSI (weekly stress inventory) and the meditation questionnaire were re-administered to examine causality between meditations and stress reactivity. Data were collected primarily via internet. The analysis of data shows that:

1. The first path analysis compared two models differing only on the causal direction of the path between stress reactivity
and recent meditation. The model positing recent meditation influencing stress reactivity provided a better fit to the data than the model positing stress reactivity influencing meditation practice;

2. Meditation’s influence on stress reactivity to provide a better fit to the data than the alternative model;

3. There were a strong negative association between stress reactivity and health;

4. Frequency of meditation was as important to stress reactivity as hours meditated;

5. Recent meditation was associated with emotional health, vitality, and stress reactivity, whereas lifetime meditation experience was relatively unimportant.

Griffith (1999) The purpose of study was to examine detrimental effect of aggression on individual who play game like video game. Griffith reviews the empirical studies in this area, including research methodologies such as the observation of free play, self-report methods, and experimental studies. Findings of the study show that:

1. Previous findings on video game violence have methodological problems and that they only include possible short term measures of aggressive consequences;

2. Young children do become more aggressive after either playing or watching a violent video game.

Ntoumanis, N. & Biddle, S. (1998) conducted a study on the topic “The relationship between achievement goal profile groups and perceptions of motivational climates in sport”. The purpose of study was to examine which combinations goal orientations are compatible with perceptions of mastery and performance climates on 146 students of British University. The findings of the study show that:

1. Students with high scores in task orientation (irrespective of degree of their ego orientation) perceived the climate as more
mastery-oriented as compare to those with low scores in the task orientation;

2. There were a large differences in effect sizes between the high and low task groups;

3. The most negative perceptions of climate were held by those who were rated both low in task orientation and high in ego orientation.

These findings give a general inference that high task orientation was motivationally adaptive high orientation was not harmful as long as it was accompanied by a high task orientation. These findings are contradictory to the previous research that the enhancement of the task orientation with the suppression of ego orientation.

Thus, these results are consonant with studies which have employed a goal profit analysis in sport and physical education.

Hall, Kerr and Mathews (1998) able to operationally and measure such changes independently. Accordingly, the symposium will describe a multi measure approach to the examination of in event performance, based on these theoretical perspectives which appear to offer a great deal to our understanding of how, as opposed to when, anxiety affects performance.

Chapman, C., Lane, A. M., Brierley, J. H. & Terry, P. C. (1997) conducted a study on the topic “Anxiety, self-confidence and performance in Tae Kwon-Do”. For the purpose of study 142 male Taekwon-do players were selected and competitive State Anxiety Inventory-2 completed. Multivariate in analysis of variance was determined. The findings of study show that:

1. Winners reported lower cognitive/somatic anxiety and higher self confidence as compare to the losers;

2. On the basis of their pre-competition competitive state anxiety inventory-2 scores, discriminant function analysis
showed that 89(62.60%) players could be correctly classified as winners or losers.

Thomassen, T. O. & Halvari, H. (1996) conducted a study on the topic “Achievement motivation and involvement in sport competitions”. For the purpose of study 213 students were tested on the motive to achieve success, to avoid failure, future time orientation, perceived instrumentality of physical tasks at school and the involvement in sport competitions. The analysis of the study shows that:

1. There was a significant positive correlation between the scores on motive to achieve success and the amounts of competitive involvement in sports;

2. There was a significant negative correlation between the motive to avoid failure and the involvement in sports;

3. There was a significant positive correlation between the involvement in sport competitions and perceived instrumentality of physical or sport tasks;

4. These relations were similar for both male and female students.

The findings of the study give the result that all independent variables affected involvement in sport competition directly or indirectly.

Terry, P. C., Cox, J. A., Lane, A. M. & Karageorghis, C. I. (1996) conducted a study on the topic “Measures of anxiety among tennis players in singles and doubles match”. The purpose of the study was to examine anxiety among tennis players in the singles and doubles matches. For this purpose 100 tennis players, comprising male and female, were selected and before playing single and double matches the Competitive State Anxiety Inventory-2 was conducted about one an hour. Multivariate analysis of variance of anxiety and self confidence responses were determined. Findings of the study show that:
1. Single match winner had significantly lower cognitive anxiety and higher self-confidence as compared to losers;

2. Doubles match winner had significantly higher self-confidence score as compared to losers;

Discriminant function analysis showed that results of 72% of single matches and 70% of doubles matches could be correctly classified from responses to the pre-competition measures. Anxiety responses and playing condition indicated that irrespective of the outcomes of the matches' scores of cognitive/state anxiety was higher while score of self-confidence was lower before playing singles matches as compared to doubles matches.

These results suggest that pre-competition scores on measures of anxiety provide significant indicators of performance in tennis but that responses vary for singles and doubles play.

Lavallee, L. & Flint, F. (1996) conducted a study on the topic “The Relationship of Stress, Competitive Anxiety, Mood State, and Social Support to Athletic Injury”. The aim of study was to examine the relationship of stress, competitive anxiety, mood state and social support to athletic injury. For this purpose it was hypothesised that greater incidence of injury was shown by the athletes with high levels of stress, high competitive trait anxiety, negative mood state and low social support.

For the purpose of analysis of the hypothesis 55 University athletes, from Football and Rugby (42 players from Football and 13 players from Rugby), between the age group of 19-28 years, were voluntarily selected. For the collection of the data and analysis of the hypothesis the Inventory Sport Competition Anxiety Test (SCAT), Social Support Scale, Social Athletic Readjustment Rating Scale (SARRS), and Profile of Mood States (POMS) were conducted. The self-report measures internal consistency was tested using Cronbach's alpha coefficient. The rate of injury and severity examined by the head student therapist. For the analysis of the data
correlation analysis was performed by using Pearson correlation coefficient. The findings of the study show that:

1. Competition anxiety ($r=.29, p=.03$) and tension/anxiety mood state ($r=.43, p=.001$) were related to the injury frequency;
2. Tension/anxiety ($r=.44, p=.008$) anger/hostility ($r=.30, p=.02$) and total negative mood state ($r=.28, p=.038$) were related to the injury severity.

Two sports, individually give different results - for Football, injury frequency and injury severity were related to tension/anxiety ($r=.43, p=.004$ and $r=.47, p=.002$ respectively). Vigor/activity was found to be significantly related to the injury rate ($p=.02$) but since the internal consistency of Vigor/activity was less than .70 on the Cronbach's alpha scale while in rugby injury frequency was related to tension/anxiety ($r=.58, p=.04$) and depression/dejection ($r=.57, p=.04$).

These results of the study are very useful for athletic trainers in determining athletes possessing psychological factors predisposing them to injury.

**Lynn and Frances (1996)** The aim of study was to determine the role of stress, competitive anxiety, mood state and social support in athletic injury. For the purpose of study it was hypothesised that greater incidence of injury and severe injury occurred in the athletes having high level of stress, high competitive trait anxiety, negative mood state and low social support. For the purpose of the analysis of hypothesis 55 male players of the University, between the age group of 19-28 years were selected and Sport Competition Anxiety Test (SCAT), Social Support Scale, Social Athletic Readjustment Rating Scale (SARRS), and Profile of Mood States (POMS) were administered. With the help of Cronbach's alpha coefficient internal consistency of the self-report measures was tested. Findings of the study show that:
1. Competitive anxiety \( (r=.29, \ p=.03) \) and tension/anxiety mood state \( (r=.43, \ p=.001) \) were related to the injury frequency;
2. Tension/anxiety \( (r=.44, \ p=.008) \), anger/hostility \( (r=.30, \ p=.02) \) and total negative mood state \( (r=.28, \ p=.038) \) were related to injury severity.

**Das (1996)** conducted a study to determine attitude of fresher’s towards physical education in L.N.I.P.E. The study was to assess the degree of liking and disliking of Fresher’s towards the physical education. The study was also reveal modification in physical education programs, if any.

Students of first year degree course of the institute were selected as subjects. A questionnaire consists of thirty six questions was administered and hundred numbers of responses was received by the author.

Percentage analysis was done for assessing the background of the subjects. The chi-square statistics was applied, keeping the level of confidence at .01, to find out the attitude.

The research found that majority of the respondents recognized the importance of physical education. The subjects were also of the opinion that only physically fit person selects this profession. They also agreed that to pursue this course they had to give up what they would have liked to do.

**Knop, Theeboom, Wittock & Martelaer (1996)** The purpose of study was to determine relationship between sports and young Muslim women in the West European Countries. Before the study it was revealed that relationship between sports and young Muslim female of Western Europe was problematic. Therefore, special attention must need for this topic. Research in this direction has indicated that attitude of most of young Muslim female were positive towards sports while their actual participation in the sports were very low as compare to other youngsters. This is due to the reason that in the Islamic living rules, especially related to the female, sports participation is totally restricted. However, some authors are of the
view that Islam does not prohibit female participation in the sports. This study provides more insight about the relationship of Islam and participation of young Muslim girls in the sports in the West European Countries and gives some recommendations to make policy for promotion of sports in the Muslim girls.

**Ravneet (1995)** conducted study on 120 sportsmen/women of post-graduation. Among sports men and women she took males and females belonging to judo, gymnastics, cricket, badminton and basketball games. She found significant difference in sports women and non-sports women where sports women are more aggressive. There was no difference in sportsmen and non-sportsmen whereas sportsmen were more aggressive than sportswomen and non-sportsmen were found more aggressive than non-sportswomen. The participants of Judo, Gymnastics were more aggressive than individuals played Cricket, Basketball and Badminton.

**Harry (1995)** The present work tests the associations of sports ideology with sexist and anti-homosexual attitudes in a sample of 304 college students. It was found that sports ideology is positively associated with sexist and anti-homosexual attitudes, but only among males. Among females only sexist attitudes were associated with negative attitudes toward gays and lesbians. Among males, the link of sports ideology to anti-homosexual attitudes was independent of sexist beliefs. Reciprocal casual influences between sexist attitudes and sports ideology are discussed.

Korean National athletes and coaches shown a favorable attitude towards athletic participation while recognizing the value of participation like general, social and moral and self-concept and character development. The study also shows that Korean female athletes had more favorable attitude than their male counter pastes. She study also revealed that the Korean national coaches have more favorable attitude towards athletics participation than do athletes (Nov.1991).

**Lefmgwell and Williams (1995)** tested the predictive validity and discriminate validity of the Sport Anxiety Scale (SAS) and compared the
SAS to the SCAT in predicting dimensional state anxiety, as measured by the CSAI-2. Two separate samples were investigated (1) 36 male and female (n = 18 for each) junior college cross country runners and (2) 35 female (n=20) and female (n=15) college students enrolled in an intermediate tennis class. The results from sample 1 indicated good discriminate validity for the somatic subscale. Results in sample 2 demonstrated an opposite effect. In both samples, compared to the SCAT the appropriate subscale of the SAS correlated slightly higher with the appropriate state anxiety subscale, although the differences in the correlations were not significant. The results of this study suggest future research is needed regarding the discriminate validity of the SAS and before discarding the SCAT in favour of the SAS.

Terry, P. C., & Slade, A. (1995) conducted a study on the topic “Discriminant effectiveness of psychological state measures in predicting performance outcome in karate competition”. For this purpose 208 male karate players were selected. The Competitive State Anxiety Inventory-2 and Profile of Mood State Tests were conducted for about 40 minutes before a competition. Single factor multivariate analysis of variance of pre-performance mood and anxiety scores shows that:

1. There was a significant difference between winning and losing competitors;

2. Winners scored higher on vigor, anger and self-confidence and lower on tension, depression, fatigue, confusion, cognitive anxiety and somatic anxiety.

Discriminant function analysis show that on the basis of pre-performances mood scores 91.96% participants could be correctly classified as winners or losers while this score included on anxiety sub-scale the percentage increased to 93.47%. scores of anxiety alone produced 78.89% discrimination. Mood profiles for winning karate were in line with the "mental health" profile of Morgan except for above-average scores on Anger.
These findings support the results of McGowan and Miller that anger may stimulate performance in the karate competition.

**Radha (1995)** studied the selected psychological variable namely anxiety, aggression, motivation and personality traits in relation to basketball performance. If psychological factors, aggression is highly correlated with the playing ability \( (r = .941) \) further, it is noted that the coefficient of multiple correlation \( (r = .981) \) revealed that psychological factor put together play an important role in the basketball performance.

**Jones & Graham (1995)** conducted a study on the topic “More than just a game: Research developments and issues in competitive anxiety in sport”. Discusses the relationship between anxiety (AN) and performance (P) in competitive sports. The general arousal and AN theories include the Drive theory, inverted-U hypothesis, reversal theory, and state and competitive trait AN theories. Research shows that AN can be conceptualized as multidimensional, comprising cognitive and somatic components. Antecedents of cognitive AN relate to the athlete's expectations of success, and antecedents of somatic anxiety consist mainly of conditioned responses to stimuli. Temporal patterning of AN distinguishes between successful and less successful, and experienced and less experienced performers. The amount of time which cognitions about specific competitive events occupy a performer's mind relate to pre-competition AN. AN can both debilitate and facilitate P. However, catastrophe models state that P drops in a sudden and dramatic way when arousal reaches beyond the optimal level. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

**Wong, E. H., Lox, C. L. & Clark, S. E. (1993)** conducted a study on the topic “Relation between sports context, competitive trait anxiety, perceived ability, and self-presentation confidence”. This study examined the relations among athletic context, i.e., team-sport versus individual-sport, competitive trait anxiety, perceived ability, and self-presentation confidence for 62 men and 34 women athletes. The analyses showed that the athletic
context is associated with variations in competitive trait anxiety and self-presentation confidence; however, no main effect or interaction was noted for perceived ability. Results support the notion that aspects of the sports context are significantly related to various precompetitive cognitions.

**Turner (1994)** conducted a study about the efficiency of the inverted –U- theory and Hanin’s one of optimal function (ZOF) theory were contrasted in the present study. Twenty seven female and 40 male members of the Indiana University track and field team were evaluated for trait, baseline state, and recalled best state anxiety using the State Trait Anxiety Inventory (STAI) ANOVA revealed that subject possessing U classification (16 of 16 tests) did not perform better than their counterparts outside of optimal, subjects with pre-competition anxiety value within their individual ZOF performed significantly better than those with anxiety outside of ZOF in all tests, except for comparison based on coaching classification. In accordance with ZOF theory, the players were found to accurately predict pre-competition anxiety. These results indicate that ZOF theory was superior to the inverted U hypothesis in explaining the anxiety/sport performance relationship

**Tjeerdsma (1994)** studied about the ability of a model based on achievement motivation theory to explain the motivation/performance process in a natural physical education setting. The subjects were 49 sixth grade children participating in a 14 lesson volleyball unit in an actual middle school. Subjects completed four questionnaires which assessed their goal orientation and intrinsic motivation in physical education as well as their motor skill and volleyball perceived competence. Results showed that the proposed model did not do an acceptable job of describing the motivation/performance process in this physical education setting. However, several significant relationships among the variables in the model were identified. Volleyball performance was positively related to consistent engagement rate and motor skill perceived competence. Motor skill perceived competence was positively related to volleyball perceived competence, while perceived
competence over all was positively related to intrinsic motivation. The only significant relationship found between the goal orientation and the remaining variables was the positive association between task orientation and the challenge dimension of intrinsic motivation.

Ping (1993) examined motivational predictors of cognitive competitive trait anxiety (CCTA) in a sample of 406 subjects involved in 30 events. Factor analysis of CCATI items revealed six factors: game preparation, failure, opponent’s ability, social evaluation, injury and external condition. Factor analysis of the items or competitive motives (CM) revealed five factors: desire for victory, high ability demonstration, social approval, enjoyment, and self challenge. Self wise multiple regression analyses demonstrated that all the CCTAI factors were predicted by common unique predictors of the five CM factors. Positive and negative relationships between CCTAI and CM factors did not clarify conclusiveness of whether intrinsic or extrinsic motivation differently mediated CCTA. These findings indicate that the motive is a predictor of CCTA.

Jones, G. Swain, A. & Hardy, L. (1993) conducted a study on the topic “Intensity and direction dimensions of competitive state anxiety and relationships with performance”. This study examined relationships between intensity and direction dimensions of competitive state anxiety, and also relationships with beam performance in a sample of female gymnasts. The 48 gymnasts, whose ages ranged from 14 to 16 years, competed in a beam competition and were divided, via the median split technique, into poor performance and good performance groups. All the subjects completed a modified version of the Competitive State Anxiety Inventory-2 (CSAI-2) 10 min prior to performance. This inventory included the original intensity scale plus a direction scale in which subjects rated the degree to which the experienced intensity of each symptom was either facilitative of debilitative to subsequent beam performance. Analyses of variance showed no significant group differences on any of the CSAI-2 sub-component intensity scores, or on somatic anxiety and self-confidence direction scores. However, the good performance group reported their cognitive anxiety intensity as
being more facilitating and less debilitating to performance than the poor performance group. Stepwise multiple-regression analyses showed that the only significant predictor of beam performance was self-confidence intensity. These findings support the proposal that sports performers' directional perceptions of their anxiety symptoms may provide further understanding of the competitive state anxiety response, and also emphasize the importance of self-confidence in predicting performance.

Jones, G. & Swain, A. (1992) conducted a study on the topic “Intensity and direction as dimensions of competitive state anxiety and relationships with competitiveness”. This study examined differences in intensity and direction of symptoms of competitive state anxiety in high and low competitive subjects from the sports of rugby union, basketball, soccer, and field hockey. The 69 men were dichotomized via a median-split into high and low competitive groups based on their scores on the Sport Orientation Questionnaire. All subjects completed a modified version of the Competitive State Anxiety Inventory-2 30 minutes prior to competition. This inventory included the original intensity scale plus a direction scale on which subjects rated the extent the experienced intensity of each symptom was either facilitative or debilitative to subsequent performance. There were no significant group differences on intensity of cognitive anxiety or of somatic anxiety or on direction of somatic anxiety; however, the highly competitive group of 34 subjects reported their anxiety as more facilitative and less debilitating than the low competitive group (n = 35). This supports the proposal that sports performers' directional perceptions of their anxiety symptoms may provide further understanding of the competitive state-anxiety response.

McGuire (1992) et al. conducted a study on aggression as a potential mediator of the Home Advantage in professional Ice Hockey. Based on the subject defined delination between aggressive and non-aggressive ice hockey penalties established by Midmeyer and Brich, 13 measures were used on data collected from the official game reports and penalty records of the National Hockey League for the 1987-1988
seasons. Both macro-analysis and micro-analytic research strategies and the analysis were employed. Initial analysis revealed that home won 58.3% of the decided games. Further analysis showed a significant interaction between game location and performance. Home team incurred more aggressive penalties in games they won where as visiting teams incurred more aggressive penalties in games they lost.

Seiler's (1992) review presents psychological performance enhancement training as practiced, taking into account the requirements and prerequisites, the targets populations, the specific uses, and the generally applied training schedules. Future directions in psychological performance enhancement training are suggested respect to the need for evaluation and practice consideration.

Jones, Swain and Cale (1991) examined changes in, and antecedents of cognitive anxiety, somatic anxiety and self-confidence in a sample of male (n=28) and female (n=28) university athletes. Subjects responded to the competitive State Anxiety Inventory – 2 (Marten, Burton, Vealey, Bump & Smith 1990) and six antecedent item during the week preceding an important competition. In the case of cognitive anxiety, males showed no change across time, females showed a progressive increase as the competition neared. Male and female showed the same patterning in somatic anxiety with increases occurring only on the competition. Self confidence scores revealed a reduction in self confidence as the competition neared in both gender, but there was a greater decrease in females than in males. Stepwise multiple regression analyses showed that different antecedent predicted cognitive anxiety and self confidence in males and females. Specifically, significant predictors in the females were associated with personal goals and standards; significant predictors in the males were associated with interpersonal comparison and winning.

Jones, Swain and Cole conducted study on university athletes and found that in case of cognitive anxiety males showed no changes across time through female showed a progressive increased the competition is neared.
Males and females showed the same patterning in somatic anxiety with increase occurring only the day of competition. Self-confidence scores revealed an education in self-confidence scores revealed a reduction in self–confidence neared in both gender but there was greater decrease in female then males.

As there was limited study done in the area of sprints regarding the effect of anxiety hence researcher has chosen this study.

Razeena (1991) conducted a study on 110 university level female Hockey players. The purpose of the study was to investigate the comparative relationship of state anxiety and aggression of defensive and offensive women Hockey players. State anxiety questionnaire was administered to all subjects after the competition. On the basis of key given by Rainer and Martin for state anxiety and A. Kumar and P.S. Shukla for aggression to correlate and compare the anxiety and aggression in defensive and attacking players separately. A standard error of a co-efficient and correlation was computed and a ‘t’ ratio was obtained. It also shows that there is no significant different between these two groups.

Allen (1991) has also done a study entitled “Stress and coping in adolescents” in which he has concluded that females tend to report having been affected by negative events more often and more markedly than males. Higher scores on stress among females than males indicated that females liked to compete, be noticed, loved and worry for others, sometimes seeking perfect solutions that lead to higher anxiety and stress. Possibly, females attempt to do several activities such as achieve academic excellence, take care of families, and work at one time.

Patial (1991) studied the selected psychological variables of female hockey players of India with the purpose to sketch a profile if national hockey players, to compare the status of national and international and finally to form the individual profiles for international players who have represented the country in the recent most international tournaments. The variables selected for the study were incentive
motivation, state and trait anxiety, sport competition anxiety and extraversion-introversion and neurotism. For the collection of data, Alberta Incentive Motivation Inventory, the Sports Achievement Motivation Test, State and Trait Anxiety Inventory, Sport Competition Anxiety Test and Eysenck Personality Inventory were administered during 23rd Senior National Hockey Championship. Mean and SD on all the variable for both the groups were calculated and ‘t’ test was used to find the significant difference in the mean scores. The group and individual profiles were sketched on the model developed by Watson et al. on the basis of results, following conclusion were drawn:

1. National and international female hockey players of India had a moderate motivation profile.
2. The level of achievement motivation was just moderate.
3. Both were beset with high trait and state anxiety.
4. Low competition anxiety was perhaps a great asset with both of them.

International players were found to be stable, introverts whereas national players had leaning towards ambiversion and neurotism.

Mincho (1991) studied the attitude of Korean national athletes and coaches towards athletic participation. The purpose of the study was to investigate the attitude of Korean national athlete and coaches towards athletic participation and to compare the attitude of the subjects classified into various sub-group according to the biographical data.

The stubbs attitudinal Inventory was followed three hundred and thirteen national athletes and thirty five coaches of nineteen different athletic teams who were preparing for the 1990 Peking Asian games were chosen as subjects.

The .05 level of significance was selected for testing the null hypothesis. A one –way analysis of variance and follow up Turkey/Kramer test were used to test the hypothesis instigated in their study.
Weaver (1990) studied the relationship of college student's achievement motivation to family cohesion and aspiration: An analysis by race and gender. A disproportionate sample of 611 white’s black and Hispanic under-graduates of the Maryland Collage Park responded to a mailed questionnaire. Achievement motivation included orientation towards work, intellectual mastery, competitiveness and fear of success. Aspiration assessed the amount of educational desire, the ideal number of children and the importance of marriage. Family cohesion was measured by a sub-scale from the family environment scale. Descriptive Statistics, Chi-square Test, Person Correlation, Analysis of Covariance and Multiple Regression techniques were employed in the treatment of data. The major findings included: most black students lived on the campus, Asian and Hispanic students lived with their family, no consistent living arrangements emerge for the whites. Nearly all the students were attending the college for a degree. The majority of students had a strong desire to work hard, a moderate desire for intellectual challenge, and was moderately or highly fearful of success male tended to be more competitive than females. More black males and Asian females were competitive. The desire to work hard was an important predictor of Achievement Motivation. Most students perceived their families as moderately cohesive which indicated a healthy relationship most students wanted to marry and to have two or three children. Marriage was relatively more important than a job. The analysis by race or gender revealed few significant differences.

Shah, Singh and Pathak (1990) administered personality questionnaire and competitive state inventory-2 on twenty one international marathon runners to investigate extraversion, neuroticism, psychotism and state anxiety, cognitive anxiety, self-confidence. The result obtained indicated that successful marathon runners found to have high mean value in age (chronological) extraversion, neuroticism and self-confidence scale, whereas low mean value in psychotism, cognitive anxiety, somatic anxiety and total competitive state anxiety.
Bowger (1989) conducted a study to compare the state anxiety levels among ages, genders and skill levels at practice and pre-competition. The study included 137 players. Each subject completed the Spiel Berger State Anxiety Inventory. A state twice once just prior to a practice session and gain just prior to the State Age Group Swimming Championship. Test which indicated that the 15-18 age groups had significantly higher state anxiety than 19-21 and 12-14 age groups. Female had significantly higher state anxiety than male, significantly higher state anxiety was found at the pre-competition situation than at practice situation.

Jones et. al. (1989) examined changes in cognitive anxiety, somatic anxiety and self-confidence in a sample of 40 male and female university players during the period leading up to the quarter-final stage of the English and Welsh University Athletic Union Championship. Subject responded to the Competitive State Anxiety Inventory -2 (CSAI-2) on six occasions during the pre-competition period, 2 week, 2 days, 1 days, 2 hour and within 30 minutes. The results demonstrated different patterns of change for the females on all three CSAI-2 sub scales. In the case of cognitive anxiety, there was no change across time in the male but females showed a progressive increase as the competition neared. Females also showed an earlier increase in somatic anxiety than males. Self-confidence remained stable in males but decreased in females on the day of the competition.

Hayajenh (1989) dwelt on the achievement motives for participating in and dropping of youth sports programmer in the United States and Jordan. The sample consisted of two groups. Sixty-five Americans and sixty-seven Jordanians both samples consisted of male and female sport participants and sports dropouts between the ages of 11 and 17 years. The most important reasons of the Americans had for sports participation was living to have fun, liking to improve skills and liking to learn more skills, for Jordanians liking to travel were the most important reasons for participation. Both Americans and Jordanians
dropout listed emphasis a winning and losing and the lack of fun as the most important reasons for dropping out of sport programs. There were no significant differences found between American and Jordanians in their factors of achievement motivation for sport participation. However, one factor emerged with regard to Mache’s and Nicholls (1980) model in that Americans were found to be more task and independence oriented while Jordanians were found to be more ability and social approval oriented. It was concluded that Americans and Jordanians have different reasons for participation and similar reason for dropping out of sport programs.

Jones, J. G. & Cale, A. (1989) conducted a study on the topic “Relationships between multidimensional competitive state anxiety and cognitive and motor subcomponents of performance”. This study examined the relationship between multidimensional competitive state anxiety and cognitive (i.e. digit span) and motor (i.e. perceptuo-motor speed) subcomponents of performance in an experimental group of hockey players during the period leading up to an important hockey match, and also in a control group of hockey players before a routine training session. Using a 'time-to-event' experimental paradigm, an increase in somatic anxiety 20 min before the hockey match was accompanied by improved perceptuo-motor speed performance. Stepwise multiple regression analyses showed that somatic anxiety was negatively related to digit span performance, whilst somatic anxiety and self-confidence were positively related to perceptuo-motor speed performance. These findings suggest that somatic anxiety may be an important source of performance variance.

Lewthwaite, R. & Scanlan, T. K. (1989) conducted a study on the topic “Predictors of competitive trait anxiety in male youth sport participants”. This field study examined intrapersonal and significant adult factors related to the levels of dispositional or competitive trait anxiety experienced by 9- to 14-yr-old male participants of a competitive wrestling program. Competitive trait anxiety (CTA) is a personality disposition which reflects the tendency to experience stress in situations involving competitive
sport (20). Multiple regression analyses of questionnaire data revealed that boys with more frequent somatic competitive trait anxiety symptoms 1) had lower self-esteem, 2) reported greater upset if they performed poorly, and 3) expressed a greater preference for avoiding a tournament match. Investigated cognitive anxiety symptoms involved characteristic precompetitive worries about failure and worries about adult expectations and evaluation. Youngsters with more frequent worries about failure placed greater importance on wrestling well and felt greater upset when they performed poorly, in comparison with boys who worried less frequently about failure. More frequent adult-related worries were predicted by greater personal upset for poor performance and perceptions of 1) greater parental and coach shame and upset, 2) more negative adult evaluations, and 3) greater parental pressure to wrestle.

Nandi (1989) conducted a study on anxiety and its effect upon the performance soccer skill test requiring gross motor skills and concluded that low anxiety subjects performs significantly better than that of high anxiety subjects in dribbling the ball for time and kicking the ball for distance with left food and performed will in gross motor soccer skills, who were having low anxiety state.

Bowger (1989) conducted a study compare the state anxiety levels, ages, gender and skill at practice and pre-competition. The study included 137 athletes. Each subject completed the Spielberger state Anxiety Inventory a – State twice, once just prior to practice session and gain just prior to the state Age Group Swimming Championships. The statistical procedures used were a 3 x 2 x 2. Repeated Measures Analysis of variance. Mean comparisons were made using the Newman Keuls Multiple Range Test which indicated that the 15-18 age groups. Females had significantly higher state anxiety than males and significantly higher' state anxiety was found at the pre competition situation than at the practice situation.

Teiple, et. al. (1988) suggests that interpretation of an action as an aggression will depend on the rules and perspective of the observer.
Extending this assumption to the sport situations, these researchers hypothesized that coaches, athletes and referees, due to their contrasting notes, would judge aggressive sport actions differently. To test this hypothesis, the investigators asked 20 highly skilled male soccer players, 20 male coaches and a control group of 10 rule experts to observe a series of 40 foul scenes selected from championship soccer matches and presented on a colour video monitor. Immediately after viewing each soccer scene, the observer was asked to evaluate the soccer action according to type of foul exhibited. Personal sanction to be imposed and resulting game condition chi-square analysis indicated distinct difference between the groups in their evaluation of these sport actions.

Thomas (1988) assessed the attitudes of undergraduate students majoring in physical education towards women competing in varsity sports. The Thomas, Solomon, Ellis Opinionnaire (TESO), consisting of physical, emotional, social and personal domains, was developed to be administered to under-graduate students majoring in physical education at five traditionally black institutions in the South-East. The t-test and analysis of variance statistics were used for the collection and analysis of data. Conclusions made from the opinion expressed by physical education majors towards females competing a varsity sports revealed statistical significance in (1) female physical education majors had more favourable attitudes that male physical education majors (2) male athletes had fewer favourable attitudes than female athletes (3) female non-athletes had more favourable attitudes than female athletes, (4) male non-athletes had more favourable attitudes than male athletes, (5) black and white students showed no differences, (6) age groups showed no differences and (7) in the physical domain, freshman and seniors had more favourable attitude than sophomores, while the emotional domain seniors had more favourable attitudes than sophomores and juniors.

Maynard (1988) conducted a study to assess the relationship between the martens sport competition anxiety test and the competitive state anxiety inventory as well as their effectiveness in predicting the game performance
in Rugby 22 male university rugby players were acted as subjects for the study. A multiple regression analysis between the SCAT and the three scales of the CSAI showed a significant relationship between the SCAT and the sub-scale of somatic anxiety. A significant correlation was also noted between somatic anxiety and the performance of players who performed below their normal ability. The author suggested that the increase in self-confidence between games may have been detrimental to the performance of the team.

Reusser (1987) worked on the aggressive and non-aggressive behavior of a college basketball coach. An inter-collegiate female basketball coach selected by the investigator was videotaped six times during the 1985-1986 basketball season. The data were systematically analysis by Cheffer’s adaptation of Flanders interaction analysis system and the emotional dimension of Cheffer’s system CAFIAS. She found out that the subject did not become more aggressive while losing as opposed to winning. More aggressive behavior was exhibited during home games when compared with away games. The subject became more aggressive when first and second halves were compared and became less aggressive as the season progressed. The subject was silent for more extended period of time and emitted more directive behavior as the season progressed.

Harvatials (1987) conducted a study to find out the effects of A-trait and A-state anxiety upon athletic performance. A total of 90 "Effect size" (ES) were conducted from the initial investigations and utilized as dependent variables which included anxiety type level, performance outcome sex of the subject and grade level. The average study ES, was 656 (SD=.842) suggesting that anxiety influences performance somewhat more than with no anxiety present. Specific suggestions were presented direct attention towards the relationship between anxiety and performance or changes in anxiety level.
Krane and William (1987) compared changes in cognitive anxiety, somatic anxiety and self confidence prior to competition by high school gymnasts and collegiate golfers.

The participants in this study were 36 girls on three high schools gymnastic team competing in conference meets and 44 female collegiate athletic association teams competing in the university of Arizona invitational golf tournament. The CEAT-2 questionnaire was used to measure pre-competitive cognitive anxiety, somatic anxiety and self confidence. The questionnaire consists of 27 items.

There was no significant difference in cognitive anxiety prior to the practice round (M=16.2), and second tournament round (M=16.7), F (2.41) = .82, P.10 there were also no significant difference in self confidence in prior to the practice (M=27.3), first (M=27.0) and second (M=27.2) tournament rounds F(2.41)=.07; P.10. A significant main effect was found on the somatic anxiety sub-scale, F (2.41) = 6.64, P.10 follow up Duncun Multiple Range Test Revealed that somatic anxiety prior to the first tournament round (M=13.5) but there was no difference between the second tournament round (M 14.4) and the practice round.

Rainey, Conklin and Rainey (1987) used the sport Competitive Anxiety Test (SCATO was used to identity athletes with high and low upper and lower 25 percent) competitive trait anxiety (CTA) from among 60 male 60 female junior high scholars. High CTA athletes reported more frequent evaluation and performance worries and more anticipated negative feeling when playing poorly than low-CTAs. These groups did not differ on perceived importance of their success/failure in sport. Male and females differed significantly on only tarn performance expectancies. Results support for the hypothesized relationship of fear and fear of evaluation to CTA.

Horvastich (1987) a study to find out the effects of A-trait and A-state anxiety upon 'athletic performance. A meta-analytic approach, A total of 90 "effect size" (ES) were calculated from the initial investigations, and
utilized as dependent variables to assess of 41 independent moderator variables, which included anxiety type, anxiety level, performance outcome, sex of the subject, and grade level, the average study ES was 0.656 (SD=0.842) suggesting that anxiety influences performance somewhat more than with no anxiety present. Specific suggestions were presented to direct attention towards the relationship between anxiety and performance or changes in anxiety level.

**Brustad et. al. (1987)** examined the relationship between cognitive appraisal processes and the effective characteristics of youth sport involvement using Herter’s competence motivation theory as a framework. Specifically, the present study extended poser’s (1983) research on patterns of competitive trait anxiety (CTA) in young male soccer players by including female players involved in different sports. Boys baseball players (N=55) and girls softball (N=55) completed self-report measures of (CTA), self-esteem, perceived physical competence and frequency of evaluative and performance related worries about athletic competition. Multivariable analysis revealed that high CTA boys reported lower levels of self-extreme and more frequent worries about their performance they did their less anxious counterparts. For the girls, no significance relationship was found between levels of competitive trait anxiety and the cognitive variables. To enhance the experience of youth sport and the participants, it is essential that the contribution to consequences of competitive trait anxiety be more closely examined.

**Zwart (1987)** studied attention and anxiety responses of athletes to mental tainting technique. This study explores the change in competition anxiety, attention direction and focus, and performance in 13-15 year old swimmers (n=30) after exposure to the super learning mental training program. The experimental treatment consisted of engaging the subjects in a six week (two hour session per week) program of (i) relaxation training, (ii) positive affirmation statements synchronized to breathing exercises and music, and (iii) visualization for mental rehearsal.
Singh (1987) administered SCAT (Marten`s) to Indian athletes and hockey players and found significant differences between the two samples on sport competition anxiety. Hockey players, both male and female, were found to have less competition anxiety as compared with the players of individual events. Male exhibited less anxiety in competitive situations as compared with the female.

Singh et. al. (1986) studied the anxiety difference between male and female Handball players of intervarsity level. 73 (male 36, female 37) subjects comprising 6 teams were investigated. The subjects were members of 1st, 2nd and 3rd position holders respectively. Marten's sports competitive anxiety test (SCAT) for adults was administered to the subjects selected or the study. T test was applied to find out intra group differences. ANOVA was worked out to find out the difference among the different position holder of male and female teams. The difference of competitive anxiety between male and female came out to be statistically significant at .05 level though over all level is moderate in both cases.

Purpose of the study conducted by Sandhu et al. (1986) was to adapt the competitive anxiety level scale for female basketball players. 32 female basketball players were taken as subjects from the basketball teams of colleges officiated to Punjab University. The data were statistically analysed by using the statistical operation including coefficient or correlation to determine the validity. Factor analysis was also used for the adaptation of test. The result of the study revealed that the test is valid and can be used on female basketball players at college level in Indian conditions.

Holden(1986) has conducted a study on attitudes of high school students toward women’s participation in sports. The students were divided into ethnic, sex and age groups. In general, whites were the most accepting of women in sports, blacks were in the middle, and Hispanics were the least accepting. The biggest difference occurred in white males between the ages of 15 and 18 while females started at the highest level
and had only slight differences. Hispanics were reflective of the male dominated culture and supported a strong sex-role stereotype. Black males have viewed sports as an escape from the ghetto and were hesitant about allowing females the same access to sport.

**Spence & Spence (1986)** which states that difference between high and low anxiety subjects would occur only when a stressor was present measurement of Competitive Trait Anxiety (CTA). This construct assesses individual differences in perceiving competitive situations as threatening and leads to corresponding differences in A-State responses. The SCAT Manual (Martens 1977) presents impressive data and information documenting theory development, reliability, and validity of this inventory. Essential validity was best demonstrated in that SCAT. Predicted program A-State Scores ($r=.64$) as compared to the STAI A Trait ($r=.30$) and coaches ($r=.13$) (Martens and Simon, 1976).

**Debnath and Bawa (1986)** found that sports competitive anxiety between junior and senior cyclist and gymnast. But a non significant difference has been found in sports competitive anxiety between female cyclist and gymnast of national coaching camp.

**Wilfley et. al. (1986)** found that stress can be reduced with regular exercise. In the study 83 adults (37 women and 46 men) were enrolled in an individualized exercise program at a Midestern university. The POMS was administered to the subjects who completed the course. Those who were in the low fitness/high stress subgroup had positive changes in Stress, Vigor, Fatigue and Confusion. Completing the program showed no significant psychological changes. This study supports related studies that find exercise benefits those that are not physically fit and higher levels of stress.

**Bredemeier et. al. (1986)** conducted a study on the relationship at sport involvement with children’s moral reasoning and aggression tendencies. The relationship between sports involvement variables (participation and interest) and fact of children’s morality (reasoning
maturity and aggression tendencies) were investigated for 106 girls and boys in grades 4th through 7th children responded to a Sport Involvement Questionnaire, participated in a moral interview, and completed two self-report instruments designed to assess aggression tendencies in sports – specific and daily life contexts. Analysis revealed that boy’s participation in medium contact sport (the highest level of contact sport experiences they reported) was positively correlated with less mature moral reasoning and greater tendencies to aggress. Regression analysis demonstrated that sport interest predicted reasoning maturity and aggression tendencies better than sport participation. Results and implications are discussed from a structural development perspective.

Holden Laura Lee (1986) conducted a study in early spring, 1984, approximately 900 Los Angles high school students were surveyed regarding their attitude towards women’s participation in sports. In contradiction to previous studies, this group agreed that sports were an acceptable human activity and could not be labeled as masculine or feminine.

Calderaro (1985) conducted a study on stress anxiety in sport, he concluded that sport seems to be source of acute and chronic stress with possible effects in physical and psychie health of a person. a simple test like the one used by Holmes in psycho – somatic, has allowed the Author to discover the presence of "stress anxiety" in the world of sport besides the better known pre-against anxiety" felt by the athlete. In fact, "stress anxiety" can also attract official’s trainees and other sports engaged persons with possible interpersonal side effects (family, school, work). The author also emphasis efficient interventions in order to prevent behavioural and psychomatic negative consequences. Furthermore, in order to increase individual resistance to physic, consequence certain techniques are emphasized.

Kenneth (1985) conducted a study on prediction of performance from selected personality traits, and State Anxiety Levels of competitive male and
female gymnasts. Subjects for the study were 21 male and 35 female gymnasts, aged 9 to 23 who compared in either sectional or national qualifying meets in the United States and Canada. Path analysis, a multiple regression technique was used in the treatment of the data. Based upon the findings and within the limitation of this study, the following conclusions can be drawn: (1) the personality – anxiety. Model was supported by explaining over 51 percent of the variability in the criterion, (2) pre-competitive anxiety was not a statistically significant prediction of gymnastics performance, (3) the hypothesis related to the personality performance relationship were not supported since the model explained only 38.1 percent of the total variability in gymnastics performance.

The Wear Attitude Inventory was administered by Organ (1985) to 206 students to determine students’ attitudes toward required physical education in the liberal arts programme at Howard University. The Wear questionnaire had a possible maximum score of 200, which would indicate a strongly favourable attitude toward physical education.

He found the following: (1) there was no significant difference between the students attitudes and their classifications. (2) There were no significant differences between the students and the activity area in which they were currently enrolled. (3) There were no significant differences between the students’ age and their attitudes toward required physical education. (4) There were no significant differences between the male and female attitudes toward required physical education.

He concluded that (1) the students at Howard University who participated in this study had favourable attitudes toward physical education. (2) No significant differences in attitudes concerning physical education can be predicted by the classification, sex, age or course enrolment. (3) The majority of the students (58 percent) had favourable attitudes toward physical education.

Onifade (1985) has conducted a study to investigate the relationship among selected demographic factors, physical activity belief
and meaning of physical activity (attitude). Kenyan Attitude Inventory was used to assess students' attitude toward physical activity and the physical activity behaviour scale which was adopted from Zaichkowsky's (1979) study was used to measure physical activity behaviour. The result revealed that Nigerian male students could be expected to seek physical activity that would be of a social experience while the female students would be probably seek experiences related to health and fitness. The Nigerian student attending universities in the Metropolitan Washington, D.C. area has valuable attitudes that seem to be expressed through different behaviors for different beliefs.

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The students were divided into ethnic, sex, and age groups and comparisons were made between the groups. In general, white were the most accepting of women in sports, black were in the middle and Hispanics were the least accepting. The biggest differences occur in white males between the age of 15 and 18. White females started at the highest level and had only slight differences. Hispanics were reflective of the male dominated culture and supported a strong sex role stereotype. Black males have viewed
sports as an escape from the ghetto and were hesitant about allowing females the same access to sports.

In an archival study, Widmeyer et. al. (1984) examined the relationship between aggression and performance of 320 professional ice hockey teams of various times during 1176 games over a period four seasons. Aggressive penalties were operationally defined as non-sanctioned aggressive acts in which a player will make the intent to do harm (i.e. slashing, spearing, high stitching, cross checking etc.) and were separated out from accidental penalties such as tripping or interference which are usually committed in order to prevent from scoring. The average number of points a team accumulated per game was correlated with a number of dependent measures, average penalty minutes per game in the first segment of the season. Results indicated no significant relationship between aggression and team performance. For all games, combined, however, a significant positive relationship was obtained for aggression exhibited by team in the first period of games and the average number of points they accumulated per game. The author concluded that aggression is an effective strategy to achieve success in an ice hockey game, provided it takes place early in the contest.

According to Husman (1984) aggression behaviour is an overt verbal or physical act that can psychologically or physically injure another person or oneself. Aggression behaviour against another person is called extra punitive behaviour. Whereas aggression against the self is often labelled intropunitive behaviour. Aggressive behaviour is non-accidental, the aggressor intends an injury, and the behaviour selected for this is under his or her control. The aggression has selected the behaviour from various alternatives available in the situation including non-aggressive responses.

Dowthwaity (1984) administered Spielberger's State and Trait Anxiety Inventory and SCAT to 22 women hockey players. Forwards reported consistently higher A-State than defenders. Consistent
differences in A-State Score were found in the 1st Sixth for the extreme group of high and low score on SCAT and the high SCAT group showed the greater increase from the coaching to the competitive condition. Over both teams A-State correlated significantly with SCAT.

A study conducted by **Goodspeed (1984)** investigated the effects of comprehensive self-regulation training including relaxation, mental imagery, self-confidence, concentration and cognitive restructuring on anxiety and performance of female gymnasts.

**Soltani (1984)** has conducted a study to determine the attitudes of college and university students toward required physical education activity class programmes. Wear (1955) Inventory was administered. The results showed as significant, favourable attitude to exist among students toward physical education activity classes. Moreover, senior student attitudes were significantly more favourable (P < .02) than freshman attitudes and social science student attitudes were significantly more favourable (P < .01) than science student attitudes.

**Graening (1984)**, concluded from his study by attitudinal data, revealed the following results – (1) Principals were more favourable toward physical education than superintendents. (2) Principals of large school districts were more favourable toward physical education than principals of small districts. (3) Principals of Northwest Region were more favourable toward athletics than principals of the Delta region, but less favourable toward physical education than principals of both Delta and Central/South West Regions. (4) Principals having physical education degree were more favourable toward both athletics and physical education than principals without these degree. (5) Superintendents having physical education degree were more favourable toward physical education than superintendents without these degrees. (6) Both principals and superintendents with prior athletic coaching and/or athletic directing experience were more favourable toward both physical education and athletics than those without this experience.
Barros (1983) has conducted a study on principal’s attitude towards physical education. Wear Inventory (1951) was administered on 352 elementary school principals to assess their attitude toward physical education. The results showed that participation in physical education classes is a matter that has significant influence in attitude toward physical education. The results showed also, that participation in physical education classes and school enrolment had a positive relationship with attitude of elementary school principals toward physical education and length of experience as a school principal had a negative one. The analysis showed that there were a positive significant relationship of the principals’ attitude toward physical education with his/her opinion of the importance of physical education and sports in the elementary school curriculum, agreement with the scholastic sports games, and physical education teacher performance.

Bhullar (1982) in the year 1982 undertook a study entitled “A Comparative study of attitude towards physical activity of university male and female students”. The purpose of this evaluation was to discover the structure of attitude towards physical activity of male and female students living in the same environment. Subjects for this study included both male and female students. The 200 (100 male & 100 female) subjects who participate were drawn randomly from various teaching departments of the Punjab University campus, Chandigarh. Their age ranged from 16 to 23 years. To measure attitudes, physical activity attitude scale constructed and standardized by the author was used which consisted of 70 items. Scoring was done on the basis of ‘Scale Product Technique by giving weight for each response category in the Likert fashion and then multiplying the same with scale value of the statement

Nelson and Langer (1982) examined some of the psychological variables present among athletes in competitive situations. They assessed anxiety levels of the team member by using Taylor’s Manifest Anxiety scale. The result showed that performance of athlete with extremely high
levels of anxiety was poor. It was also found that athletes who scored extremely low level of anxiety did not perform well.

Brown (1982) found that both males and females who participated frequently in contact sports were more willing to use aggression than were those who reported that they rarely participated in such sports. It is difficult to determine whether the folk love and sanctions surrounding the sport produced aggressive acting people, or whether aggressive people choose to participate in such sports. There are some individuals that certain sports do encourage aggression, as stated by Brederbeir (1985) in her study. She analysed interviews of forty females and male basketball players and assessed their feelings about the legitimacy of aggression behaviour along a scale of “injurious acts”.

Brown (1982) studied the inter-relationship of Androgyny, self-esteem and achievement motivation of female’s players. Subjects were 75 female players from varsity teams at LSU and 72 non-players selected from English classes on the basic of scores on two personality inventories, the Mehrabian test for achieving tendency for females and the short form of the PRF ANDRO scale the 101 subjects were categorized into four sex role and three achievement groups. The self-esteem scores were also recorded for each subject. Regression ANOVA and chi-square were used in the analysis of data. Female players were more and regimes than the non-athletes. The non-athletes consisted largely of feminine sex typed individuals. Subjects, scored significantly, lower on self-esteem. These were no significant correlation between self-esteem and achievement motivation.

Marten (1982) study conducted on four sample of Volleyball team found subjects scoring high on Achievement Motivation (Mehrabian-Scale) are low in fear of failure and high in need achievement. Same way subjects scoring low on Achievement Motivation Scale were found high in fear of failure and low in motive to success. The study further
concluded that there was no significant relationship between sports competition anxiety and achievement motivation.

Maxson (1982) conducted a study in which the Mehrabian Measures of Achieving tendency and a survey of a swimming achievements instruments designed by the investigator were given to 44 college swimmers (29 male and 15 female) from four universities. There was a significant positive ‘r’ between the scores of the achievement motivation questionnaire and the swimming success survey. In addition college swimmers achieved significant higher score on the Mehrabian Measure of achieving tendency than the norms for college students in general, and female swimmer obtained significant higher level of achieving tendency than the level of the male swimmers.

Miltons (1981) collected data from 335 collegiate female athletic directors utilizing a questionnaire designed to assess trends in selecting coaches for female athletic. These demographic result revealed (a) 37% increase in the number of coaches for female athlete, (b) a greater increase at the assistant 22% rather than head 8% coach level, (c) a substantial decrease in male coaches 124 in comparison to their female counter parts 44, (d) a significant decline (294) in female head coaches and (e) a large increase in the number of male head coaches (437). As the basis for this present investigation, current practices and affirmative action strategies were discussed i.e., gender employment trends, possible explanations of these findings were offered.

Balance (1981) has conducted a study on administrators’, teachers’, and students’ attitudes toward physical education. 25 administrators, 50 teachers, and 100 students in the Bartie County School System in NC were given the wear attitude Inventory. There was no significant difference between the attitude of administrators and teachers toward physical education. However, administrators and teachers had significance higher (P<.05) attitudes towards physical education than did the students.
Ervin (1981) has conducted a study on visually impaired adults: opinions about physical education and physical recreation. Interviews were conducted with 30 legally blind adults, ages 16 to 50, to obtain their opinions in response to 37 questions were concerning past and present experiences in physical education and recreation and factors relating to these experience. 3 judges independently rated the responses a having positive or negative affects toward physical education and recreation. 2 values (P < .05) were obtained for responses to 24 of the 37 interview questions. Of these, 14 were favourable and 10 were unfavourable. It was concluded that students had positive feelings about their remembered school based childhood and adolescent physical education and recreation experiences and negative feelings about their past and present involvement and/or inclusion in family, neighbourhood community and church physical education and recreation. ANOVA showed no significant difference in opinion as related to school placement (Public v/s residential).

Silva (1981) tried to identify variable that are related to optimal performance at elite levels of wrestling. The subjects were 86 candidates competing for 1980 US-Greco-Roman and free style Olympic wrestling teams. Psychological testing included trait testing and pre-competitive state testing. The reports showed non-qualifier scored higher than qualifiers on anxiety, depression and regression. Separate anxiety measures generated from the STAI and the IPAT anxiety trait measures indicated that the qualifiers were lower on all measures of anxiety than were the non-qualifiers.

Virgina (1980) studied the attitude of emotionally disturbed and normal children towards physical activity. Subject was 50 emotionally disturbed and 391 normal children. The findings indicated that normal children had a more favorable attitude towards physical activity then the disturbed children. In study of female sports socialization Greendorfer examined whether differences exited between these systems of socializing agent’s family peers of school during three life cycle stages. She found that
during childhood, the female participation were more likely to have been influenced by peers and family respectively, than by teachers and coaches. At the adolescent stage the influence of family was not significant, while peers and teachers and during young adulthood, the most influential agent was the peer group.

She also found out the relationship between father level of education and type of sports participation and also the socio-economic status, occupation of father and type of sports participation. Specifically, the lower the father’s educational and occupational status, the more likely the girls was a team sports participant, while the higher the education occupation level were associated with the individual and dual sport participation.

Haque (1980) conducted a study on the attitude of the heads of the Governmental and Non-governmental secondary schools of Dacca city. The purpose of the study was to assess favorable and unfavorable attitude of heads of each school towards particular aspect of physical education. The individual scores of each statement were added and compared with natural value.

The author observed that the heads of the schools of governmental schools and non-governmental schools have a positive attitude towards physical education. He further observed that the heads of the governmental schools have more sincere attitude than their non-governmental counter parts.

Mize(1980) determined the relationship between attitude towards physical activity and sex role orientation of college students. Scores on the Kenyan Attitude toward Physical Activity Inventory (ATPA) and the Bem Sex Role Orientation Inventory (BSRI) were processed by inter correlation, t-test, ANOVA, Duncan’s Multiple Range Test and Chi-square. Her subjects were 267 college age students (M=179, F=88). All variables of ATPA were inter-related except chance and athletics for the total group. Analysis of the male and female groups yielded some
different results for various factors of the ATPA. Significant difference between males and females was found.

**Basu (1980)** has conducted a study to determine the attitudes of parents toward physical education programme and to find out their opinions (negative or positive), if any. The investigator prepared a questionnaire comprising 100 statements based on a very simple pattern viz. Yes/No, which covered 10 aspects of physical education. The study revealed that a majority of the parents had a favourable attitude towards all aspects of physical education. Parents had a highly favourable attitude towards physical education because it promoted physical health and fitness, mental maturity and alertness, personality development, sociability, efficient use of leisure. Their opinion was political interference in sports was undesirable. They wanted physical education programme for all.

**Weinberg(1980)** investigated the relationship between competition trait anxiety and state anxiety and golf performance in a field setting. Test low moderate and high CTA collegiate golfer (10 per cell) performed in a practice round one day and day 2 of competitive tournament. Co-relation between SCAT and state anxiety indicated that SCAT was good predicator of pre-competitive state anxiety. The direction of state anxiety and performance CTA main effects provide support for oxedine`s (1970) contentions that requiring fine muscle coordination and precision (i.e. golf) are performed best at low level of anxiety.

**Ahmed (1980)** examined the relationship between the state anxiety of male and female scholastic athletic team members and their athletic team’s psychosocial environment. 441 male and female athletic team members were selected from Eugene Springfield, Oregon, area high schools. A packet containing directions, a personal data form requesting age, sex, and sport, the Team Atmosphere Scale and the State Anxiety
Scale were given to each subject. Males and females did not significantly differ in their mean TAS scores or state anxiety.

Betty et. al. (1980) studied 1977-78 South Dakota State University Women's Basketball Team (N=12) and were measured on state anxiety inventory (SAI), sport competition anxiety tests (SCAT), pre-game HR, game field goal 1, free throw 1. Ss in groups 1 consisted of the players who attempted over 122 field goals or less. Results of ANOVA indicated significant (P/=.05) difference between groups on season field goal % and SAI subsequent data analysis throughout this study in corporate. Only the values from group – 1.A significant r was found between scores on the SAI and SCAT significant (P/=.5) multiple regression equations to estimate field goal shooting proficiency from selected measures of anxiety produced multiple R’s ranging from 47 to 66 and accounted for between 22 and 44 percent of the variance in performance. Amultiple regression equation for predicting free throw success was not significant (P.05).

Poteet, D. & Weinberg, R. (1980) conducted a study on the topic “Competition trait anxiety, state anxiety, and performance”. This study tested predictions about social facilitation using a competitive (evaluation) vs. non-competitive setting. In addition, subjects who exhibited low, moderate, or high anxiety concerning competition were selected to determine the relation of anxiety to social facilitation. The design was 2 (competition/no competition) X 3 (competition trait anxiety), with state anxiety and performance as the major dependent variables. In a significant main effect of anxiety about competition subjects high in competitive anxiety displayed higher levels of state anxiety than subjects moderate or low in anxiety about competition. Performance differences were non-significant although means were as predicted.

Simon, J. A. & Martens, R. (1979) conducted a study on the topic “Children's anxiety in sport and nonsport evaluative activities”. Comparisons of pre-event state anxiety (A-state) were made among 9–14 yr
old boys participating in required school activities (classroom tests and physical education class, 145 Ss), nonrequired nonsport activities (band solos and band group competition, 136 Ss), and nonschool sports (baseball, basketball, football, gymnastics, hockey, swimming, and wrestling, 418 Ss). Ss in all groups were significantly different from each other, with those in nonrequired nonsport activities manifesting the highest A-state levels followed by Ss in nonschool sports and then those in required school activities. Higher A-states were found among individual sport than team sport participants. A significant interaction showed that the highest A-states were reported among those in individual contact sports and the lowest in team-contact sports. Differences in A-state levels among the activities are discussed in terms of the evaluation potential existing in each activity.

Widmeyer, W. N. & Birch, J. S. (1979) conducted a study on the topic “The relationship between aggression and performance outcome in ice hockey”. This investigation determined if aggression is a means of obtaining success in amateur ice hockey. Two analyses were undertaken. The first examined the relationship between illegitimate tactics (as measured by penalty minutes accumulated) and team success, while the second compared the penalty minutes accumulated by successful individuals (i.e. all stars) with the penalty minutes accumulated by non-all stars. The sample was comprised of the 87 teams and their 1,667 players who participated in the Ontario University Athletic Association from 1971-72 to 1976-77. The relationship between team aggression and team success was analyzed with a Pearson Product Moment Correlation. A t test was used to compare the mean accumulated penalty minutes of all stars with those of non-all stars. The results failed to support the premise that aggression is a means to success for teams or for individuals.

Dockstader (1979) carried out an investigation to explore the relationship between need achievement and locus of control with regard to realistic goal setting, atypical and typical shift strategy, varying conditions of success and failure. Subjects manifesting different levels of need achievement (higher and low) and control scale (Rotter 1966) and
Mehrabian tendency to achieve scale (1967). The study involved a series of 2x2x10 factorial design defined by level of achievement and control ideology over a series of ten trials. The sample consisted of 149 male high school students between the ages of 14 to 17 years, attending a week long summer cross-country training camp. The results were mixed and support for the underlying hypothesis’s that locus of control and achievement motivation are two independent measures that interact to enhance prediction of achievement behavior could not be unequivocally maintained. The discussion of the results includes some speculation about casual relationship among the measures.

**Martin (1979)** has conducted a study to determine the attitudes of elementary school teachers and administrators toward athletics for female. Three hundred seventy three elementary school teachers and administrators were chosen. The results show that (1) Teachers and administrators disagreed with items which presented negative statements about female athletes and agreed with items presenting positive views toward female athletes. (2) Teachers and administrators agreed that a difference exists between the personality of the female athlete and non-athlete. (3) The pattern of participation revealed females participating in sports traditionally accepted for female involvement. Male teacher and administrators established a pattern of participating in sports which have traditionally been reserved for men. (4) Teachers and administrators in this study could not be characterized by a particular pattern of attitudes. (5) Sub group responses indicated that the certain subsets of teachers and administrators were either more positive or more negative than others. It was concluded that elementary school teachers and administrators are a positive group toward female participation in athletics though teachers appeared more positive than administrators.

**Walker (1979)** conducted a study on aggression in sport fouling in university basketball. The purpose of the study was to determine differences in the occurrence of aggressive actions (fouls) under several conditions evident in basketball contests. The intent was to examine the
possibility of predicting aggressive actions throughout the game. Official play-by-play score sheet and official National collegiate Athletic Association Box Score Sheets were used together the data. The findings of this investigation indicate that fouling is predictable when the range of scoring increases and during the first minutes of the second half. The implications associated with the finding are the following.

(a) The frustration of the fame situation causes aggression behavior.
(b) No cathartic effect is apparent as a result of displaying aggressive actions.
(c) Several factors contribute to the occurrence of fouling behavior in basketball games including accidents, international fouls, coach requested fouls, and over aggressiveness by players.

Ciccolella(1978) made a study to determine differences in aggression of male and female athletes. Subjects for this study included male and female under-graduate students at Alma College and Brigham young University who participated in varsity athletic in basketball, softball (baseball for men) tennis, and swimming during 1977-1978 academic years. The study employed the Minnesota Personality Inventory (MMPI) as the measuring instrument. The scales of the MMPI selected to determine aggression were 2 (depression), 3 (hysteria), 4 (psychopathic deviancy), 5 (masculinity-feminity) and 9 (hypomania). The conclusion of this study was that female varsity athletes were more aggressive than male varsity athletes.

Vogel, et. al. (1978) conducted a study on 200 male and 200 Female army personnel were tested prior to the beginning of basic training. Substantial improvement in fitness was noted in the males but not the females. After the eight-week training period was over, significant drops in Tension, Deprecation, Fatigue and confusion were noted in the males as well as a significant an increase in Vigor. There was a reduction in the scores (except Fatigue) for Females but none were statistically significant, and there was a slight increase in Vigor.
Nesvig (1978) conducted a study to determine whether a relationship existed between an athlete’s level of achievement motivation and gymnastic meet performance. A secondary purpose was to determine if the level of achievement differ between male and female gymnasts. The McClelland thematic appreciation test (MTAT) was administered to measure the level of achievement motivation among the male and female members of the SDSU inter-collegiate gymnast’s team. Subjects gymnastics meet scores were taken as the measure of proficiency in gymnastics. Using Person’s ‘r’ it was found that no significant relationship existed between achievement motivation and gymnastics meet performance among men and women (P .05.) Through the use of a t-test is was found that a significant difference existed between scores attained by men and women on the MTAT (P.05) ANOVA demonstrated significant difference in MTAT scores among the men but not among women.

McCarthy, J. F. & Kelly, B. R. (1978) conducted a study on the topic “Aggression, performance variables, and anger self-report in ice hockey players”. This study partially replicated a former one showing a relationship between aggression and performance among hockey players. With certain penalties used as a measure of aggression, two groups of male college ice hockey players were compared for differences in goals and assists. Those rated high in aggression scored significantly more goals than those low in aggression. The direction of differences in assists was the same but did not reach significance. When the same groups were compared for shots on goals, significant differences were found, favoring the high aggressive group. This findings was discussed in light of energy output and efficiency. Attempts to relate performance and personality measures were not successful when comparisons on a self-report measure of anger were analyzed.

Martens (1977) was administered on the subjects. T-test was used to analyse the data. Results of the study revealed no significant
difference between male and female national weight-lifters of Manipur with regard to sports competition anxiety.

Gordon W. Russell (1976) conducted a study on the topic “Crowd Size and Competitive Aspects of Aggression in Ice Hockey: An Archival Study”. The season's records of a Canadian ice hockey league provided the data for an investigation of aggression in relation to crowd size and competition. Crowd size was positively related to aggression in one season but not in the preceding year. Aggression increased over the three periods of game play but not across the season. League standing and the score existing during play were both significantly related to aggression. However, the aggression displayed by a team in a match was unrelated to their league standing vis a vis that of their opponents. The results are generally discussed within a frustration-aggression framework.

Weinber (1976) compared the resultant achievement motivation of athletes and non-athletes. The study included male athletes and non-athletes from three small colleges and two large colleges. The instrument used to assess resultant achievement motivation (N. Ach.) was the male form of Mehrabian Achievement Scale (MAS). The MAS was administered to all the subjects under relax conditions. Individuals were classified as athletes if they earned a college varsity award or as non-athletes if they had failed to earn an athletic award in high school as well as college. Based on this criteria 857 athletes and 673 non-athletes were included in the study. The athletic sample consisted of individual representing 13 different sports. The resultant Non Achievement Levels of athletes and non-athletes were analysis by a two factor fixed effect analysis of variance. The results were; (1) Athletes demonstrated a high N. Achievement level than non-athletes. (2) The individual sport athletes demonstrated a higher N. Achievement level than team sport athletes, (3) the large college athletes and small college athletes demonstrated similar resultant Non Achievement levels.
Dickinson (1976) suggests that there are cultural differences in the reinforcement provided for aggressive behaviour. This is reflected in sports in a distinct differences between the reinforcement provided for males and females in their aggression. Western society, as a whole, tends to reinforce aggression in males to a very much greater extent than in females. In parallel fashion, western society also tends to punish females for aggressive behaviour to a much greater extent. The aggression is more common in male sports because of greater reinforcements available to them.

Zoble (1976) found in her study that women have been viewed as non-aggressive, men are seen as aggressive. This difference was discussed by Zoble in review of literature on women in sports. She found that girls are more punished for aggressive behaviour in childhood than are boys.

Zaichkowskygt. et. al. mentioned in his book “The child and physical activity that early sex role training discourages aggression in girls but encourages it in boys. Tulko and Neal (1975) have revealed that women learn not to be aggressive, not to win, not to get into situations where there is a risk of pain and not to be where there is the risk of pain and not to be taught — or they will lose their feminity.

Bucher (1975) conducted a survey covering 100 teachers, parents, respective of the general superintendents, and principals of school and directors of physical education to determine what they believed should be the role of physical education in American Schools and Colleges. Overwhelming support for physical education as a part of the education programme was indicated by 89 percent of the persons surveyed; sixty one percent believed that physical education should be scheduled once a day. Only two group professions and parents indicated that they might possibly by more in favor of three times a week. Most of the persons surveyed, thought that all types of activities, including teams sports, carry over activities, individual activities and recreational activities
should be part of physical education programme. Principals and superintendent thought that physical education class should be larger than the size of classes for academic subjects. A majority of the opinion that physical education grades should be reported separately from the other educational offerings. School administrators and professors were the only group who believed that it should correspond with the marking in other subjects.

**Goodson (1975)** conducted a study to assess the attitude of adult male community college students toward physical education activity and to develop implications for community college physical education programmes from an analysis of the result. The Mcpherson-Yuhass Attitude Inventory consisting of fifty statements was administered to 106 male ranging in age from forty to sixty five. The inventory consisted of twenty six negative statements and twenty four positive statements.

The findings revealed that adult males did not show a favourable attitude toward physical activity, although the combined group mean (190.5) was much closer to the score necessary to favourable (200) than it was to the score required to be unfavourable (100). Twenty-three of the fifty inventory items received a mean score high enough for favourable agreement (4.0 or above), whole none was in the non-favourable category (2.0 or below).An analysis of variance revealed no significant difference among the three groups of adult males.

**Klavora (1975)** studied optimal pre-competitive state anxiety of football players. Oxidine's proposition regarding the optimal arousal level for the typical participant in football was examined on 4 level of football competition: Junior High School, Senior High School, Alberta Junior and University. The pre-competitive state anxiety was measured by Spielberger's STAI anxiety scale. No Significant differences in optimal pre-competitive state anxiety at the competitive levels were found.
Zillman, Johnson & Day (1974) compared aggressive behaviours of male athletes to those of non-athletes. The athletic population was divided into those contact sports (football and wrestling) and those in non-contact sports (swimming, tennis, track, and Gymnastics) when provoked, the non-athletes evidenced the highest level of retaliatory aggression as to the two athletic groups whereas the contact sports athletes proved to be more punitive in their aggression than were the non-contact sport athletes. It was concluded that the contact sport athletes were counter acted by the “strong aggressive habits” possibly needed in their sports (or because of the expectations others have regarding aggression in contact sport athlete.

Delforge (1973) conducted a study where an attitude inventory using the semantic differential technique was administered to 100 male and female graduate and under-graduate students. Subjects were selected at random from each of the following students’ populations. 1) Ambulatory physically handicapped. 2) Wheel chair physically handicapped. 3) Non-handicapped and 4) College athletes.

No significant differences in attitudes toward physical activity in general or toward each of the six dimensions of physical activity were found among the four main study groups. No significant differences were detected between male handicapped and male non-handicapped and between male handicapped and female handicapped students. Attitudes expressed by male students and by male and female handicapped students toward physical activity as an ascetic experience were significantly less positive than for all other dimensions.

Jones (1973) studied the effect of anxiety and need for achievement on the performance of high school wrestlers. Data were obtained from the Thematic Apperception Test the test anxiety questionnaire, expectancy rating by the individuals and by their coaches. Performance data were obtained from match score books and observation. It was concluded that the personality traits of anxiety and
need for achievement had a tendency to influence both the expectancy and the actual performances of these HS wrestler. Subjects who measured low anxiety level performed better than those high in anxiety. The groups scoring highest in performance was that of low anxiety and high need for achievement. The lowest level of performance was demonstrated by the group high in anxiety and low in need for achievement.

Ray (1970) conducted a study in order to find out the attitudes of high school girls and their parents towards physical education. The evidence indicated that the students who achieved high fitness scores and their parents viewed to contributions of physical education class for more favourable than did the students who were less physically fit and their parents, and the parents and students differ in their views of the mental, emotional contributions. Parents and students for both groups had similar views about the physical psychological outcomes and the social contributions, while with regard to the emphasis placed on physical education in the total school programme. The parents of the low fitness group viewed this more favourable than their daughters. It was just the opposite with the high fitness group. Attitudes toward physical education were positively related to the senior high school girl’s achieved physical fitness score. A lower score regulated in a lower attitude towards physical education.

Wright (1970) conducted a study by using Wear Attitude Inventory to the nineteen physical education teachers and 1440 tenth grade girls to determine if significant differences existed between the expressed attitudes of students and the teachers’ perception of the student’s attitudes. Differences between the expressed attitudes of the teachers and the students’ perception of the teachers were also investigated. Analysis revealed that teachers had a better attitude toward physical education than did the classes as a group. There was no significant difference in the attitudes of students and their teachers’ perception of their attitudes; however, there was a difference in the expressed attitudes of teachers and the students’ perceptions of the
teachers’ attitudes. Students perceived a less favourable attitude than the teachers expressed.

Morgan (1970) administered three forms of IPAT 8-parallel form anxiety test to seven varsity wrestlers at the University of Missouri. The first test was given before the season began, a second 45-60 minutes prior to a match judged easy by the coach. Surprisingly the pre-match anxiety scores were lower than the preseason scores, but there was no difference in anxiety scores between the easy and difficult matches.

Harvey (1969) found that achievement is an important component in the psychological make-up of the group of athletes understudy. Thirty non-athletes, thirty team sport athletes, thirty individual sport athletes were tested to determine their need for achievement (n. achievement) as measured by McClelland’s 4-picture test and a modified 6-picture test which included 2 athletic team indicated no significant differences among the n-achievement response scores of the three groups or among the n-achievement score of the ten athletic sub-group.

Singer (1968) distinguished team sports athletes from individual sports athletes in certain traits by using Edward Personality Preference Scale (PPS). It was reported that tennis groups scored significantly higher than both the basketball and the normative groups on the achievement variable. On aggression the normative group achieved lower score than the tennis group.

Ferris (1968) investigated the attitude of Manitoba high school principals toward physical education. The Wear Attitude Inventory was incorporated into a questionnaire, to which 91 of 100 principals of high schools responded. These comparisons were made between small enrolment (less than 300) and principals with larger enrolment; principals with different educational preparation; principals who engaged in personal recreational sports activities and principals who indicated they did not participate in them, supervisors and principals of schools with a longer class time for physical education and principals of school
with a shorter class time for physical education. As an entire group, the principals had a favourable attitude toward physical education. No statistically significant attitude differences were found between the different comparison groups.

The Wear Attitude Inventory was administered to 188 college women in a variety of physical education activities by Vincent (1967). The final grade received for the activity course was used as the success factor. Attitudes were analysed both as to values and as to activity groups and correlations were computed between attitude and success. Attitudes toward physical education were generally favourable, with the contributions of physical education to the physiological-physical values being higher than other values examined. There was a significant relationship between attitude and success at the .05 level. The higher significance accrued to those students having more favourable attitudes.

G. Devi (1967) in her study — “A study of sex difference in reaction to frustrating situations”. She found significantly different aggressive responses for males and females towards ten different situations incorporated in the test. Male subjects were found more overtly aggressive than females. As regards suppressed aggression she found no significant difference between the responses of male and female subjects.

In many cross cultural studies, play aggression ‘was found to be higher among males than among females. Taylor and Epstein (1967) found that males reached aggressively to provocation by male opponents but un-aggressively to female opponents. Females, on the other hand, were unaggressive to female opponents but reached to provocation by male opponents in a highly aggressive manner.

Carder (1966) found the relationship between manifest anxiety and performance in college football. The subjects were 40 freshman football players who were rated on 2 scales by 3 members of the coaching staff. One scale consisted of ranking on total performance
during the season and the other scale involved skill rating in blocking, tackling, movement agility, and running speed. Subjects were also tested on the M.A.S. and 3 motor ability tests to identify potential. The results indicated no significant relationships between the M.A.S. Scores and total performance, individual skill performance, or actualization of Football potential.

James (1966) comprehensively examined the effect of anxiety and need for achievement on the performance of high school wrestlers. Data was obtained from the Thematic Apperception Test, the test anxiety questionnaire expectancy rating by the individuals and by their coaches. Performance data was obtained from match score books and observations. It was concluded that the personality traits of anxiety and need for achievement both the expectancy and the actual performance of these high school wrestlers. Subjects who measured low in anxiety performed better than those high in anxiety. The groups scoring highest in performance was that of low anxiety and high need for achievement. The lowest level of performance was demonstrated by the group high in anxiety and low in need for achievement.

Chamber (1965) conducted a study on the appraisal of the attitudes of the principals, teachers and students toward physical education as a secondary school subjects. The study revealed that teachers and students, unlike the principals, held a favourable attitude toward physical education as a secondary school subject. Teachers and students were aware of the importance of physical education in developing fitness, activities which were liked by pupils and teachers were also the activities in which they desired instruction and in which they estimated their skills to be high.

Ayers (1964), from his study has concluded that parental attitude towards physical education were not related to socio-economic status. Parents considered the activities and the outcomes of physical education
programme either desirable or essential to the total educational development of the daughter.

Harris (1964) compared high and low fitness indices college women in Psychological traits and found that there is a tendency for the fit individual to appear more stable in certain Psychological traits and to appear less anxious in others.

Berkowitz (1963) concluded that more aggression was levelled against men than against women.

Buss (1963) investigated the effect of three kinds of frustration on college students’ aggression, task failure interference with winning – money and interference with attaining a better course grade. The different frustration did not generally lead to different intensities of aggression, but all three lead to more aggression than a control. Although frustration did elicit aggression, the effort was slight. This was explained by the mode of aggression (physical) and the fact that it had no instrument value in overcoming frustration. It was suggested that instrumental value of aggression is a major determines of the frustration aggression relationship. Men were found to be more aggressive than women. Men aggressed more against men than against women, but the sex of the victim was unimportant for female aggressors. Thus, sex differences in aggression occur not only in the aggressor but also in the victim.

Engels, et. al. (1962) investigated the relationship among induced muscular tension, manifest anxiety levels, and motor learning.

The study was conducted on 24 male students. The subjects were randomly divided into 4 equal groups for the per suit motor learning task group – 1 learned at constant rpm’s, group – 2, learned at increasing rpm’s producing task induced muscular tension, group – 3 learned at constant rpm’s while gripping a hand dynamometer and group – 4 learned at slow, rpm’s but were tested at the same criterion rpm’s as the other three groups.
The results of this study seem to indicate that three is differential effect of internally and externally induced muscular tension on motor learning. Group – 1 had the best learning performance followed by group – 2, 4, and 3. There was significant difference between group – 1 and 3, 4 and between group – 2 and 3.

**Francis (1962)** investigated 61 male students with scores more than one standard deviation above (high anxiety) and below (low anxiety) the mean on the Pittsburgh revision of the manifest anxiety scale were used as subjects and assigned randomly in each category to experimental and controlled groups. The test consisted of matching a specific foot pattern while walking at 2 mph on a treadmill for 1.5 min. with total missteps constituting the error score. The experimental groups received shock at predetermined intervals. Subjects had two trials with pulse rate recorded before and after each trial. Following each trial, the subjects rated themselves on the anxiety during the test. The finding supported the hypothesis that stress inhibited functioning of high anxiety subjects and facilitated the performance of low anxiety subjects. Absence of stress produced better performance in high anxiety subjects than stress.

**Baker (1962)** studied the effects of anxiety and stress on gross motor performance. Sixty one male students with scores more than 1S.D. above (high anxiety) and below (low anxiety) the mean on the Pittsburgh revision of the Manifest Anxiety Scale were used as subjects and assigned randomly in each category to experimental and control groups. The test consisted of matching a specified foot pattern while walking at 2 mph on a treadmill for 1.5 minutes, with total missteps constituting the error score. The experimental groups received shock at predetermined intervals. Subjects had two trials with pulse rate recorded before and after each trial. Following each trial, the subjects rated themselves on the anxiety during the test. The findings supported the hypothesis that the stress inhibited efficient function of high anxiety subject facilitated the performance.
The purpose of the Isenberger (1959) study was to determine the relationship between the self-attitudes of women physical education major students and those of women physical education teachers. Subjects used in the study were 277 women physical education major students from three institutions and 167 women physical education teachers. The “Who Am I?” test, a Twenty Statements Test of self-attitude (TST), was used as a measure of self-attitudes. The result of this study indicated that there was a significant difference between the self-attitudes of student groups within a school and between schools. It was also indicated the self-attitudes of teachers differed significantly from those of students enrolled in a liberal art college or a teachers college connected with a university but were similar to those of students in a teacher education institutions.

Livon and Muson (1957) made an experimental study to see the relationship between overt aggression and ego-control in both male and female subjects. They found a significant negative relationship between the amount of expressed aggression and ego-control. This study further suggested that girls developed greater ego-control and less overt aggression.

Burris (1955) studied the case of aggression in boxers and wrestlers as measured by projective technique. In this study, the Rosenzweeg P.F. study, TAT pictures, and a sentence completion test were administered at intervals throughout the season to the following collage, groups. Nine boxers, eight wrestlers, nice cross country and seventeen control subjects. The tests were analysis for number, severity and direction of aggressive responses significant differences indicated than the boxers were least aggressive of the groups and that they tended to direct aggressive feeling inwardly (intropunitive) rather than outwardly upon persons or thighs in their environment (extra punitive) indications were that the intensity and direction of aggression of these various athlete and no athlete groups were quite different. The Thematic Apperception Test was judged the best instrument for assessing aggression.
CHAPTER - 3

MATERIALS AND METHODS

This chapter is developed to the procedures adopted with selection of the subjects, selection of tests including their reliability, orientation to the subjects in order to acquaint them with the manner in which they are expected to work. Collection of the data for administration of the tests and their tools, and statistical procedures used for analysing the data.

SELECTION OF SUBJECTS

The purpose of the study was the analysis of selected psychological variables between college men and women, Basketball players.

For this purpose, list of students who represented inter-collegiate and inter-university tournaments was prepared and from these players subjects were selected using method of purposive sampling.

The final sample consisted of 50 men college Basketball players and 50 women college Basketball players making total of 100 players.

In order to ensure the full co-operation from the subjects, the researcher had a meeting with them in presence of their coach/mangers. The purpose of this study was made clear by giving a detailed explanation in order to ascertain that there was no ambiguity among the subjects regarding the efforts, which they had to put in the successful completion of the investigation.
All subjects voluntarily agreed to extend full cooperation and coaches/ managers ensured that the subjects were made available for collection of data.

**SELECTION OF VARIABLES**

A feasibility analysis as to which of the variables could be taken up for the investigation, keeping in view the availability of questionnaires and their acceptability to the subjects and the legitimate time that could be devoted for testing and to keep the entire study unitary and integrated was made in consultation with experts.

With the mentioned criteria in mind, the following psychological variables such as – Achievement Motivation, Aggression, Anxiety, Attitude and Stress were selected because these are directly related to performance of the Basketball players.

**SELECTION OF QUESTIONNAIRES**

The present study has been undertaken for the analysis of selected psychological variables between men and women, college and Basketball players. For this purpose the following standardized questionnaires have been used to collect data for different psychological variables

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variables</th>
<th>Questionnaire</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Achievement motivation</td>
<td>Sports Achievement Motivation test</td>
</tr>
<tr>
<td>2.</td>
<td>Aggression</td>
<td>Smith’s Aggressive Questionnaire</td>
</tr>
<tr>
<td>3.</td>
<td>Anxiety</td>
<td>Sports Competition Anxiety test (SCAT)</td>
</tr>
<tr>
<td>4.</td>
<td>Stress</td>
<td>Sports Stress Test</td>
</tr>
<tr>
<td>5.</td>
<td>Attitude</td>
<td>Sodhi Attitude Scale (SAS)</td>
</tr>
</tbody>
</table>

**RELIABILITY OF QUESTIONNAIRES**

1. Achievement Motivation: - The reliability value has been found to be 0.70.
2. Aggression: - The reliability value has been found to be 0.70.
3. Anxiety: - The reliability value has been found to be 0.85.
4. Stress: - The reliability has been found to be 0.87.
5. Attitude: - The reliability has been found to be 0.70.

COLLECTION OF DATA.

All the data in this study has been collected by the investigator in the natural setting. Each player was contacted for this purpose and permission was sought from the coach/manager of the college. Before actual collection of data, the investigator gave a short orientation lecture explaining to the subjects, the purpose of the test that was to analyze the selected psychological variables between men and women college Basketball Players.

Each player, present on the day of data collection, was included in the study. The time taken for data collection was about 70 minutes. Respondents gave their answer on their respective answer sheets after reading items from the test booklet. Thus, all the responses were recorded on the test booklet and answer sheet.

ADMINISTRATION OF THE QUESTIONNAIRES

1. Achievement Motivation has been assessed using Sports Achievement Motivation Test. This test was constructed by M. L. Kamelsh. The tool consisted of 20 test items to be answered by putting a mark of tick. The scoring is done by awarding 2 marks for correct statement and for incorrect ‘O’ marks is awarded.

2. Aggression has been assessed using Smith’s Aggressive Questionnaire. This test was developed by Smith. This test consists of four questions and each question has five levels of responses. The level changes from strongly disagree to strongly agree. The respondents were made to en circle the appropriate number which suited their attitude. The test was scored with the help of the scoring key that is ‘1’ marks for strongly disagree, ‘2’ marks for disagree, 3
marks for undecided, 4 marks for agree and 5 marks for strongly agree. The total range of score was from 4 to 20. The higher the score, the more aggressive the player is.

3. Anxiety has been assessed using Sports Competition Anxiety Test (SCAT). This test was developed by Rainer Martens, Diane Gill, Tara Scanlan, and Julie Simon. In the year 1990 at Champaign, IL. The purpose of the test was to assess individual differences in competitive trait anxiety, or the tendency to perceive competitive situations as threatening and/or to respond to these situations with elevated state anxiety. The tool consisted of 15 items to be answered by putting a mark of ‘X’. It is based on Likerts method and each statement consisted of their responses; hardly ever, sometimes and often, the respondents made a cross mark (X) on any one of the response that fitted to them. A separate method was used for positive and negative statements. The scores for positive statement that is question number 1,2,3,4,5,7,8,9,10,12,13,14 and 15 are awarded by giving ‘1’ marks for Hardly ever, ‘2’ Sometimes and ‘3’ for often. The scores for negative statement, that is, question number ‘6’ and ‘11’ are awarded by giving ‘3’ marks for Hardly ever, ‘2’ for sometimes and ‘1’ for often. The scores obtained for both positive and negative statements were added. The higher the score, the higher the anxiety.

4. Stress has been assessed using Sports Stress Test. This test was constructed by Everly & Girdano. The tool consisted of 14 statements rating to various situation of life there was four levels of responses almost, always, seldom true and never true. The subjects were made to mark a tick in the column to which ever response the player felt was true to his nature. The scoring is done by giving ‘1’ mark for Never, ‘2’ marks, for Seldom true, ‘3’ marks, for usually true and ‘4’ marks, for almost always true. The range of score varies from 14 to 56. The lesser the score, the lower the psychological stress.
5. Attitude has been assessed using Sodhi Attitude Scale (SAS). This test was constructed by G.S. Sodhi. The questionnaire is consisted of five parts first part consist of 12 questions, second part consist of 10 questions, third part consist of 19 questions, forth part consist of 10 questions, and fifth pare consist of 20 questions total there are 71 questions in the questionnaire. The subjects have to give response in ‘yes’ or ‘no’ and if the value given in the scoring is positive and the response is ‘yes’ give +1 and if ‘no’ give -1 if marked ‘?’ give 0. Conversely if the value shown for an item on the scoring key is negative and the subject has responded ‘yes’ give him -1 and if ‘no’ give him +1 and if ‘?’ give him 0 in the case too. Score of all the five scale will be added and the final score will be obtained. The higher the score the more attitude is seen.

STATISTICAL PROCEDURE

The ‘t’ test was used to compare the groups and for testing significance of the values at .05 levels have been fixed.
CHAPTER - 4

OBSERVATIONS, RESULT & DISCUSSION

In order to arrive at certain conclusion and to achieve the objectives of the investigation, a systematic treatment of data is needed which consists of three stages namely: tabulation of data, testing of the hypotheses using appropriate statistical techniques and discussion of the results. The statistical analysis of the data consists of the scores made by the samples on various variables. The samples included in all 100 Basketball Players all of which were College students. Out of this, half were women and half men students. The age range of samples was between 18 to 25 years. In the processing of the data mean, sum of squares, degree of freedom, and mean squares were computed in order to estimate the differences among the groups using ‘t’ test are presented from table 1 to 5. The level of significance was fixed at 0.05 levels. The hypothesis set forth in Chapter-I was tested and the results obtained are discussed in details in the following pages.

FINDINGS

Findings of this study were made in sequence of Achievement Motivation, Aggression, Anxiety, Attitude and Sports Stress. In order to locate the differences among different groups the ‘t’ test has been applied. For all of them separate statistical analysis was done and the results are presented in the following tables.
In order to determine the significance of difference on achievement motivation between men and Women basketball players, t-test was applied. The result pertaining to the achievement motivation have been presented in table- 1

**Table 1**  
Significant Difference Between The Means Of Achievement Motivation Of Men And Women Of Basketball.

<table>
<thead>
<tr>
<th>MEAN</th>
<th>DM</th>
<th>σDM</th>
<th>‘t’ RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>WOMEN</td>
<td>.8</td>
<td>4.27</td>
</tr>
</tbody>
</table>

*significant, t=0.005 = 2.009

Table 1 revealed that the significant difference (‘t’ ratio) of achievement motivation between men and women inter collegiate basketball players was 0.938, which is less than the required value at 0.05 level of significance (t=2.009). Hayajenh (1989) in his study he also said that there is no significant difference on the achievement motivation on dropping of youth in sports program. Thus it may be concluded that the achievement motivation of men and women of basketball players are more or less same because the level of motivation strongly depends upon the level of achievement and men and women are having same level of achievement.

The comparisons of the mean scores of the Men and Women basketball players are also presented graphically in figure 1.
Figure 1: Mean Scores Of achievement of motivation Men And Women Basketball Players
In order to determine the significance of difference on aggression between men and Women basketball players, t-test was applied. The results pertaining to the aggression have been presented in table-2.

**Table-2**

**Significant Difference Between The Means of Aggression Of Men And Women Of Basketball.**

<table>
<thead>
<tr>
<th>MEAN</th>
<th>DM</th>
<th>σ DM</th>
<th>‘t’ RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>WOMEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.90</td>
<td>9.16</td>
<td>1.74</td>
<td>3.22</td>
</tr>
</tbody>
</table>

*significant, t=0.005 = 2.009

Table-2 revealed that the significant difference (‘t’ ratio) of aggression between men and women inter collegiate basketball players was 2.76, which is more than the required value at 0.05 level of significance (t=2.009). It shows there is significant difference between the performance of men and Women basketball players. Thus it may be concluded that the aggression of men basketball players are greater than women of basketball player. **Buss (1963)** made a study to determine differences in aggression of male and female. He found that male is more aggressive than the female because male players have more passion to win against their opponents. Winning is most important for the male players so they can go to any extent in the game than to female. Similar results were also found by **Ravneet (1995), Zoble(1976) and G. Devi(1967)** in their respective studies.

Thus, investigator’s results is in the direction of **Buss (1963), Ravneet (1995), Zoble(1976) and G. Devi(1967)** studies, which have revealed that there were significant difference among males and females sports aggression. Males are more aggressive than females players in the sports activities.

The comparisons of the mean scores of the Men and Women basketball players are also presented graphically in figure – 2.
Figure -2: mean scores of aggression of Men and Women basketball players
In order to determine the significance of difference on anxiety between men and Women basketball players, t- test was applied. The result pertaining to the anxiety have been presented in table- 3

**Table 3**

**Significant Difference Between The Means Of Anxiety Of Men And Women Of Basketball.**

<table>
<thead>
<tr>
<th>MEAN</th>
<th>DM</th>
<th>θ DM</th>
<th>‘t’ RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>21.7</td>
<td>0.8</td>
<td>3.77</td>
</tr>
<tr>
<td>WOMEN</td>
<td>22.5</td>
<td></td>
<td>1.11</td>
</tr>
</tbody>
</table>

*significant, t=0.005 = 2.009

Table-3 revealed that the significant difference (‘t’ ratio) of anxiety between men and women inter collegiate basketball players was 1.11, which is less than the required value at 0.05 level of significance (t=2.009). It shows there is no significant difference between the performance of men and Women basketball players. In the support of result opted a study of Brustad et. al. (1987) is taken in his study he examined the relationship of trait and state anxiety between the male and female basketball players, there was no significant difference found among the players. Similar results were also found by Modrono, et. Al. (2010), Ali, et. Al.(2010), Kenneth(1985) Ahmad(1980) and Martens(1977) in their respective studies.

Thus, investigator’s results are in the direction of Modrono, et. Al. (2010), Ali, et. Al.(2010), Brustad et. al. (1987), Kenneth(1985), Ahmad(1980) and Martens(1977) studies, which have revealed that there were no significant difference among males and females sports anxiety.

Thus it may be concluded that the anxiety of men and women of basketball players are more or less same. So it can be said that players are having the same level of anxiety while they play or they go to play in any tournament.
The comparisons of the mean scores of the Men and Women basketball players are also presented graphically in figure – 3.

Figure 3: mean scores of anxiety of Men and Women basketball players
In order to determine the significance of difference on attitude between men and Women basketball players, t- test was applied. The result pertaining to the attitude have been presented in table -4

**Table - 4**

**Significant Difference Between The Means Of Attitude Of Men And Women Of Basketball.**

<table>
<thead>
<tr>
<th>MEAN</th>
<th>DM</th>
<th>σ DM</th>
<th>‘t’ RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>29.9</td>
<td>1.6</td>
<td>8.27</td>
</tr>
<tr>
<td>WOMEN</td>
<td>31.5</td>
<td></td>
<td>0.929</td>
</tr>
</tbody>
</table>

*significant, t=0.005 = 2.009

Table-5 revealed that the significant difference (‘t’ ratio) of attitude between men and women inter collegiate basketball players was 0.929, which is less than the required value at 0.05 level of significance (t=2.009). It shows there is no significant difference between the performance of men and Women basketball players. Thus it may be concluded that the attitude of men and women of basketball players are more or less same. In the support of the result that is found Delforge (1973) conducted a study where an attitude inventory using the semantic differential technique was administered to 100 male and female graduate and under-graduate student, in his study he also found that there was no significant difference among the attitude of male and female graduate and under graduate students. Another study was made by Organ (1985) in his study he also found that there was no significant difference among students towards the physical education in the liberal arts program at Howard University.

The comparisons of the mean scores of the Men and Women basketball players are also presented graphically in figure–4.
Figure-4: mean scores of attitude of Men and Women basketball players
In order to determine the significance of difference on stress between men and Women basketball players, t-test was applied. The results pertaining to the stress have been presented in table -5.

**Table-5**

**Significant Difference Between The Means Of Stress Of Men And Women Of Basketball.**

<table>
<thead>
<tr>
<th>MEAN</th>
<th>DM</th>
<th>σDM</th>
<th>‘t’ RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>35.7</td>
<td>2.4</td>
<td>4.26</td>
</tr>
<tr>
<td>WOMEN</td>
<td>38.1</td>
<td>2.4</td>
<td>4.26</td>
</tr>
</tbody>
</table>

*significant, t=0.005 = 2.009

Table -5 revealed that the significant difference ('t' ratio) of stress between men and women inter collegiate basketball players was 2.89, which is more than the required value at 0.05 level of significance (t=2.009). It shows there is significant difference between the performance of men and Women basketball players. Vogel, et. al. (1978) conducted a study on 200 male and 200 Female army personnel were tested prior to the beginning of basic training. The result of his study showed that there was significant difference between male and female army persons.

Similar results were also found by Mishra (2000) and Allen(1991) in their respective studies.

Thus, investigator’s results is in the direction of Mishra (2000), Allen(1991) and Vogel, et. al. (1978) studies, which have revealed that there were significant difference among males and females sports stress.

Thus it may be concluded that the stress of men is less than women basketball players because male players are more psychologically strong they show significant drop in tension, criticism, fatigue and confusion while they participate in any tournament or sports activities.
The comparisons of the mean scores of the Men and Women basketball players are also presented graphically in figure – 5.

Figure 5: mean scores of stress of Men and Women basketball players
DISCUSSION OF FINDINGS

There is an insignificant difference on achievement motivation, anxiety and attitude of men and Women players of basketball game whereas there is significance difference on aggression and stress of men and Women players of basketball game.

It may be due to that training of men and Women has nothing to influence on achievement motivation, anxiety and attitude. Therefore, it shows insignificant difference between men and Women basketball players on achievement motivation, anxiety and attitude.

As basketball game involves teamwork, group efforts etc. Therefore, it shows significant difference in aggression and stress between men and Women basketball players.

DISCUSSION OF HYPOTHESIS

In the hypothesis of the study, it is mentioned that there will be significant difference among achievement motivation, aggression, anxiety attitude and stress on men and Women basketball players. The results of the study showed significant difference in aggression and stress and insignificant difference on achievement motivation, anxiety and attitude. Hence, the hypothesis formulated earlier in the study is accepted for aggression and stress, the hypothesis formulated earlier in the study is rejected for the achievement motivation, anxiety and attitude.
CHAPTER - 5

CONCLUSIONS AND IMPORTANT FINDINGS

Basketball has become one of the most popular games in India. Psychological variables are the most important contributing factors for better performance in all sports and games. The game of basketball requires considerable amount of mental alertness and mastery of skill.

The modern sport training lays a greater emphasis on preparing the players psychologically. A lot of emphasis is being given to the psychological research dealing with psychological characteristics and mental rehearsals of the training of the top level players. No training in the sports field is complete without reference to the psychological study and psychological training. All other factors like biological and sociological being equal, psychological conditioning of a players decidedly determines his chances of success or failure in the competition. The present chapter covers summary, conclusions, and recommendations of the study.

SUMMARY

Physical activity and sports have emerged from a long historical background. It is a process that has taken place, and still takes place in various informal and formal ways. It is very culture from the time of primitive man to the present either directly and indirectly physical activity has played a vital role in the lives of all people.

Today in the modern competitive sports every sports man and woman is in a race to excel other and competition has become a fundamental mode human expression, as competitive sports are one of
the very important factors by which and international recognition and prestige is gained.

In fact, achievement motivation is the motivation to achieve; this idea has been emphasized by Barrow and Rosemary Mc. Gee (1979) when they state that the basis of achievement motivation is achievement motive that is a motive to achieve. Those who engage themselves in a task on account of an achievement motive are said to work under the spirit of achievement motivation.

Every age has its monsters and this century is no exception. Stress is one of the biggest monsters of the present century. There are enormous environmental demands before every person. Whenever a person finds that he is unable to cope up with the environmental demands of the time, he feels stressed. In the case of players; prospects, performance, energy and being left out of the team creates stressful for him/her. The stress may be of three types; acute, episodic, and chronic. In the case of sports person’s mostly episodic stress is experienced. It is at the time of playing a match or participation in a tournament or going for championship, this stress occurs. It may become weaker or go away after the competition is over, but the other two types are sustainable and can affect episodic stress. According to Sandhu (2002), “Sports competitions, involving individuals and teams, are full of stress encounters. While physical work may produce some stress in an individual; the psychic aspect of sport may indeed be the most powerful stressor operating in the situation.”

The level of stress varies from training session to actual performance session. Crisfield (1976) reported the fact that there is a need to develop psychic stress tolerance in the players on the one hand, and on the other, we need a method to reduce it, if possible without any loss to performance.

Ferris (1981) asserts that the sports, besides requiring certain physical attributes on the part of the players, also require specific psychological characteristics. To be able to take part in sporting activity,
a sportsperson 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 ‘masculine’ that is normal desirable and appropriate in the male and by contrast, abnormal, undesirable and in appropriate in the female.

Netto (1979) conducted a study to assess the attitude of graduate trainees toward physical education. She prepared an opinionative constructing of 70 statements based on the model of Likert and distributed those opinionative to 578 teachers trainee studying in the six training colleges in Madras. The analysis of the data revealed that graduate teacher trainees, men and women did have a positive attitude towards physical education. Thus, one’s attitude towards sport activities is one of the important factors for performance.

STATEMENT OF THE PROBLEM

Analysis of selected psychological variables between College Men and Women, Basketball players.

AIM OF THE STUDY

The aim of the study was to analyses the selected psychological variables between College men and women Basketball players.

DELIMITATIONS

- The study was delimited to the selected psychological variables i.e. Achievement Motivation, Aggression, Anxiety, Attitude and Stress.
- The study was again delimited to the 50 Men College Basketball and 50 Women Collage Basketball Players, making total of 100 players.
- The study was again delimited to the state of Uttar Pradesh only.
- The study was again delimited to the Basketball players of 18-25 years of age group.
LIMITATIONS

- Questionnaire research has its limitations. As such bias if any pertaining to the subject be considered as a limitation of the study.

- The tests were administered at different points considering the availability of the subjects, their mood states which might have had influenced their response pattern on a particular scale/instrument. This was another limitation imposed on the investigation inadvertently.

- Certain factors like diet, rest, sleep etc. were beyond the control of the investigation and were considered as limitations of the study.

- As the subject come from different socio-economic groups their dietary habits, life style, routine of study and play were different which were considered as limitations of the study.

- No special motivation technique was used during the test, therefore the difference that may have occurred in performance due to lack of motivation was recorded as the limitation of the study.

HYPOTHESIS

Keeping in the view the objectives of this study, it is hypothesized that there will be significant difference between college men and women Basketball players on all the five selected psychological variables.

The purpose of this study is an analysis of selected psychological variables between men and Women college basketball players. For this study 100 Basketball players were selected as subjects. Among 100 subjects selected for this purpose 50 were college men and 50 college Women Basketball players who had participated in the Inter collegiate tournaments. The Players were selected purposely.

The selected variables for the study have been assessed by making use of standard tools. The variable-wise tools are as follows:
1. **Achievement Motivation**: This was assessed by Sports Achievement Motivation Test which was developed by M. L. Kamlesh.

2. **Aggression**: This was assessed by Smith’s Aggressive Questionnaire which was developed by Smith.

3. **Anxiety**: This was assessed by Sports Competition Anxiety Test (SCAT) Questionnaire which was developed by Rainer Marten.

4. **Attitude**: This was assessed by Sodhi Attitude Scale (SAS)

5. **Stress**: This was assessed by Sports Stress Test which was developed by Everly & Girdano.

Data for the study were collected by the investigator. For this purpose players were administered by various tools in natural settings. To establish a rapport with player’s purpose of the study was explained before administering various tools. Help was also taken from the respective Managers for this purpose.

The findings of the study showed significant differences in aggression and stress between men and women basketball players.

To compare the level of achievement motivation, aggression, anxiety, attitude and stress t-test was used. The test showed that there was no significant difference between men and Women players of basketball in relation to achievement motivation, anxiety and attitude as ‘t’ value was not found significant (0.938), (1.11) and (0.929) respectively, whereas required value was (2.009) at 0.05 level of significance. Hence the hypothesis is rejected. Moreover there was significance difference in case of aggression and stress between men and Women basketball players as ‘t’ value was found to be significant (2.76) and (2.89) respectively. Hence the hypothesis is accepted.
CONCLUSION

Within the limitations of the present study, the following conclusions may be drawn:

In relation to achievement motivation, anxiety and attitude no significant difference was found in men and Women basketball players.

It shows significance difference between men and Women basketball players in relation to aggression and stress.

The further conclusion may be as follows:-

1. The level of Achievement Motivation of the sample has been assessed and a comparison has been made among various groups; taking two groups together.

2. The level of Aggression of the sample has been assessed and a comparison has been made among various groups; taking two groups together.

3. The level of Anxiety of the sample has been assessed and a comparison has been made among various groups; taking two groups together.

4. The level of Attitude of the sample has been assessed and a comparison has been made among various groups; taking two groups together.

5. The level of Stress of the samples has been assessed and a comparison has been made among various groups; taking two groups together.
CHAPTER - 6

RECOMMENDATIONS

After completion of research investigations, it is incumbent on the researcher to offer certain recommendations in the light of finding.

The recommendations may be divided into three parts:-

The first part dealing with recommendation for the players, second to the organizers of the games including coaches and other field staff, and third for the researchers interested in this area of investigation.

RECOMMENDATIONS FOR THE PLAYERS

This study of psychological factors operative with men and Women players of basketball indicates the importance of the role of sports organizers, coaches and other staff in the training of players.

RECOMMENDATIONS FOR THE ORGANIZERS

It is required that the organizers and trainers made familiar with the important factor studied in this investigation and provided necessary training and experience necessary for organizing the game and helping the players. This can only be possible, if the higher authorities responsible for preparation of players are general, and of basketball in particular pay attention to this area.

RECOMMENDATIONS FOR FURTHER RESEARCH

1. Sports; other than Basketball like hockey, football, volleyball etc. may also be studied.
2. Samples selected may be of more numbers that can be used to repeat the present study.

3. The sample for the present study includes players from degree colleges the same study may be planned for players from primary and secondary schools.

4. The set of psychological variables may also be changed to make the similar type of study.

The present venture is a humble beginning in the area of studying the role of some psychological variables in sports persons of Basketball. The study has a number of limitations which may be kept in the mind when undertaking the research programme in this field further.

The present investigation of college Basketball players comprising of men and Women covers some psychological factors concerned with them. The findings pave the way for making some important recommendations for the players. Now-a-days, more stress is being laid on the training of various skills required for a particular game but the psychological factors have organizers of the game will take note of this and start helping and training the players for their proper psychological makeup.
CHAPTER - 7

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APPENDIX - A

A. SPORTS ACHIEVEMENT MOTIVATION TEST

1. I enjoy playing
   a. Vigorous games (s)
   b. game (s) which requires physical effect.

2. As a player I like to be called
   a. a well-equipped player
   b. a top scorer

3. In my life I would like to
   a. Use sport as a profession
   b. Use my sports achievement to get other benefits like employment, admission etc.

4. I want earn fame in sports
   a. by my hard work.
   b. by working hard with the selectors.

5. During the holidays, I want
   a. to watch matches
   b. to spend time in perfecting my game.

6. I like pride in being called
   a. a sportsman of fine manners
   b. a sportsman of perfect techniques and skill

7. It is my nature
   a. to just participate in sports rather than to compete.
   b. to take sports competitions seriously.

8. I play the game
   a. to keep good health.
   b. to earn a name in the world.

9. I feel extremely unhappy when
   a. I lose a match
   b. I lose my sports equipment or kit.

10. Generally I make friends with
    a. those who are sportsmen though I influential
11. I have a tendency to concentrate  
   a. on one game only  
   b. on more than one game.  
12. I feel my success depends upon  
   a. my own hard work  
   b. my friends or officials  
13. I want to practice sports so that  
   a. I may be selected to represent my school/state/nation  
   b. so that I may be keep fit.  
14. I feel that winning in sport is  
   a. something to be proud of  
   b. everything for me.  
15. I shall feel contented if my team  
   a. just win a match  
   b. crushed the opposite team  
16. In near future, I shall be  
   a. a star sportsman  
   b. a rich person.  
17. Generally I have a feeling that.  
   a. I must represent my country in my sport  
   b. I may achieve some success in sports activities.  
18. Criticism on my performance  
   a. helps me to work harder  
   b. discourages me a great deal.  
19. I would like to  
   a. do much better than other  
   b. the best within my power.  
20. Generally I have a feeling  
   a. that I would create a new record in my game/sports.  
   b. that I shall retire before I reach the top in my game.
B. SMITH’S AGGRESSIVE QUESTIONNAIRE
(Encircle the appropriate numbers for your answer)

1- If you want to get personal recognition is games it helps to play rough. People in admire those.

   Strongly Disagree Agree
   1 2 3 4 5

2- Roughing up the other team might mean getting penalized but the long run. If often helps you to win.

   Strongly Disagree Agree
   1 2 3 4 5

3- Most people don’t respect players who will not retaliate when they are picked on.

   Strongly Disagree Agree
   1 2 3 4 5

4- To be successful most teams require at least one or two aggressive people.

   Strongly Disagree Agree
   1 2 3 4 5

C. SPORTS COMPETITION ANXIETY TEST QUESTIONNAIRE

   Name:……………………….   Sex:……………………………

   (SCAT Questionnaire)

   Your answers may be marked by putting “X” mark against appropriate column.

   Hardly Ever    Sometimes    Often
1. Competition against other is ……… ……… ……… sociality enjoyable.

2. Before I complete I feel uneasy ……… ……… ………

3. Before I complete I worry about ……… ……… ……… making mistake.

4. I am a good sportsman when ……… ……… ……… I complete.

5. When I complete I worry about ……… ……… ……… making mistake.

6. Before I complete I am calm ……… ……… ………

7. Setting a goal is important ……… ……… ……… when competing.

8. Before I compete I get and uneasy ……… ……… ……… Feeling in my stomach.

9. Just before competing I notice my ……… ……… ……… my heart Beats faster than usual.

10. I like to compete in games that ……… ……… ……… demand.

11. Before I compete I feel relaxed ……… ……… ………

12. Before I compete I am nervous ……… ……… ………

13. Team sports are more exciting than ……… ……… ……… Individual’s sports.

14. I get nervous wanting to start the ……… ……… ……… game.

15. Before I compete I usually get ……… ……… ……… up High.
D. SPORTS STRESS TEST

Below are a number of statements relating to various situations of life. Read each statement carefully and decide how it suits you and accordingly make a tick mark under the appropriate column against each statement.

There is no right or wrong answers. Do not spend too much time on any one statement but give the answers which seem to describe your feeling best.

<table>
<thead>
<tr>
<th>Almost</th>
<th>Usually</th>
<th>Seldom</th>
<th>Never</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>True</td>
<td>True</td>
<td>True</td>
<td>True</td>
</tr>
</tbody>
</table>

1. I do not like to wait for the people to complete their work before I proceed with my own.
2. I hate to wait in most times.
3. People tell me that I tend to get irritated too easily.
4. Whenever possible, I try to make activities competitive.
5. I have a tendency to rush into work that needs to be done before knowing the procedure I will use to complete the job.
6. Even when I go on vacation I usually take some work along.
7. When I make it is usually due to the fact that I have rushed into the job before completely planning it through.
8. I feel guilty for taking time, time off from work.
9. People tell me I have a bad temper when
It comes to competitive situation.
10. I tend to lose my temper when I am under a lot of pressure of work.
11. Whenever possible, I will attempt to complete two or more task at once.
12. I tend to race against clock.
13. I have no patience for lateness.

Name:………………………… Sex:………………………..

E. SODHI’S ATTITUDE SCALE TEST
INSTRUCTION

1. There are five parts of this scale and you are asked to attempt all the item in each part.
2. You are only to read the item carefully and then encircle any of three alternatives Yes, ? and No given on the answer sheet. If you are agree with statement, encircle around Yes; if you are disagree with statement, encircle around No and if you are undecided about it, encircle around ?

PART-1

1. I have great regards for my teachers and use respectable language for them even in their absence.
2. The days are gone when teachers were “GURUS”. Now they are money-makers.
3. It is safe to act upon the advice of teachers in all matters.
4. I have consideration for the opinions which my teachers have about me.
5. The lack of discipline in students is due to weakness and shortcomings in teachers.
6. My teachers are my ideals.
7. Teachers unreasonably deny even legitimate freedom to students.
8. We should be guided by our parents even in the choice of our friends.
9. Unreasonable orders of parents need not be obeyed.
10. Even when the parents are unreasonable they should be respected.
11. We should happily marry at the place selected by our parents.
12. Parents should not interface much in the affairs of grown-up children.

PART-2

1. There is a fun in breaking the rules of traffic when police constable is not watching you.
2. There is nothing wrong if you travel in first class with a second class ticket when the seats are vacant there.
3. It is a good fun to give wrong coins to the short-sighted shopkeepers at night.
4. Discipline curtails our freedom.
5. All the rules should be obeyed even if these appears to be unreasonable.
6. We must respect our office bearers.
7. Acts of indiscipline by the brilliant students should be pardoned.
8. In a match even the wrong decisions of the referee should accepted cheerfully.
9. Nothing is wrong in not standing at attention when the National Anthem is going on if you are getting late for school or class.
10. We should not bother about local values, but do in Rome as Romans do.

PART-3

1. Inspite of failures and frustrations we should be cheerful.
2. I feel as if the whole World is unsympathetic to me.
3. Life without love for others is a parasite.
4. We should not pick up quarrels with the persons with whom we differ.
5. I do not like to take responsibility for the welfare and safety of the children and the old.
6. A thing is good only if it does good to me.
7. I must not tune my radio at high pitch as it might disturb my neighbours.
8. If anyone commits a serious mistake, he should be punished, even if he feels sorry for it and expresses regrets for it.
9. I do not feel discouraged when other people disagree with me.
10. It is pretty difficult for me to accept my mistakes.
11. I want to get the maximum pleasures out of this life.
12. “Honesty is the best policy” may be a good motto, but it will not work in real life.
13. The highest type of service is the service of needy and the ill.
14. Everybody in the world should look after himself, others will manage for themselves.
15. People under the prefix of service unnecessarily interfere in the affairs of others.
16. You should not say unkind things to others even when they irritate you.
17. The best way to live a successful life is to plan individual career without bothering others.
18. If you bother too much for other you will fail in your own achievements.
19. If a person is unhappy because of his own faults, nobody needs bother about him.

PART-4

1. We should believe in universal brotherhood.
2. The land of my country is as sacred to me as my place of worship.
3. My nation is a nation of friends and philosophers.
4. If I get a job in America, I will not like to stay in my country of poverty and diseases.
5. It would have been better if I was born in some progressive country.
6. Our cultural traditions should be maintained to preserve the integrity of the country.
7. I do not hesitate to pay the taxes as it is to be used for administration, development and protection of my mother-land.
8. In a nation of the corrupt people, it is very difficult to be honest; we should do in Rome as Romans do.
9. We are proud of the achievements of our country in the international field.
10. I am ashamed of being an Indian.

PART-5

1- Love for God gives solace to heart and mind.
2- God is always present everywhere.
3- Those who say that they love God are all hypocrites.
4- What, He does is always the best.
5- It is incorrect to attribute our failures to the will of God.
6- Fear of God makes us do the right.
7- Prayers sustain us in the time of trouble.
8- Religion is the one of strongest causes of war.
9- Religion makes a man coward and lethargic.
10- Only noble deeds and devotion to God can lead us to salvation.
11- As you sow, so shall you reap; God has nothing to do with it.
12- God watches our actions and punishes us for our lapses.
13- There is nothing like heaven, everything ends with death.
14- One who leads a sinful life goes straight to hell.
15- Religious priests are noble personalities.
16- Study of religious books purifies souls.
17- Our religious ceremonies purify our way of living.
18- It is essential to practice religious conventions for purification in life.
19- Those who are intellectually sharp do not believe in religion.
20- By dint of good actions one goes straight to heaven.
The results of an unpaired t-test performed at 21:46 on 20-APR-2013

t= 2.76
sdev= 3.22
degrees of freedom = 98 The probability of this result, assuming the null hypothesis, is 0.0069

Group A: Number of items= 50
4.00 4.00 5.00 5.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
9.00 9.00 9.00 9.00 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0
11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0
16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0

Mean = 10.9
95% confidence interval for Mean: 10.04 thru 11.84
Standard Deviation = 3.53
Hi = 18.0 Low = 4.00
Median = 11.0
Average Absolute Deviation from Median = 2.78

Group B: Number of items= 50
4.00 4.00 4.00 4.00 5.00 5.00 5.00 5.00 5.00 5.00 6.00 6.00 6.00 7.00
8.00 8.00 8.00 8.00 8.00 8.00 9.00 9.00 9.00 9.00 9.00 9.00 10.0 10.0
10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0

Mean = 9.16
95% confidence interval for Mean: 8.256 thru 10.06
Standard Deviation = 2.88
Hi = 14.0 Low = 4.00
Median = 9.50
Average Absolute Deviation from Median = 2.44

**Data Reference: 5FF2**

**Student's t-Test: Results stress**

The results of an unpaired t-test performed at 05:00 on 26-FEB-2013

\[ t = -2.89, \quad sdev = 4.26 \]

degrees of freedom = 98 The probability of this result, assuming the null hypothesis, is 0.0048

Group A: Number of items= 50
24.0 26.0 26.0 26.0 30.0 30.0 31.0 31.0 32.0 32.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0
Mean = 35.7
95% confidence interval for Mean: 34.46 thru 36.86
Standard Deviation = 4.25
Hi = 42.0 Low = 24.0
Median = 36.5
Average Absolute Deviation from Median = 3.14

Group B: Number of items= 50
28.0 28.0 31.0 31.0 32.0 32.0 33.0 34.0 35.0 35.0 35.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0
Mean = 38.1
95% confidence interval for Mean: 36.92 thru 39.32
Standard Deviation = 4.28
Hi = 47.0 Low = 28.0
Median = 38.0
Average Absolute Deviation from Median = 3.32

Data Reference: 21A8

Student's t-Test: Results anxiety

The results of an unpaired t-test performed at 05:04 on 26-FEB-2013

t= -1.11
sdev= 3.77
degrees of freedom = 98 The probability of this result, assuming the null hypothesis, is 0.27

Group A: Number of items= 50
13.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0

Mean = 21.7
95% confidence interval for Mean: 20.62 thru 22.74
Standard Deviation = 2.72
Hi = 27.0 Low = 13.0
Median = 22.0
Average Absolute Deviation from Median = 2.00
Group B: Number of items= 50
15.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 27.0 28.0 28.0 29.0 30.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0
Mean = 22.5
95% confidence interval for Mean: 21.46 thru 23.58
Standard Deviation = 4.59
Hi = 37.0 Low = 15.0
Median = 22.0
Average Absolute Deviation from Median = 3.36

Data Reference: 21D2

Student's t-Test: Results achievement motivation

The results of an unpaired t-test performed at 05:26 on 26-FEB-2013

t=-0.938
sdev= 4.27
degrees of freedom = 98 The probability of this result, assuming the null hypothesis, is 0.35

Group A: Number of items= 50
20.0 22.0 22.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 34.0 36.0 36.0 36.0 38.0
Mean = 28.2
95% confidence interval for Mean: 27.04 thru 29.44
Standard Deviation = 3.72
Hi = 38.0 Low = 20.0
Median = 28.0
Average Absolute Deviation from Median = 2.80

Group B: Number of items= 50
18.0 20.0 20.0 20.0 22.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0
26.0 26.0 26.0 28.0 28.0 28.0 28.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0
30.0 30.0 30.0 30.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 34.0
34.0 34.0 34.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 40.0

Mean = 29.0
95% confidence interval for Mean: 27.84 thru 30.24
Standard Deviation = 4.75
Hi = 40.0 Low = 18.0
Median = 30.0
Average Absolute Deviation from Median = 3.68

Data Reference: 226C

Student's t-Test: Results ATTITUDE

The results of an unpaired t-test performed at 05:39 on 5-MAR-2013

t=-0.929
sdev= 8.72
degrees of freedom = 98 The probability of this result, assuming the null hypothesis, is 0.36

Group A: Number of items= 50
8.00 15.0 17.0 18.0 18.0 19.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 29.0 30.0 31.0 31.0 32.0 32.0 32.0 32.0 32.0 33.0 33.0 34.0 34.0 34.0 35.0 35.0 35.0 35.0 36.0 36.0 36.0 38.0 40.0 40.0 40.0 41.0 41.0 41.0 41.0 42.0
Mean = 29.9
95% confidence interval for Mean: 27.41 thru 32.31
Standard Deviation = 7.66
Hi = 42.0 Low = 8.00
Median = 31.0
Average Absolute Deviation from Median = 6.14

Group B: Number of items = 50
7.00 10.0 12.0 13.0 19.0 19.0 19.0 19.0 21.0 24.0 24.0 24.0 25.0 25.0 25.0
28.0 29.0 29.0 29.0 32.0 32.0 32.0 33.0 33.0 34.0 34.0 34.0 34.0 34.0
35.0 35.0 36.0 36.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 38.0
38.0 43.0 44.0 44.0 45.0 45.0 47.0 49.0

Mean = 31.5
95% confidence interval for Mean: 29.03 thru 33.93
Standard Deviation = 9.67
Hi = 49.0 Low = 7.00
Median = 34.0
Average Absolute Deviation from Median = 7.24

Data Reference: 6634
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PUBLICATIONS

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GROWTH AND DEVELOPMENT IN PHYSICAL EDUCATION

*Ms. Sarita Yadav

ABSTRACT

An important aspect of the organism is to do with growth and development. Although growth and development generally follow a pattern, there are wide variations within the pattern. Growth is generally viewed as increase in height, weight and size, and increases in mass. Growth & Development are interdependent. Basically, heredity furnishes the frame of reference for growth & development. Some characteristics of structure are the result of combination of genes from the parents. Heredity sets the boundaries, but environment also influences growth and development. E.g., nutrition, climate, outdoor factors, fresh air, sunshine, exercise, rest.

Human Biology deals with the study of man, which includes principles related to total growth & development, malnutrition, sex difference etc. Physical Education must consider the nature and needs of the individual human animal and help children in development.

Keywords: Growth, Development.

INTRODUCTION

An important aspect of the organism is to do with growth and development. Although growth and development generally follow a pattern, there are wide variations within the pattern. Differences within this pattern, generally as viewed as increase in height, weight or size. Development has been defined as the process of growth, then, represent an increase in mass of an organization of that mass with respect to its functional abilities.

Growth and development are interdependent. There are many factors influencing growth and development. Basically heredity furnishes the frame of reference for growth and development. Some characteristics of structure and physical makeup, level of intelligence are results of combination of genes from the parents. It is making up of heredity.

Heredity sets the boundaries, but environment also influences growth and development. E.g., nutrition, climate, outdoor factors, fresh air, sunshine, exercise and rest. Environment deals with heredity. Some traits and characteristics, both mental and physical, are passed on to the child from the Parents.

Human Biology deals with the studies of man which studies several principles related to total growth and development, malnutrition, sex difference etc. Physical Education must consider the nature and needs of the individual human animal and help children in development.

BIological PRINCIPLE

1. Physical activity is a Biological necessity. The evolution of man shows that he has developed himself from a lower form of life.

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In this evolutionary process the muscle cells develop from simple to complex structure. Muscle system and its connecting nerves develop first, then any other system of body. It shows that a muscular activity determines the growth of the organism. The primitive man was very close to nature in their daily activity which built a strong physique. Modern man is no longer required to lead life, for searching food from the climate. As soon as a child is born it cries and later on moves its arms and legs of a limb it proves to grow.

2. **Physical activity is a daily necessity:** The big Muscles are those of shoulder, hip and legs. These muscles are used in running, jumping and other activities. When the big muscle are used they burn up more energy which result in a greatly increased functioning of the vital organs improve the circulatory, respiratory and other systems.

3. **Function builds structure and structure decides function:** During the evolutionary process the ape man started walking with rare legs. This Bi-pedal locomotion (function) strengthened the spinal column to support the need vertically. This function got the erect structure to the ancient man. It shows that function builds structure. Another example is the right arm which is used more is bigger than the left arm.

The erect posture of the ancient man exposed the vital organs to the enemies. This structure demands the arms to be spilied to protect the vital organs. Another example is the anatomical structure of the pelvis for man and women decides that typical style of walking and running.

4. **The facts related to the stages of physical growth and development according to age:**

A) **Period of growth:** Growth is continuous process it does not stop at any one stage of development, so as the begin next stage though it is a continuous process it is customary to classify the stage of growth and development to facilitate the educators to file suitable activities for the children at different periods of growth. In this connection it must be remembered that children grow at their own pattern.

I) **First period of growth (up to 6 years):** In this period the physical growth of the child is rapid during the first 3 years. The bones are very soft and not fully ossified. The ligaments are yielding. The muscles tendons are not well developed. Children are easily fatigue and it is not advisable to stimulate then beyond the limits of their own free play situation.

II) **Second period of growth (6 to 10 years):** In this period the physical growth of the child is relatively slow. The spinal column is mobile with acute angles and it is liable to be deformed by bad postures. Hence the children at this stage need strengthening exercise. The heart is still small and endurance is low and limited. In order to avoid over fatigue vigorous competitive contest have to be avoided. They should be given only natural activity.

III) **Third Period of growth (10 to 14 years):** In this period the growth of the child rapidly works. At this age girls grow faster and they proportionally taller and heavier than boys. It may also be noted that there is a tendency for boys and girls to associate with the members of their own sex. Problem of posture and lack of control of bodily movements may be evident. Capable of
prolonged interest. Often makes plans and go ahead on his own. They feel they are perfectionist.

Exercise involving co-operation between the muscles groups have to introduce positively. Loyal to his country and proud of it. Spend a great deal of time in talk and discussion. A wide variety of activities including games and sports. They develop their skill, agility, co-ordination. Specialization in one activity is not advisable at this stage. Teasing between boys and girls.

Awkwardness, restless and laziness common as result of rapid and uneven growth. Self conscious about physical changes. Interest in earning money. Skillfully planned recreation and school program. Warm affection and sense of honor in adults. Opportunities for greater independence and for carrying more responsibilities.

Pressure and sense of balance.

IV) Fourth Period of growth. During age of puberty, the growth spurt is on increase in height and growth of muscles. Strength and endurance. Boys gain relatively broad shoulder, in relation to hips. While hip of girls increased markedly. Voice of boys changes due to considerable growth of larynx. Enormous development of muscles during this stage require the introduction of practice of activities demanding neuro-muscular co-ordination.

It is therefore advised that the long distance races have to be avoided in athletic competition. Major games have to be positively practice in this stage. Uneven growth of different parts of the body.

Interest in team games, pets, television, radio, movies, comics. Often becomes overcritical, changeable, rebellious, uncooperative. Self conscious about physical changes. Interested in earning money. Opportunity for great independence and for carrying more responsibility without pressure.

V) Fifth Period of growth: This age of adult hood reaches the optimum growth. All types of strenuous activities may be undertaken. Specialization of activities can favorably be done. Older people should restart to varied types of recreational activities rather than strenuous activities.


Post Adolescent years: At this age physiological maturity has been reached. Boys are development muscularly. Improved motor co-ordination in different physical activity. In these years endurance increases emotional balance is better, physical attractiveness and recreational activities become popular.

This period developed strong
communications and ideals are being
developed. There is a deeper friendship much
thought is given to the future. Development
of skills and plying games for participate in
planning for many social activities for
opportunities to increase skills practice in
critical thinking and problem solving.

AGES OF DEVELOPMENT

With the help of ages an individual are
classified into various ways. These all may be
helpful to the teacher of physical education.
1) Chronological Age :- It represent the age of
an individual in year month and days.
2) Anatomical Age : It is related to the
ossification of bones. The small bone in the
wrist is used for this purpose.

An X-ray examination is needed to
determine anatomical age. Sometimes the
age of dentition is also used to determine this
type of age.
3) Physiological Age : It is related to Puberty
in some cases by the quality and texture of the
pubic hair in boys by menstruation in girls.
4) Mental age : This age arrived by
determining through test the degree to which
an individual has adjusted to the environment
and is able to solve certain problems.

The length of the body segments, height,
weight, ossification of bones, dentition age of
puberty, may develop at different rate the
vital organ may develop at a rate different
from that of other body marks. The rate of
development of the nervous system may not
fall in line with that of the muscular system.

Such as uneven development of the
human body during the year of maturity is
known as unsynchronized development of the
human body for making a thoughtful
selection of activities and choice of methods.

CONCLUSION

An important step in establishing the
educational process for children is to
understand the nature of the child as revealed
by his biological, psychological, emotional
and social needs. Each child is unique and
develops at his own rate, variations occur
within the traditional school levels.

Teacher, coaches understand the needs
and characteristics of children that motivate
and structure behavior at the various age
level. Development is a continuous process
which starts even before birth.

Growth and development is very
important in physical education. With the
help of growth and development teacher or
coach can understand how each game students
have a career or if the game he can give
good response.

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SPORT TRAINING INFLUENCES PERFORMANCE

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Training process can be extended to a number of days, months & years. According to experts training is a kind of exercise. Terms like strength training, interval training, technical & tactical training have been used. Training improves performance. Training affects performance. Factors like equipment, instruction, training, recovery, nutrition and psychological factors affect training. The planning, implementation and control of training is the responsibility of coach.

Sports training is done for improving sports performance. Sports performance is not a product of one, single aspect of human personality, but it is the product of total personality of the sports person’s dimensions e.g.: physical, physiological, social and psychological.

Sports training is process extending over a long period. For best results the system of training has to be based on scientific facts.

Aims of Sports training
Sports training aims to improve performance of sports persons. Performance depends on sports person’s performance capacity. Physique cannot be improved by training. But other factors can be improved like-

- Physical fitness is the total sum of motor abilities namely strength, speed, endurance, flexibility and co-ordinate abilities. It can be improved through sports training. Each sport requires different kind of physical fitness. Such as distance running requires very high level of endurance & shooting & archery do not require the same.

- Performance is affected by the skills executed by the sports person. Skills vary sport to sport. The technical skills serve as basic elements of tactical actions, which are good for performance in sports.

- Tactical efficiency is an important element in all sports, but the role is different in different sports. Tactics in sports performance increases with the improvement in performance level.

- Sports training is an educational process. Some qualities are needed to compete successfully in the competition. These are beliefs, values, motives, interest, attitudes: thinking, memory, perception, emotions, hard work, regularity, habits of eating, sleeping, hygiene, leisure time, etc.

Principles of training
- Normal body is sensitive to training and will respond in a positive manner.
- Fitness is relative & will differ individual to individual. Two people will not have the same starting point.
- For adult’s fitness training programme, qualified person are needed, who have the knowledge of training programme.
- Medical examination of the trainees to be done periodically.
- Muscular strength, endurance and flexibility must be developed.

Mode of Exercise
General exercise used in a training program is walking, jogging, running, bicycling, swimming, bench stepping, calisthenics and skipping rope.
Regular activity with a prolonged training session (30 minutes to 1 hour) is needed to achieve optimum level of fitness.

**Characteristics of sports training**
- Sports training aims at achieving high performance in sports competition.
- Sports training is always planned in a form of cycle of systematically e.g. micro cycle, meso cycle and macro cycle.
- Sports training is based on scientific facts and principles.
- Sport training is always planned, organised & implemented by a coach. He bears the responsibility for the effectiveness and success of training.
- Sports training find hidden reserves and develop the same.
- Training should be regular for best effect.
- Personality development and performance development are two interrelated and interdependent aspect of training.
- Sports training is a continuous process of perfection, improvement and creation of means and methods.

**TRAINING PHASES**

**Off-Season Training**

Training programs during the off-season are generally non-specific.
- A weight training programme increases strength, muscular, endurance & power e.g. specific athletic event.
- Running programme of low intensity performed not more than twice a week. This programme goes concurrently with weight training programme.
- Recreational games only for relaxation and enjoyment.

- Limited participation in regular sports to develop skills e.g. basketball, shooting.
- Weight training 8 weeks, 3 days a week.
- Informal running, low intensity 8 weeks 1 to 2 days per week.
- Participation in other sports and games.

**Pre-Season Training**
- Pre-season phase is of 8 to 10 weeks before the competition. Pre-season training increases maximum capacities of energy systems. The off-season weight training program should continue during pre-season training.
- Running high intensity, 8 weeks, 3 days per week.
- Weight training 2 to 3 days per week.
- Watching films, learning strategies, some skill drills.

**In-Season Training**
- In-season training program for most sport emphasises on skill development. If athlete competes regularly, will maintain & increase energy capacities, obtained during pre-season training.
- One or two days training program per week as in Pre-season.
- Weight training with one work out per week.
- Improve skills as well as maintain fitness.
- Running high intensity, 1 or 2 days per week.
- Weight training 1 day per week.
- Skill drills.
- Regular competitive performances.

**CYCLES IN A TRAINING SESSION**

**Macro-Cycle:**
- Longest cycle of training. Its duration can be from 3-4 months to 12 months. It has 2 aims:
  - Achievement of top performance in a certain time.
• Increase of performance capacity to higher level.
• Macro cycle has 3 periods - Preparatory, Competitive and Transitional period.
• There may be two or three macro cycles in a year.

**Meso-cycle**

It is a training cycle of medium duration. It is composed of 3-6 micro cycles or weekly cycles. The last micro cycle of a meso-cycle is for recovery & relaxation.
• For improvement of performance, duration of a meso-cycle should be of 4 weeks.
• In next meso-cycle the stress can be removed.
• In this cycle training should aim to achieve top form.
• In 1st half meso-cycle volume of load should increase & in 2nd half volume of load should decrease.

**Micro-cycle**

It is the smallest training cycle of 3 to 10 days. This cycle is for recovery & relaxation.

**3 Ways To Increase Length Of Muscle**

**Iso-Tonic**

Iso-tonic exercise involves muscle contraction which produce shortening of the muscle range.

**Iso-Metric**

It is strong muscle contraction, which does not produce change in muscle length.

**Iso – Kinetic**

In machines are used to increase muscular length.

**3 Periods In 1 Macro Cycle**

**Preparatory period**

It is the longest period. In this period high volume & medium intensity is tried. It has 2 or 3 phases-

**Phase-I**

Development of general motor abilities eg: endurance, strength flexibility, co-ordinative abilities & regain the previous training.

**Phase – II**

High training volume & increase in intensity and perfection of technique training.

**Phase – III**

In this phase sports man is prepared for the competition. Thus training intensity increases. Mastery in technique is tried for competition.

**Competition period**

In this period aim is to achieve top form and maintain it for long period. The training in competition period is with high to maximum intensity, special exercises high number of competition etc are aimed at. In this period techniques and tactics are developed. To reach the top form 4-6 weeks are needed.

**Transitional Period**

The main aim of this period is to give recovery and relaxation after strenuous training of preparatory and competition period. It should not be more than 4-6 weeks.

**Conclusion**

The sports performance can be adequately assessed from the competition result or results achieved in training. With the help of assessment, performance of sports man can be judged.

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Wholesome Development of Physical Education in New Millennium

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Education has been defined as a change, a modification, or an adjustment in a part of the student as a result of educational experience. The most important goal is referred to as a aim. In education starting point of beliefs probably begins with the establishment of a value. In the physical education these values make up a physically educated person. An aim would be an ultimate goal, it would indicate direction. Goals are never-ending and form for achievement. Goal concerns its durability. Goal will not change as long as the interpretation of the data remains constant. When new data are discovered and new theories and principles are formulated, aims will change according to the changes.

In physical education all goals are concern with Philosophy. Philosophy deals with ultimates. The scientific process and philosophy, helps to goals in physical education. Several characteristics should be kept in mind in the process of formulation of goals.
• First it must be general enough to be inclusive of every thing in the field.
• It must be delimit within that specific field.
• Goal must relatively permanent.
• If it could be change at all it would change only over long period of time.
• Goals have power to inspire toward greater effort.
• Goal is an essential for man’s mental, social, emotional, spiritual life.

The goal of physical education is the optimum development of the physically, socially, and mentally integrated and adjusted individual through guided instruction and participation in selected total-body sports, rhythmic, and gymnastic activities conducted according to social and hygienic standards. “Goal is “optimum”, which is in contrast to maximum.” Optimum implies that which is the best for the purpose or the most favorable amount of degree.

Many skills involve hand-eye-foot-eye coordination. Eg: Such skills involve catching, shooting, batting or stroking is usually concerned with goals. There is an order of movement involving a Primary goal followed by a Secondary goal. If attention is removed from the Primary goal soon in order to concentrate on the Secondary goal, there will usually be an error in performance. For example, a second baseman who covers the bag on an attempted steal of second base tries to tag the runner before he catches the ball, or a flanker in football, on a hook pattern, attempts his pivot and dash down the field before he catches the ball, or the batter who moves his eyes from the ball an instant before contact and looks at the fence in left field over which he hopes to clout the ball; or the golfer who looks up for his shot down the fairway before he contacts the ball. In many instances the simple remedy is “to keep your eye on the ball” until it is hit or caught.
Goals of Physical Education

- To spread physical education, games and sports all over the world.
- To raise the standard of performance in various sports.
- To promote, international understanding and peace in physical education.
- To give physical, mental, moral and social development to a human personality.
- To help the youth to establish themselves in the society through new sports and also take a physical education as a profession.
- Physical education helps in developing productivities of factory.
- It is helpful in developing positive health.

The wholesome development of human personality is provision for a complete living. The goal depends on social change in society. So the goal of physical education is to contribute to the development of such qualities of body, mind and society.

Government Sports Policies of India

Sri Hanumaan Vyayamshala Prasarak Mandal (Amravati)

This institute was founded in 1914 at amravati with the help of 2 vaidya brothers, Pt.Ambe Das and Anand Kumar Vaidya. Since his foundation the Mandal has played an important role in promoting the course of physical education in India.

In 1924 five week summer course was introduced with the object of training young men and women in indigenous form of physical training exercise. Since then the summer course is also run. After attending the course they were known as Vyayam Visharad.
Under the auspicious of the Mandal the 1st all India physical education conference was held at Amravati in 1946. In 1947 Mandal introduced a diploma course in physical education. It is a regular course of 1 year duration and has now received recognition by the ministry of education Govt. of India.

**Lakshmibai College of Physical Education (Gwalior)**

The 2nd five year plan is important in the history of physical education in India. In 1957 L.C.P.E was established at Gwalior with Mr. P.M. Joseph as a principal. The college as conducted 3 years degree course and affiliated to Vikram University Ujjain, which was the 1st University in India to recognize physical education as equivalent to any other subject for the award of degree. On the practical side the students have to specialize in certain activities of their choice particular attention is given to coaching and officiating in all the games.

L.NIPE aims to prepare highly qualified leaders in the field of physical education and sports, by providing good training to the students. With the available infrastructure, it aims to serve as the centre of excellence and innovation in physical education. Apart from training, LNIPE also undertakes, promotes and disseminates research in the field of physical education. It also aims to provide the professional and academic leadership to other institutions, in its respective field. Vocational guidance is provided by the trainers in the Institution, which in turn offers placement services to the physical education professional.

Sports have been one of the most loved activities in India. Right from hockey, cricket, football, badminton, and tennis to golf, swimming and archery, almost every one indulges in one or the other form of sports. Gone are the days when different sports were mainly played for recreational purpose or to satisfy the fitness demands. In the present times, sports in India are essentially played for competitive and occupational purpose.
**I.dCA College of Physical Education (Madras)**

The first college of physical education in India was established in 1920 at Madras by the national council of YMCA of India, Burma. Then it was known as the school of physical education. Its founder principal was Mr. H.C. Buck. This institution in 1932 was known as YMCA College of physical education and has gained an international reputation. Since July 1940 the institution is co-educational and offers 3 types of diploma courses, government certificate higher grade and lower grade.

The college is housed in a spacious building has extensive playing fields and possess a good swimming pool. Thousands of young men and women have gone out of this college as trained teachers of physical education are to be found all over the country.

**Government College of Physical Education (Hyderabad) DECCAN**

The Govt College of physical education was established at Hyderabad in 1931 with Mr. Fred Wever as principal. It was mainly due to his effort the physical education was made compulsory in all the primary, middle and high school in the former state of Hyderabad.

In 1952 the college was placed under private management for 5 years and known as ACADEMY OF PHYSICAL EDUCATION. It was then reverted to Govt. control and has shifted to its new building.

**Government College of Physical Education (Kolkata)**

This college was established in 1932 at Kolkata by the govt of Bengal. Mr. James Bushman was appointed as principal. His training of teachers was highly regarded as Buchman trained teachers of physical education. In 1956 the college was shifted to Banipur 30 miles away from Kolkata.

**Training Institute for Physical Education Kandiwali (Mumbai)**

Govt. of Bombay was appointed a committee in 1927 to report on physical education but keeners could not
transplant in action. In September 1937 another committee was appointed for physical training institute as like YMCA College of physical education at Madras and established a training institute of physical education at Kandiwalli near Mumbai in June 1938 with Mr.P.M.Joseph as principal. He serves this institute for 20 years. This institute offers one year diploma course for Graguates and is co-educational institute. Beside this refresher courses are also conducted.

Sports Authority of India (SAI)

The Govt. set up the sports authority of India (SAI) with the help of Prime Minister Mrs. Indira Gandhi and its chairman with an initial budget of Rs.1crore. SAI which would be apex body for sports development in the country was formally floated through a Govt. resolution. The sports minister Mr. Buta Singh was the vise president of the newly formed body. The SAI is having its head quarter at Jawaharlal Nehru stadium and it is registered as a society.

SAI was to upgrade the skills of the budding sports talents in India, which is fulfilled to a great extent, through its 23 training centers spread across the length and breadth of India. Through the various policies formulated for sub-junior, junior and senior level, it ensures that the enthusiasm for sports is widened among different age groups of people. SAI has provided vital inputs to the players, which includes coaching, infrastructure, equipment support and sports kit. SAI has also provided competitive exposure to the talented players.

Netaji Subhash National Institute of Sports (NSNIS)

The Govt. of India established the national institute of sports at Patiala which started functioning from March 1961 and was finally inaugurated on 7th may 1961. This institute meant for good coaches in all popular games and sports.

In addition to practical which, include coaching and officiating. The practical consist of different subject. The medium of instructions are English. The institute is located at Motibagh, Former residence of maharaja of Patilla.
All India Council of Sports

This council was formed in the year 1954 by the ministry of education of India under the chairmanship of Maulana Abul Kalam Azad. It was intended to serve the cause of game and sports in the country and to act as a coordinating body between the National Federation, National Association and central Govt.

The council has several functions—
- Advise Govt. of India for sports and games.
- Advise National Sports Organization.
- Recommend to Central Govt. for the financial aid to sports organization.
- Act as a link between the National Sports Organization and Central govt.
- Recommend financial aid for Foreign teams visiting to India.
- Recommend the name of sportsman of the country for National Awards.

State Council of Sports

The states of Indian union were asked to form State Sports Council and get them selves affiliated to AICS. This council has been found in many states with a view to popularize games and sports not only in urban areas but also in rural areas to promote sports.

National Level Association

For the propagation regulation and control of various games and sports on a National level association have been formed. This federation is affiliated with their respective International federation. International competitions are selected by the respective federation and no one can compete in an international competition without the approval of the concerned National federation.
Indian Olympic Association

India sent its competent first time in 1920. Six competitors represented India. Through the effort of YMCA Olympic movement was popularized in India. In 1927 Indian Olympic Association (IOA) formed with the effort of Dr. D.G. Noehren and Mr. H.C. Beck. Mr. Dorabji Tata was its 1st presented with Dr. D.G. Noehren its secretary and G.D. Sondhi as assistant secretary since then IOA has been functioning in India as is affiliated with International Olympic Committee.

Indian Association of Teachers of Health Physical Education and Recreation

To promote and to help the teachers community to revitalize their professional endeavors. As per their status is concerned and their pay scale are concerned Association of teachers of health, physical education and Recreation was formed in way back 1958. Most of the teacher faculty in different college was registered as paid members. This association became less effective because of increased numbers of college and increase number of teacher faculty.

National Sports Talent Contest (NSTC)

This scheme was introduced in 1985 with identify the sports talent in school children between the age group 9-12 years are selected for achievement in sports. They are selected on the performance shown by them in the test. Selected children are admitted in SAI where boarding, lodging, and tuition fee are given by SAI.

Special Area Games Policy

Under this policy sports talent from tribal, coastal, hilly and remote areas of the country have been selected. The scheme also enhances toping of parents from games and also comes material arts from geographical advantages for excellent in a particular sports.

Sports Hostel Policy

It was introduce by SAI and objective to enable talented
young girls and boys in sports to stay, study, work and play together with development of individual and team excellence.

National Coaching Policy

It was introduce in 1955 by Rajkumari Amrit Kaur. This policy helps to encourage people to take coaching from the coach. Now a day it is a major source for meeting the requirement of a systematic training provided to the talented sports persons. The scheme merged with NSNIS in 1961 but now it is a separate wing having separate board of control and directors.

National Physical Fitness Policy

The objective of this policy is to improve health, physical fitness and sports. Under this scheme Bhartiam- a mass sports movement was introduced in the year 1988-89. This scheme is patterned on the lines of Sparta Kaidi. Sports like races were conducted like in Indira Gandhi Pradarshni Race and Road Race every Sunday in order to encourage boys and girls.

Sports Science Research Fellowship Policy

SAI awards sports fellowship the research worker carrying out research in sports in physical education allied sciences. Boys sports in the army established in 1991-92. Under this policy tuition fee, books, food, equipments, and coaching expenses are given by SAI.

Sports Project Development Area (SPDA)

This policy started in 1987 in all states and Utaranchal which would provide coaching facilities to talented youngster in their own states in the age group of 9-14 years. For this scheme land has to be provided by the state Govt.

Sports Talent Search Scholarship

It was implemented on behalf of department of youth affairs and sports Govt. of India. Scholarships are provided to the talented boys and girls studying at secondary stage to education and nutritious food during their studentship.
Students are selected on the basis of sports competition at the state or national level are also provided to the outstanding sports persons at the university and college level as well as free education for students of physical education.

Conclusion

The wholesome development of human personality is provision for a complete living. The goal depends on social change in society. So the goal of physical education is to contribute to the development of such qualities of body, mind and society.

Sports organizations such as the Indian Olympic Association and Sports Authority of India are spearheading efforts to raise the standard of Indian sports through different talent promotion policies. The central governing bodies, a host of sports academies and institutes are actively involved in the grooming of Indian sportsmen. Besides them, there are various corporate houses, which have initiated and have shown interest in supporting the talent in India.

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