It is well documented that it is the time of super specialization or
time of nano-technology. Gradually, physical education has grown like a
huge Banyan tree. In recent years sports, scientists have ventured to find
out those factors which directly and indirectly contribute towards the
enhancement of performance. Many scientific subjects have been applied
in the field of Physical education and sports to enhance the performance
of sport person.

Nobody knows exactly how and when sports started and developed
in society. However, it appears that nature itself has helped humans in the
spread of sports. It is certain that participation is inherent in human
psyche. Perhaps the first activity a fetus does is sport or play. Though not
in contact yet with the outside world and not trained in any activity, the
fetus learns and plays inside the mother’s womb by stretching and
throwing limbs. It makes the mother feel its lovely presence inside her.
Even after taking birth, the baby keeps on playing except when it is
sleeping. Even the conception of child is through sporting activity of
parents experiencing pleasure, joy and contentment. A constantly
increasing interest in sports has become a global phenomenon. Growing
health care awareness among people and print and electronic media, and
an inmate relation with these add to their popularity. As a result, the
demand for making physical education and sports as an integral part of
the curriculum is gaining momentum. As physical education and sports
are integral parts of educational system, overall sports programmes will
need social and individual support; making available adequate sports facilities and equipments. It is important that there should be promotion of research and development in the realm of physical education and sports. Besides, there should be an emphasis on information and documentation on sports, and an increased link between mass media, physical education and sports.

Physical Education is the mother of all other education systems. Educating our body and mind through regular physical activities along with moral qualities like loyalty, obedience, respecting each other and cooperation, etc is the key factor of physical education. The concept of “sports for all” is well known in developed countries, but in India we are still thinking of implementing this proven fact. That is why advanced countries have introduced movement education in their Kindergarten classes (age group 3 to 5 Years), where they teach how to walk scientifically, jump and lands from different height, sit properly, falling on the ground unhurt and how to throw balls efficiently.

Physical education bears an ancient heritage. The early sources of physical education are very old. The ancient cultures of India, Egypt Babylonia, Assyria, Persia, Greece and Rome also gave evidence of this same purpose when they stressed the use of physical education to train youth in war like activities.

The greatest of sports festival in which thousands of men, women and officials participate to win laurels for themselves and their nations are the Olympic Games. The history of Olympics Games dates back to 776 B.C in Olympic-the sacred valley of Flis on the cultural soil of Greece. The Olympic Games began as funeral games but gradually grew in strength and volumes and for about one thousand years they continued to
be organized until put to stop in 394 A.D by an order of the Roman Emperor Theodosius. He found these games becoming a battlefield and degenerating in ethics and morality.

The Olympics were stopped in 394 A.D and revived in 1896 A.D by the untiring efforts of a French Nobleman Baron Pierre De Coubertin. He viewed the Olympics Games not simply as an athletic event but a focal point for a broadly based social movement, which would enhance human development and international understanding.

The modern Olympic Games organized at Athens (Greece) from April 6 to 15, 1896 had 311 contestants from 13 countries. Today around 190 nations and more than 10,500 participants take part in this extravaganza without any discrimination of color, creed, caste, language, sex and ethics.

Henry Didon, a teacher and a friend of Baron Pierre De Coubertin, devised the Olympic motto CITIUS, ALTIUS and FORTIUS. The three Latin Words are set under the Olympic symbol flag meaning faster, higher and stronger. These words encourage human spirit for moving faster, soaring higher and getting stronger through the practice of sports (Sports Era 2004).

India has also learned from the international sport and has started giving due importance to sports. The best evidence is the Asian Games. It was first time in 1951 that India took the initiative to conduct the first Asian Games at New Delhi. It took a long period of time to understand the importance of sports/games to develop good health and positive impact on overall development of personality. So the first national sports policy was introduced in the year 1984. The national policy on education 1986 has clearly stated that sports and physical education are an integral
part of the learning process and will be included in the evaluation of performance; sports, and games will be built into the educational edifice. The infrastructure will consists of play fields, equipment, coaches and teachers of physical education as a part of the school improvement programme. Available open spaces in urban areas will be reserved for play grounds, if necessary by legislation, and efforts will be made to establish institutions and hostels where specialized attention will be given to sports activities and sports along with normal education (Antony & Kumar 2005).

If we intend to improve the standard of sports and games in our country then physical education should be made compulsory to all class up to collegiate level. Physical activity should become a habit; it should be a part of our daily life. The national sports policy should be revived periodically to evaluate the progress in its implementation.

India hosted the Commonwealth Games in 2010. It has been India’s most successful Commonwealth Games till date with 38 Gold, 27 Silver and 36 Bronze medals, staying in a respectable 2nd place in gold medals, but third in the total.

The opening and closing ceremonies were held at the Jawaharlal Nehru Stadium, the main stadium of the event. It was the first time that the Commonwealth Games were held in India and the second time it was held in Asia after Kuala Lumpur, Malaysia in 1998. The official mascot of the Games was Shera and the official song of the Games, "Jiyo Utho Bado Jeeto", was composed by celebrated Indian musician A.R. Rahman. The Commonwealth Games 2010 were the most expensive gaming event ever. The budget reached $157,731,000,000 which included flyover
construction, roads construction, new airport terminal construction, stadiums construction etc.

When the stakes are so high in the realm of games and sports, then it looks imperative to seek the factors associated with these human efforts, be it psychological physical etc. It is with the notion researcher proposes to confine his attention to only “Body Building and Weight Lifting” and dwell on these specific types of sports. But before the main thesis is developed, it is essential that a brief history of Body Building and Weight Lifting is delineated.

Body building and weight lifting are socio – cultural phenomenon, both the processes are integral part of general education and involve learning as well as performance.

Body building and weight lifting are considered to be a part of physical education and sports: Basically body building and weight lifting are individual activities born out of a normal urge of movement. There are reports, however, that the Chinese were performing strength training as early as 3600 B.C. In a Chinese text that describes soldiers lifting weighted objects before entry into the military. The tombs of Pharaohs describe athletes lifting bags of sand. Sculptures from ancient Greece illustrate weight lifting. A stone was found at Olympia dating back to 600 BC. The stone stated that it was lifted by an athlete named Bybon. The first world weightlifting championship was held on March 28, 1891 in London, England. This event consisted of seven athletes from six countries. Levi Laurens, an Englishman, won the first gold medal of world championship. Weightlifting was added to the Olympics in 1896 in Athens, Greece. The first weightlifting competition consisted of two events, the one hand lift and the two hand lift. Launceston Elliott of Great
Britain took the Gold in the one hand lift while Viggo Jensen of Denmark took the Gold in the two hand lift.

Greece in 6th century B.C. reportedly had strongmen, wrestlers, and boxers. In 624 B.C. it was related that the legendary Milo shouldered a young calf until it grew to its full size. Milo developed the theory of progressive resistance training. Some of the first Greek gyms were outdoor arenas, and the Greeks later built enclosed structures similar to today’s fitness centres. To further understand the history/development of body building it is important to know the basics and history of strength training. There were reports of strength training in India over 5,000 years ago (Stutley & Stutley, 1977). Some of the earlier training methods included people jumping up out of holds to develop their legs. Ancient athletes cut handles into stones, a concept that proved to be the forerunner of today’s dumbbells. Discus throwing was another type of brute strength event, and it remains as a popular training method even today. The Romans, who used exercise to become fierce warriors, developed exercise circuit training. The fall of the Roman Empire sent strength training into dormancy for approximately 1400 years. In the 1800s the Germans rediscovered strength training and physical culture by opening up weight lifting clubs (Persis, 1999).

In the 19th century there were reports of Englishman William Buckingham Curtis pressing two 100lb dumbbells overhead at arm’s length. Louis Attila was teaching the art of physical culture at studios in Brussels, Belgium studios in the 1800’s, and one of his pupils was the great Fredrick Mueller, also known as Eugene Sandow. Sandow was the first person known to use posing for entertainment, and was said to have earned $3600 a week for displaying his physique. Sandow has been known as “The World’s Strongest Man.” It was in Sandow’s time that
competitions were first held in which the physical measurements of the competitors were compared to determine the best athlete (Persis, 1999).

In 1859 French professor Edmond Desbonner and other prominent educators were endorsing weight training. Bernard McFadden was a master promoter of bodybuilding competitions in Madison Square Garden beginning in 1903. McFadden contests put more emphasis on how the body looked than how much strength an individual exhibited. Early in the 1900’s the first corporate organization emerged and was known as the Milo Barbell Company. The first publications, Strength Magazine, Body Building, and the Truth about Weightlifting, were printed in 1911. Mark Berry, who added lifting methodology and various movements, made appearances with his pupil, John Grimek. The start of World War I ended the rise of the Milo Company, and Bob Hoffman bought out Strength Magazine and the Milo Barbell Company. Hoffman changed the magazine’s name to Strength and Health, and he renamed the company York Barbell Company. It was in 1936 that Perry Rader first published The Iron Man and it still exists today (Persis, 1999).

Initial bodybuilding competitions required bodybuilders to perform an athletic feat as well as show their physiques. The first Mr. America contest was held in 1939, and it was won by Roland Essmaker. The first real bodybuilding event was held in 1940, and John Grimek won it. It was added on to a powerlifting event, so it was called a bodybuilding contest until 1940. In the 1940’s Clarence Ross and Steve Reeves in particular brought attention to the sport of bodybuilding, and Steve Reeves became well known to the public.

Even before this time physique exhibitions were popular additions to Olympic weightlifting contests, and, photo contests were sponsored by
physical culture magazines. Charles Atlas was one of the memorable victors of these earlier events. Many of the classical ideals of how bodybuilders were judged have carried over to today’s judging of the sport. Earlier athletes were judged on athletic prowess, and as late as 1973 the Amateur Athletic Union (AAU) America required bodybuilders to show intelligence by being scored on how they responded to a question. There has been some controversy over whether bodybuilding is actually a sport, but its addition to the World Games in 1981 helped confirm its place in the sport’s realm. (Hatfied, 1984).

In the 1960’s the sport was dominated by Dave Draper, Sergio Oliva, Bill Pearl, Franco Columbu, Frank Zane, and Arnold Schwarzenegger. It was in this era that marketability became important to bodybuilders, and there emerged controversies about judging and whether they showed favor for popular athletes. There was much disagreement about the 1972 Mr. Olympia title when Arnold Schwarzenegger defeated Sergio Oliva. There was even more disagreement in the 1980 Mr. Olympia won by Schwarzenegger, and some believed it to be unfairly judged. Schwarzenegger, after a 5-year leave of absence from the sport, returned to defeat all bodybuilders (Schwarzenegger, 1998). Society has associated anabolic steroid use with anyone who claimed to be a bodybuilder, and that has prevented the sport of bodybuilding from becoming a part of the Olympics. In the early 1980’s, drug free bodybuilding surfaced and the World Natural Bodybuilding Federation emerged to give natural athletes a chance to compete professionally. Some bodybuilders have become more marketable than others, and judging the sport has become prone to bias. Back in Sandow’s time they used to judge physiques by physical measurements, but this has long been discontinued. Bodybuilding, like other sports judged by human
observation, is subject to the biases of the panel of judges selected to evaluate the event.

Body building is a form of body modification involving intensive muscle hypertrophy; an individual who engages in this activity is referred to as a bodybuilder. In competitive bodybuilding, bodybuilders display their physiques to a panel of judges, who assign points based on their appearance. Muscles are revealed through a process known as the “cutting phase” - a combination of fat loss, oils, and tanning (or tanning lotions) which combined with lighting make the definition of the muscle group more distinct.

In the early 2000s, the International Federation of Bodybuilding (IFBB) was attempting to make bodybuilding an Olympic sport. It obtained full IOC membership in 2000 and was attempting to get approved as a demonstration event at the Olympics which would hopefully lead to it being added as a full contest. This could not happen.

Weightlifting in India has a glorious story since its participation in 1936 Olympics. In India there is no dearth of games. Varieties of sports and games from every corner of the world ventured in India and were practiced all over the country. India also welcomed weightlifting as a sport. Weightlifting in India is popularly known as lifting only. In this game of strength, the participants need to lift heavy weights attached to the steel bars known as barbells. India first took part in the 1936 Olympics and in Asian games it is taking part since it started in 1951. Weik Zaw was the Indian competitor in 1936 Olympics in Berlin and stood 15th in the 75kg category. Indian Women weight lifters competed in the World Championship for the first time in 1989 at Manchester although it started in 1987. Kunjurani Devi from Manipur earned three
silver medals in that competition. Laita Polley from West Bengal added two bronze medals to this glory. In individual lifts, Shyamala Shetty and Chhaya Adak owned two medals.

Weightlifting in India can be divided into two events: “snatch” and the “clean and jerk”. In 1972 Olympics, the “clean and press” or simply “press” type was introduced but later got abolished for creating problems in judging. Indian weightlifting federation has its head quarter in New Delhi, which is affiliated under the Indian Olympic Association, Delhi. Indian weight lifters got a full squad entry in World Championship only in 1957 at Tehran. In that competition Indian participator Mookan reached the highest ever eighth position. In the light weight category, Alok Nath Ghosh was positioned 10th. Indian weightlifters continued its glorious journey at the 1995 World Championship also by winning three gold and six silver medals. Karnam Malleswari won gold medals both in the clean and jerk category and in the snatch category by lifting 113kg and 90 kg respectively. Thus she became the first India woman to win the World title twice. Few other names that had their part in this success story are Manitombi Devi of the Central Reserve Police Force at the fourth position, Jeevan Jyothi at 5th position and Susmita Laha stood 5th in 76 kg. Above all, the official mouthpiece of the international weightlifting federation, World Weightlifting magazine ranked Indian weightlifters Kunjurani Devi and Karnam Malleswari as World no 1 weightlifter. The Indian weightlifting fame did not stop there as in 1966 Commonwealth games at Kingston, Jamaica, Mohan Lal Ghosh (60kg) win a silver medal for jerk category. Then again in 1978 games in Edmonton, Canada, E Karunakaran won a gold medal in the flyweight section. He made another record by winning four gold medals in the Commonwealth games and for winning championship at a stretch from 1978 to 1981. Weightlifting in
India got a jolt when three Indian weightlifters S. Sunaina, Sanamacha Chanu and Pratima Kumari were found guilty of doping in many international competitions in a year. For this reason, International Weightlifting Federation barred the Indian Weightlifting Federation for one year. But these issues cannot blemish the other victories by our Indian weightlifters like Karnam Malleswari’s achievement of being the first Indian who got an Olympic medal at the 2000 Summer Olympics at Sydney. One more Indian weightlifter, Geeta Rani became the star at the Commonwealth Games (2006) by winning the gold medal in women’s + 75 kg category. To take weightlifting as a profession, one needs to get prepared from his younger days because fitness and strong body build are important criteria for approaching towards this field. It needs an experienced trainer to prepare a competitor to participate at the international level. If the glorious tradition of weightlifting in India has to continue, better equipped training institutes have to come up and encourage the young talents to get trained to represent the country in International events.

The word psychology is the combination of two Greeks words “Psyche” means mind and soul and “logus” means science. Therefore psychology is the systematic study of human and animal behavior. Psychology tries to understand why living beings acts way they do, how they grew up, how they learn and change their behavior, how they differ from the other. Mc Dougall (1949) called psychology “a science which aims to give us better understanding and control of the behavior of the organism as a whole.”

The objectives of the psychologists, is to understand, to get insight and to interpret. So we can conclude that psychology is the scientific study of behavior and mental processes of humans and other animals.
Today with the modern sporting activity, it is not enough for a player to concentrate on physical, physiological and technical preparation on a long term basis, but also to concentrate on psychological preparation for the competition. Psychological preparation was thought about as early as 1930 when Puni, Roudik and Gurnikov began to evaluate the pre-performance states of sports persons on different psychological measures.

Sports competition is becoming tougher day by day. Often, however a lack of physical skill is not the problem rather a lack of mental skills is the cause of poor performance (Weinberg and Gould 1999). More often than ever top level of sportspersons are attributing their performance in competition primarily to psychological skills, although physical skills tactics and fitness are essential to performance. It is now being claimed that regardless of how much ability, skill or fitness a person possesses for a particular task or sport, the success and quality of his performance will, in the final analysis, probably depend on his particular psychological makeup (Alderman, 1974).

Sports Psychology is a branch of psychology, which deals with the scientific study of sportsman’s behavior in various sports settings. Sports is typically understood in the sense, include recreations, physical activities as well as highly organized competitive activities and games such as, football, hockey, body building and weight lifting etc. we can say sports psychology is the scientific study of people and their behavior in sports and exercise.

In the present scenario of competitive world of sports, it is not only the physical differentials which matter but the psychological makeup of an individual is also a paramount consideration as its plays a decisive role in performance. Sports psychology is concerned with psychological
factors that influence participation and performance in sports. Sports Psychology is a division of psychology aimed at better preparing the mind of a sports person for competition. Sports psychologists study motivation, personality, anxiety, group dynamics, leadership, mental imagery, self-concept, aggression, and many other dimensions of participation in sports and games. It is well established by now that there are numerous psychological factors which affect and improve sports performance. Sports psychologists, coaches and physical educators teach sports psychology and work with athletes to improve performance and enhance the quality of sports and games.

The area of applied sports psychology has grown tremendously in recent years, as evident by the number of physical educators, coaches, and sports persons now looking to sports psychology for a competitive edge. These individuals have turned to various psychological training programmes to learn, among other things, ways to manage competitive stress, control concentration, develop confidence, increase communication skills and team harmony. The aim of psychological interventions to learn consistently to create the ideal mental climate that unleashes those physical skills that allow sports person to perform at their best. In the past few decades, sports psychologists have been involved in mental health issues and they have extended their efforts to include physical health problems and illness. This development is certainly important, since mental health and physical health often go hand in hand. Rushall (1989) has stated, “Psychology is the key to athletic excellence”. For example, when physical, technical and mental readiness of Olympic athletes was assessed; only mental readiness significantly predicted Olympic success.
Today’s physical and psychological training programmes are more and more intensive, especially in the case of elite sports persons. The role of scientific and systematic preparation has become even more vital as neither physical standard nor skill level decides the performance outcome of a sports person but it is the psychological parameters of an individual which decide the medalist and non-medalist in a competition. Any sports person requires something extra for the accomplishment of extra-ordinary performance in the area of sports. Suinn (1977): “Something extra as intending to win instead of hoping to win.” It is ability to concentrate completely on performance in situation in which physical skills are to be closely matched with the competitor’s psychological approach which ultimately becomes the critical factors that determine who wins.

In the present competitive scenario, psychological aspects are given more and more emphasis in order to bring out the optimum level of sports performance. It has become clear over the past two decades that psychological interventions can help teams and sports persons to perform their best. These keen struggles for excellence have made sports scientists explore and emphasize on these psychological determinants. These variables always define the path to success or failure in the field of games and sports. There has been a concerted effort to boost the performance level in sports through physical as well as psychological training of sports persons. When physical skills are evenly matched with the psychological determinants, then performance levels are enhanced. It is the combination of psychological makeup and physical readiness that distinguish successful sports persons from their unsuccessful counterparts.

Psychological determinants are of utmost importance when we talk about human performance in any field; more so in the case of sports
arena. There have been some researches in the field of sports that highlight the event or sports traits of different groups of sports persons. In the present scenario of sports to achieve the best outcome of the performance, one must understand the dynamics of psychological determinants such as self concept, sensation seeking and sports competition anxiety.

Self-concept may be defined as the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence. Self-concept is different from self-esteem (feelings of personal worth and level of satisfaction regarding one's self) or self-report (what a person is willing and able to disclose). It has been established by contemporary researches that the way an individual perceives himself goes to shape his behavior patterns.

A milestone in human reflection about the non-physical inner self came in 1644, when Rene Descartes wrote Principles of Philosophy. Descartes proposed that doubt was a principal tool of disciplined inquiry, yet he could not doubt that he doubted. He reasoned that if he doubted, he was thinking, and therefore he must exist. Thus existence depended upon perception.

A second milestone in the development of self-concept theory was the writing of Sigmund Freud (1900) who gave us new understanding of the importance of internal mental processes. While Freud and many of his followers hesitated to make self-concept a primary psychological unit in their theories, Freud's daughter Anna (1936) gave central importance to ego development and self-interpretation. By far the most influential and eloquent voice in self-concept theory was that of Carl Rogers (1947) who
introduced an entire system of helping built around the importance of the self. In Rogers view, the self is the central ingredient in human personality and personal adjustment. Rogers described the self as a social product, developing out of interpersonal relationships and striving for consistency. He maintained that there is a basic human need for positive regard both from others and from oneself. He also believed that in every person there is a tendency towards self-actualization and development so long as this is permitted and encouraged by an inviting environment (Purkey, 1988).

Nevertheless, until now self-concept is also an illusive and often poorly defined construct. Reviews of literature have found at least 15 different “self” terms used by various authors (Strein, 1993). Terms such as “self-concept,” “self-esteem,” “self-worth,” “self acceptance,” and so on are often used interchangeably and inconsistently, when they may relate to different ideas about how people view themselves. Several authors have defined self-concept. William James (1890) holds it to be all that a person is tempted to call by the name me or mine. Murphy (1947) defines it as the individual as known to the individual. According to Symonds (1951), it is the way or manner in which the individual reacts to himself. He spells out four aspects of self: i. how a person perceives himself; ii. What he thinks of himself; iii. How he values himself; and IV. How he attempts through various actions to enhance or defend himself.

Shavelson et al. (1976) broadly defined self-concept as a person’s view of himself created through experience with and interpretations of his surroundings. These interpretations are influenced by significant other’s evaluations, reinforcements, and attributions of the individual’s behavior. Shavelson et al (1976) described the effects of this concept as cyclical. Self-perceptions influence an individual’s behavior, and that behavior
influences the way in which the individual perceives him or herself. Furthermore, Shavelson et al. (1976) believed that self-concept is important as both an outcome and as a mediating variable that helps to explain other outcomes. They identified seven features that are critical to their definition of self-concept:

1. Self-concept is organized or structured; in that individuals categorize the immense amount of information they have about themselves and relate this information to one another.

2. It is multifaceted, and the particular facets represent a self-referent category system adopted by an individual.

3. It is hierarchical, with perceptions of personal behavior in specific situations at the base of the hierarchy, inferences about the self in broader domains (i.e., academic, social, and physical) at the middle of the hierarchy, and a global, general self-concept at the apex.

4. General self-concept is stable, but as an individual descends the hierarchy, self concept becomes increasingly situation-specific and less stable.

5. As an individual develops, self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood. Preadolescents have self-concepts that are global and undifferentiated. Self-concept becomes differentiated and integrated into a multifaceted, hierarchical construct with increasing age.

6. Self-concept has both a descriptive and an evaluative aspect such that individuals may describe themselves (“I am happy”) and evaluate themselves (“I do well in gymnastics”). Evaluations can be made against some absolute ideal, comparisons with peers, or expectations of significant others.
7. Self-concept can be differentiated from other constructs to which it is theoretically related. For example, academic achievement should be more highly correlated with academic self-concept than with social or physical self-concept, and self-concepts in specific school subjects should be more highly correlated with achievement in matching school subjects than achievement in other school subjects.

Sherif and Cantril (1947) use the term “ego” and define it as the constellation of attitudes of the type “what I think of myself, what I value, what is mine, and what I identify with” According to them, these attitudes, when activated, energize, direct and control the person's behavior.

Franken (1994) states that "there is a great deal of research which shows that self concept is, perhaps, the basis for all motivated behavior. It self-concept that gives rise to possible selves, and it is possible selves that create the motivation for behavior”. Perhaps the most important distinction that differentiates various conceptualizations is whether self-concept is viewed as an overarching, global characteristic of the person, or as a set of self-evaluations specific to different domains of behavior. The global view, sometimes conceptualized as “self-esteem” or “general self-concept,” is the older and probably the more common view (Strein, 1993).

In contrast to the traditional model of global self-concept, multifaceted models stress self-evaluations of specific competencies or attributes, for example, academic self-concept, physical self-concept, and so on. Although some theoretical models are hierarchical, with global self-concept at the apex, most of these models stress the distinctiveness of various self-concept facets. Consistent with research findings, most
published self-concept measures now emphasize domain-specific self-concepts:

1. Physical Dimension: Physical dimension refers to physical makeup. This includes such variables as height, weight, appearance, physical abilities, overall health, coordination, ease and quality of movement, ability to translate mental thought into physical action, nutrition, etc.

2. Intellectual Dimension: Intellectual dimension refers to mental abilities such as abilities to problem solve, make decisions, critically evaluate information, understand the complexities of the surrounding world, to express oneself orally and in writing, to convince others rationally, etc.

3. Emotional Dimension: Emotional dimension refers to feeling self. This includes the ability and willingness to experience emotions, the ability to express emotions, and the ability to respond to emotional expression in others. It also includes the ability to accept/display both positive and negative emotions.

4. Social Dimension: Social dimension refers to how one sees oneself in relation to other people. This includes such variables as the willingness to initiate new relationships, the ability to carry on a conversation, level of comfort in dialogue, feelings of belongingness, ability to be assertive, etc.

The value of seeing ourselves in these four dimensions with their numerous “sub dimensions” is that we can understand that all of us have strengths and weaknesses in each dimension and, as a result, to so intensely focus ourselves on one dimension is unfair and unkind to ourselves. For instance, society tends to measure us a lot by the physical
dimension, but to focus on that exclusive of the rest ignores the majority of who we are. There are two processes we must go through as we develop our self-concept. First, we must get an awareness of what our traits and behaviors are--our “self-image.” We do this in two ways: self-appraisal and feedback from others. Second we must evaluate the desirability of those traits (our “self-esteem”), and we do this by applying criteria to our self-image. Our self-appraisal is our own individual perception of our traits and behaviors. The feedback we get from others is a way we validate our self-appraisal. As we become aware of our traits, we evaluate them in terms of desirability. In order to evaluate anything, including our traits and behaviors, we must compare those traits and behaviors to something. Through our fields of experience we have collected standards by which we measure ourselves. These standards come from all our experiences including family, friends, religious places, media, and our own thoughts. We use these to judge ourselves (and others too, but we are often much harsher on ourselves than on others.) If our standards are internal stand, standards we have decided are right and reasonable for us, we can maintain a healthy sense of balance between setting goals for our self for personal growth and feeling a sense of achievement. In other words, we have goals to reach, but they are attainable given our traits and abilities; they are not unrealistic. The danger arises when we fall prey to external standards, standards that are thrust upon us by societal forces: family, friends, media, etc. For instance, consider the unrealistic standards our entertainment industry sets for physical appearance for both males and females.

Consider too why advertising, for example, has a vested interest in keeping those standards beyond what our present self is—it keeps us buying their products to try to meet those false standards. Another
example is our tendency to measure ourselves in terms of material possessions or money. If we don't have the right type of car, house, clothing, hairstyle, and on and on, we aren’t “with it.” The way to be “with it” is to buy something that someone else says you ought to have, wear, use, etc. This is such a danger to our self-esteem because as one matures, the search for self-esteem can lead one into a more and more frantic attempt to meet these unrealistic standards.

In this frantic attempt, we easily fall prey to the “fallacy of oughts.” The fallacy of oughts is the mistaken belief that we must satisfy everything we ought to be, ought to do, and ought to buy. These ought’s are the products of our society, our peers, our colleagues and advertising. These are the standards we mistakenly feel we have to live up to. Once we get caught in the trap, we start abusing ourselves with attempting to meet this powerful and overwhelming world of ought’s. We constantly strive to fulfill the external standard, ignoring our internal standards. Thus these internal and external standards have an important dynamic. If we are under the influence of our internal standards, we use those standards to then evaluate the external ones, assimilating those that measure up, tossing aside those that don’t. If we are under the influence the external standards, however, our internal ones often fall by the wayside as they get so overwhelmed and buried in the onslaught of external forces. It is also becoming clear that self-concept has at least three major qualities of interest:

- (i) It is learned, (ii) It is organized, and (iii) It is dynamic. Each of these qualities, with corollaries, follows. As far as we know, no one is born with a self-concept. It gradually emerges in the early months of life and is shaped and reshaped through repeated perceived experiences, particularly with significant others. Most researchers agree
that self-concept has a generally stable quality that is characterized by orderliness and harmony. Each person maintains countless perceptions regarding one's personal existence, and each perception is orchestrated with all the others. It is this generally stable and organized quality of self-concept that gives consistency to the personality. To understand the active nature of self-concept, it helps to imagine it as a gyrocompass: a continuously active system that dependably points to the “true north” of a person's perceived existence. This guidance system not only shapes the ways a person views oneself, others, and the world, but it also serves to direct action and enables each person to take a consistent “stance” in life. Rather than viewing self-concept as the cause of behavior, it is better understood as the gyrocompass of human personality, providing consistency in personality and direction for behavior. Self-concept can also refer to the general idea we have of ourselves and self-esteem can refer to particular measures about components of self-concept. Some authors even use the two terms interchangeably. Self-esteem generally refers to how we feel about or how we value ourselves.

Self-esteem is a personal evaluation of one’s worth as a person. It measures how much one respect oneself:

- **Physically:** (how happy an individual is with the way he/she looks)
- **Intellectually:** (how well an individual feels he/she can accomplish his/her goals)
- **Emotionally:** (how much an individual feels loved)
- **Morally:** (how an individual thinks of himself/herself being as a person)

How a person sees oneself affects every part of his life. High self-esteem makes for a happier life. It allows him to be his own person and
not have others define him. Self-esteem, self confidence and self-respect are all related. Self esteem is also defined as the judgments a person makes about him or herself and is affected by self-confidence and respect. Self-confidence believes in our ability to take action and meet our goals. Self respect is the degree, to which we believe we deserve to be happy, have rewarding relationships and stand up for our rights and values. All these factors affect whether or not we will have a healthy body image. Franken (1994) suggests that self-concept is related to self-esteem in that “people who have good self-esteem have a clearly differentiated self-concept. When people know themselves they can maximize outcomes because they know what they can and cannot do”. James (1890) states that the intervening variable is personal expectations. His formula is:

\[ \text{Self-esteem} = \frac{\text{Success}}{\text{Pretensions}}. \]

That is, increasing self-esteem results when success is improved relative to expectations. An interesting corollary to this equation is that expectations and self-esteem limit success:

\[ \text{Success} = \text{Pretensions} \times \text{Self-esteem}. \]

This equation states that success, especially the limits of one's success, can be improved by increasing expectations and/or self-esteem. Bednar, Wells, and Peterson (1989) define self-esteem “as a subjective and realistic self-approval”. They point out that “self-esteem reflects how the individual views and values the self at the most fundamental levels of psychological experiencing” and that different aspects of the self create a “profile of emotions associated with the various roles in which the person operates and (that self-esteem) is an enduring and affective sense of personal value based on accurate self-perceptions.” According to this definition, low self-esteem would be characterized by negative emotions.
associated with the various roles in which a person operates and by either low personal value or inaccurate self-perceptions. In an examination of developmental considerations, Bednar, Wells, and Peterson (1989) suggest that feelings of competence and self-esteem associated with them are enhanced in children when their parents provide an optimum mixture of acceptance, affection, rational limits and controls, and high expectations. In a similar way, teachers are likely to engender positive feelings when they provide such a combination of acceptance, limits, and meaningful and realistic expectations concerning behavior and effort (Lamborn et al., 1991). Similarly, teachers can provide contexts for such an optimum mixture of acceptance, limits, and meaningful effort in the course of project work as described by Katz and Chard (1989). The matter of what constitute appropriate criteria of self-esteem cannot be settled empirically by research or even theory. These criteria are deeply imbedded within a culture, promoted and safeguarded by the culture's religious, moral, and philosophical institutions. One’s self-concept sets limits on one’s behavioral possibilities in several ways. The first of these is that, by virtue of one’s self-assigned-status, one may appraise oneself as ineligible for many forms of valued life participation. When one considers certain commonly encountered, global, self-assigned statuses such as “unlovable,” “irrational,” “inadequate,” “incompetent,” “worthless,” or “inferior,” one can easily see that, by virtue of their ascription, persons have declared themselves ineligible for various forms of participation in life. To believe oneself “unlovable,” for example, is to appraise oneself as ineligible for the love of another person. To believe oneself “irrational” is to appraise oneself as ineligible to render logical, well-grounded judgments and decisions, a perceived ineligibility that is vast in its behavioral implications (Bergner 1998).
A second limitation imposed by a person's self-concept is captured well in the expression: “I could never do that and still be me.” Here, individuals are bound by self-concept in such a way that, being whom they take themselves to be the action in question is unthinkable as something they would or could do. In their minds, it would so violate who they are that, should they do it, they could no longer take themselves to be the same person, but would be forced to see themselves as a different (and usually distinctly lesser) person (Ossorio, 1976; Rogers, 1947). In general, this constraint serves as a force for social good insofar as for most people antisocial acts such as child abuse or murder are “unthinkable” or “something I just could never do.” However, at other times, this constraint proves debilitating in people's lives because crucially needed actions have become for them such unthinkable (e.g., leaving a destructive relationship, or defending their rights in an assertive and forceful manner).

A third and final type of limitation imposed by the self-concept is on what a person will take to be the case about the world. Essentially, persons will “read” the world in ways that are in keeping with their self-concepts. For them, this will be “just the way the world is.” To have a self-concept is, in the end, not just to have a certain appraisal of oneself—it is to live in a certain world.

The present account of the self-concept ties together a wide variety of observed empirical phenomena and regards the self-concept a single causal/explanatory source lying at the heart of a wide array of factors crucial to the quality of persons’ lives. Changes in it may therefore be expected to result in changes in these many factors and thus to have a profound impact on the overall quality of these lives.
In the 1940s, William Sheldon, an American psychologist proposed a theory about how there are certain body types ("somatotypes") that are associated with certain personality characteristics. Building on the previous work of Kretschmer, Sheldon’s five year study analyzed 200 young men both morphologically and temperamentally, measuring in addition to the primary components a number of apparently secondary temperamental characteristics. He discovered that there were three fundamental elements which, when combined together, made up all these physiques or somatotypes. With great effort and ingenuity he worked out ways to measure these three components and to express them numerically so that every human body could be described in terms of three numbers, and that two independent observers could arrive at very similar results in determining a person's body type. These basic elements he named endomorphy, mesomorphy and ectomorphy, for they seemed to derive from the three layers of the human embryo, the endoderm, the mesoderm and the ectoderm.

Endomorphy is centered on the abdomen, and the whole digestive system.

Mesomorphy is focused on the muscles and the circulatory system.

Ectomorphy is related to the brain and the nervous system.

Endomorphic Body Type: Soft body, underdeveloped muscles, rounds shaped, overdeveloped digestive system. Associated personality traits (viscerotonia): love of food, tolerant, evenness of emotions, love of comfort, sociable, good humored, relaxed, need for affection. Viscerotonia has a relatively long, heavy digestive tube, with large liver, and with other subsidiary organs of digestion showing increased size of
development. The life of a viscerotonic seems to be organized primarily to serve the gut.

Mesomorphic Body Type: Hard, muscular body, overly mature appearance, rectangular shaped, thick skin, upright posture. Associated personality traits (somatotonia): adventurous, desire for power and dominance, courageous, indifference to what others think or want, assertive, bold, zest for physical activity, competitive, love of risk and chance. Somatotonia is so named because the complex traits to which it refers is associated with functional and anatomical predominance of the somatic structures—the moving apart of the body frame. Activity of the voluntary muscles appears to be prepotent. Such a person seems to live primarily for muscular expression.

Ectomorphic Body Type: Thin, flat chest, delicate build, young appearance, tall, lightly muscled, stoop-shouldered, large brain. Associated personality traits (cerbrotonia): self-conscious, preference for privacy, introverted, inhibited, socially anxious, artistic, mentally intense emotionally restrained. The prepotent activity seems to be that of conscious attention, which involves an inhibition or "hushing" of other activities of the body.

There are many methods for investigating the somatotypes of adults and children. Among these, Heath and Carter Somatotype method is a comprehensive evaluation method. Using this method, 10 items of anthropometric indicators are selected and three factors which could be to represent relative content of body fat, growth degree of skeletal muscle and relative height and thinness of body (relative line degree), respectively are calculate. Due to the advantages of being easy and accurate, this method has been widely used for assessing the somatotype.
The technique of somatotyping is used to appraise body shape and composition. The somatotype is defined as the quantification of the present shape and composition of the human body. It is expressed in a three-number rating representing endomorphy, mesomorphy and ectomorphy components respectively, always in the same order. Endomorphy is the relative fatness, mesomorphy is the relative musculo-skeletal robustness, and ectomorphy is the relative linearity or slenderness of a physique. For example, a 3-5-2 rating is recorded in this manner and is read as three, five, and two. These numbers give the magnitude of each of the three components. Ratings on each component of $\frac{1}{2}$ to 2½ are considered low, 3 to 5 are moderate, 5½ to 7 are high, and 7½ and above are very high (Carter & Heath, 1990). The rating is phenotypical, based on the concept of geometrical size-dissociation and applicable to both genders from childhood to old age. The Heath-Carter method of somatotyping is the most commonly used today. There are three ways of obtaining the somatotype.

1. The anthropometric method, in which anthropometry is used to estimate the criterion somatotype.

2. The photoscopic method, in which ratings are made from a standardized photograph.

3. The anthropometric plus photoscopic method, which combines anthropometry and ratings from a photograph - it is the criterion method.

Because most people do not get the opportunity to become criterion raters using photographs, the anthropometric method has proven to be the most useful for a wide variety of applications, should take triplicate measurements and use the median value.
Sensation seeking is an interesting personality trait that has its effect on several spheres of our lives. It affects what activities we prefer, what sports or occupations we choose. Personality traits are underlying characteristics of an individual that are relatively stable over time, and explain regularities in people's behaviors. When thinking about people you know well, you will naturally have noticed how they differ, and our everyday language is full of ways of describing and comparing people. People may be outgoing or unsociable, shy or confident, friendly or rude, and so on. People instinctively observe that persons react differently to the same situations, and these differences are caused by natural variations in personality traits. Many studies involving sensation seeking have been conducted across a variety of anti-social risk-taking behaviors, such as drug use and unsafe sexual practices, as well as more socially acceptable forms of risk-taking behaviors (Zerevski et al., 1998) such as engaging in extreme sports (Donohew, Zimmerman Cupp, Novak, Colon & Abell, 2000; Kerr, 1991; Zuckerman, 1994). The sensation-seeking scale (Zuckerman, 1978; 1994) was initially developed in the late 1960’s to help researchers identify the sensation-seeking personality type of trait. Originally, it was found that higher levels of sensation-seeking correlated with Psychopathic Deviance and Hypomania scales from the (MMPI) Minnesota Multiphasic Personality Inventory (Zuckerman and Link, 1968), and thus high sensation seekers were viewed as “deviant and somewhat anti-social, excitable, and overactive” members of society (1968. P.420). However, further research and refinements to the SSS have demonstrated that the scale can be useful in helping researchers to understand those who engage in more socially acceptable forms of sensation seeking (e.g Slanger & Rudestam, 1997) as well as more socially unacceptable, or anti-social, Sensation seekers (e.g., sexual risk-
takers; Donohew et al., 2000; Levenson 1990). The scale as well as related work, provided more of a psychological, rather than biological, understanding of why individuals engage in high sensation seeking activities. Many studies have found that high scores on measures of sensation seeking are related to engaging in risky sports (e.g. sky divers, autoracers, hang-gliders; Hymbaush & Garrett, 1974, Straub, 1982). In this context, Zaleski (1984) has found high-risk takers (men who engage in high risk sports such as car racing, mountain climbers, parachutists, and glider pilots) to score significantly higher (d=1.33 for TAS, d=.36 for ES, d=1.30 for Dis, and d=.36 for ES) on the SSS than control group participants (randomly selected men who matched the high-risk takers on age only). Cronin (1991) found that mountain climbers scored significantly high on the total sensation seeking scale of the SSS as well as the Experience Seeking (ES) and the Thrill and Adventure Seeking (TAS) sub-scales, than control condition consisted of psychology participant pool volunteers and the mountain climbers (the High-risk group) were solicited to participate through an Alpine Club the two samples were remarkably similar with regards to age and gender split. Wagner and Houlihan (1994) found that glider pilots scored significantly higher than golfers on all sub scales and the tool SSS. While some research such as some of preceding studies have used control conditions which are comprised of randomly selected participants, other studies have used low-risk extreme sports participants as the control participants. Slanger and Rudestam (1997) administrated Zuckerman’s SSS among a population of extreme-risk sports participants (e.g. rock climbers) as well as participants who engage in high and medium-risk sports (e.g. skiing and gym members respectively), and found that extreme and high-risk sports participants scored significantly higher on overall sensation
seeking than medium-risk sports participants (d=.86 for the total scale). Potgieter and Bischoff (1990) found that rugby players scored significantly higher on the total SSS as well as on the Thrill and Adventure seeking (TAS) sub-scales than the control condition of marathon runners.

Moreover, high sensation-seekers were found to not only be more likely to engage in high risk sports, but also to be more likely to engage in high risk sports, than low sensation seekers (Zuckerman, 1994). In addition, some research (Zuckerman, 1984) has suggested that level of sensation seeking may be related to how much preventable risk a sports participants chooses to engage in. For example, perhaps individuals who do not wear a helmet and life-jacket while white water rafting will demonstrate higher levels of sensation seeking than individuals who do wear a helmet and life-jacket while rafting. Additionally, some research (Freixanet, 1991) has proposed that individuals scoring high on sensation seeking appraise dangerous activities as less risky than those who score lower on sensation-seeking.

Despite the dramatic increase in participation in extreme sports and the level of danger one is exposed to when engaging in these activities, there are many other “high-risk” activities which sensation seeking people may engage in that are far more dangerous and much less socially (Levenson, 1990). Every year, over 418,000 cigarette smoking-related deaths occur in United States (Centre for Disease Control, 2001). Sensation seeking has been significantly linked to smoking behaviours, such that individuals with higher levels of sensation seeking are more likely to smoke than individuals with lower levels of sensation seeking (Zuckerman, Ball, & Black 1990). It is estimated that HIV, a disease which is contracted primarily through risky sexual and unsafe drug
practices, claimed over 3 million lives worldwide in 2001 (CDC 2002). Among populations of teens and college-aged students, strong associations between high levels of sensation seeking and sexual risk-taking behaviours have been found (Donohew et al., 2000; Sheer & Cline, 1995; Zuckerman 1994). In addition self-reported anti-social behaviours (such as hitting and shoplifting) among a group of children was significantly correlated with sensation seeking—higher numbers of anti-social behaviours were found among children with higher levels of sensation seeking (Kafri, 1982).

Zuckerman and Neeb (1980) administrated a self-report questionnaire to a group of licensed automobile drivers and non-drivers and found a linear relationship between sensation-seeking and self-reported speeding behaviours for both male and female drivers. Moreover, they found that young males between the ages of 16 and 20 demonstrated the highest level of overall sensation seeking compared to all other participants. Not coincidentally, this same group of young males reported the highest amount of speeding. Non-drivers and those who drive under or within the speed limit demonstrated the lowest scores on the SSS. Additional research has also demonstrated that risk seekers are disproportionately male with strong sensation seeking tendencies (Witte & Donohue, 2000) and young, with the highest incidence of high-risk activities among individuals in their twenties (Arnett, 1998). A study of Zelesky (1984) showed that participants scoring higher on the SSS were also significantly more likely to take high risks in their business decisions and in their sports participation than those scoring low on the SSS. A study examining problem gamblers and problem substance users (Vitaro, Ferland, Jaxcques, & Ladouceur, 1998) found a high degree of comorbidity between the two high-risk behaviours; individuals who
gambled more also used more substances, and the opposite was also found to be true.

Study results (Gundersheim, 1987) indicate that some activities may have stronger relationships with certain sub-scales of the SSS than other activities.

Specifically, male college baseball players scored significantly lower on the Thrill and Adventure Seeking (TAS) sub-scale than male college wrestlers and lacrosse players, despite the fact that there were no significant differences in overall sensation seeking between the three types of sports participants (Gundersheim, 1987). And as mentioned earlier, Potgieter and Bischoff (1990) found that rugby players scored significantly higher than marathon runners on overall sensation seeking and the Thrill and Adventure seeking sub-scale, but not on any of the other sub-scales. Other research (Cronin, 1991) has shown that mountain climbers score higher on the score SSS, the ES sub-scale, and the TAS sub-scales than control participants. These studies indicate that not only can overall sensation seeking distinguish between individuals who engage in different types of activities, but also that different sub-scale can distinguish between individuals who engage in diverse types of activities such as extreme sports, where as the ES, sub-scale is more related to activities such as drug and alcohol use and abuse.

Zuckerman (1971) proposes that there are four sub-dimensions to the sensation-seeking trait:

1. Thrill and Adventure Seeking: Which relates to the willingness to take physical risks and participate in high-risk sports.
2. Experience Seeking: Which relates to the need for new and exciting experiences and associated with all types of risk taking.
3. Disinhibition: Which relates to a willingness to take social risks and engage in health risk behaviours.

4. Boredom Susceptibility: This relates to intolerance of monotony.

Theories of Sensation Seeking

1. Optimal Level of Arousal

   Optimal level of arousal theory discussed says that there is an optimal level of stimulation that is best for performance and that is desirable. People seek out situations and activities that will lead to and maintain this optimal level. Most theorists equated level of arousal with activity of the brain stem reticular activating system (Lindsley, 1951; Hebb, 1955). One of the great-perceived advantages of this line of thought was that it accounted for why people seek increases as well as decreases in stimulation. Tension reduction theories, including Hull’s drive theory, seemed only to account for why organisms seek lower levels of drive or stimulation.

   Individual differences in sensation seeking would be explained in terms of different people need different levels of stimulation to achieve an optimal level of arousal. For some people, the optimal level of arousal is achieved with relatively low levels of stimulation. It is easy for these people to be over stimulated, leading them to seek a less stimulating situation and to avoid highly stimulating situations. For other people, it takes a great deal of stimulation to reach the optimal level of arousal. Therefore, such people actively search out exciting situation that, for them, produce only a moderate level of arousal and they avoid boring situations. Thus, the same situation that is too exciting for one person may be too boring for another and just right for a third.
The problem with optimal level of arousal theory (Zuckerman, 1994) is that the predicted differences in arousal between high and low sensation seekers are not always found. For example, measure of EEG or skin conductance has shown that high sensation seekers react more strongly to stimulation than do low sensation seekers, just opposite of what the theory predicts. Also high sensation seekers show greater use of stimulant drugs, as predicted, but they also show greater use of depressant drugs a result that runs counter to the theory.

2. Monoamine Oxidase Theory

The monoamines are a class of neurotransmitters that include noradrenalin, dopamine and serotonin. The first two of these are associated with pleasure and excitement and serotonin is a neural inhibitor. Monoamine oxidase (MAO) breaks down the monoamines in the synapse or upon reuptake into the neuron from which the neurotransmitter was released. This process keeps the transmitter cumulating in the synapse and continuing to act after the neuron has stopped firing. However, the gonadal hormones in males are related to sensation seeking also reduce the level of MAO, which allows greater activity in the monoamine system regulated by MAO. Thus there would be greater activity in the dopamine reward systems (Zuckerman, 1994). The level of MAO is in large part genetically determined. So, says the theory, there are heritable individual differences in the degree to which our dopamine reward system is aroused by stimulation. Activation of the reward system may also inhibit activity in the punishment system, suggesting that there is interplay between relative levels of arousal in reward and punishment system that is crucial for sensation seeking.
High sensation seekers have low levels of MAO. High sensation seekers are more orienting in their behaviour, react with faster adaptation to new situations, feel stimulation less intense and seem to have stronger pleasurable reactions to stimulation.

A wide variety of theories that include arousal, sensation seeking and self-efficacy have attempted to scientifically explain the tendencies for people to participate in sports and extreme sports (Skinner, 1992). It is clear from available literature that sensation seeking is an integral part of sport psychology and more intensive research is needed in this area to clarify all the scientific constructs that are associated with the fascinating phenomenon of sensation seeking. On an average, men tend to be higher in sensation seeking than women and sensation seeking tends to decline with age. This goes some way to explain why many people who take potentially fatal risk are young men. However, it should be remembered that many women are high sensation seekers and increasing number of women participate in high-risk sports, take health risk such as smoking and binge drinking.

Performing to the best of abilities has become more relevant in today’s sports, because of the extensive media exposure. Sports are at the peak of their popularity throughout the world, cutting across the barriers of richness or poverty, nationality, race or religion. In order to sustain the tremendous expectation of the fans and also to maintain a high ranking in the international arena, it is important to perform well. Self confidence, strong resolves, humility to except defeat and experience are the best tools to counter the effects of anxiety. Anxiety is not a disease that a sports person can get rid of once and for all. It has to be used as a booster to improve performance, to achieve sporting glory.
Anxiety can be classified in two ways: trait anxiety and state anxiety. State anxiety is situational stress induced by situations in the game. A sports person’s autonomic nervous system is aroused in this state which is the natural reaction of any individual. On the other hand, trait anxiety can be thought of as a world view that an individual uses when coping with stress. In sports, individuals who are state anxious and low on the trait anxiety in tough situations, often deliver good performances concisely. Whereas, athletes who have higher levels of trait anxiety, added with the state anxiety, tend to perform below expectations.

The ability to deal with anxiety an integral part of sports training. People, who are able to overcome their anxiety, perform much better than some of the strongest contenders of the game. Sports bring out the best qualities in every individual. Every faculty of the human body, whether physical or mental, is stretched to its limits playing a competitive game. In today’s world, the standard of all games has increased considerably. Elite sport persons are finding it increasingly difficult to sustain their dominance in their respective sports. The mental state of a sports person plays a vital role in his or her performance. Anxiety sets in when an individual begins to doubt his or her capacity to deal with the situation which builds stress. Quite often it is not the talent that decides your performance; it simply depends on the way you deal with the ups and downs of the game.

There is always a pre-defined region of anxiety in sports persons, before the start of any game, bout or event. When this anxiety is at the optimum level, it can lead to a significantly better performance. If the level exceeds or falls below this region of anxiety, it can adversely affect the performance. Competitive anxiety has been defined as the tendency
to perceive competition situations with feeling of apprehension or tension. It is a natural phenomenon. No human being is free from fear and anxiety. It is usual to observe an athlete who either is unable to act because of fear. The ‘Word’ here refers to a rational appraisal of a real threatening situation and denotes an abnormal apprehension of such a situation. The well trained sport person is less affected by emotionally arousing stimuli as compared to an average athlete. During competition, the sports person is by and large fearful to some degree which eventually affects their sports performance.

Competitive anxiety is a negative emotion state that is generated when a person feels unable to cope with competitive demands. This subjective perception of failure resulting loss of self concept. The increase mental stress of sports competition can cause player to react both psychologically and physiologically in a manner that can negatively affect their sports performance. They may become tense, faster heart beat, cold sweat; they worry about their performance in their competition and they find it hard to concentrate on their events/games. Such situation clearly indicates towards anxiety, which is often faced by the players during the competitions. Anxiety is produced by the fear of failure in a competition. Sport persons are not only afraid of losing the contest or scoring less point than usual, but not performing as well as they have expected to. Psychologically, anxiety is a very important phenomenon. Different Psychologists expressed their views about anxiety in different ways.

Freud (1936) says “anxiety is something felt, unpleasant effect of state or condition.” This state is characterized by all that is covered by the word nervous apprehension or anxious expectation and different discharge phenomena.
Spielberger (1966) has tried to differentiate between state and trait anxiety. According to him, state anxiety refers to the ever changing mood component and is defined as an emotional state, characterized by subjective, consciously perceived feeling of apprehension and tension accompanied by or associated within activation or arousal of the autonomic nervous system. On the other hand, trait anxiety is a part of the personality an acquired behavioral tendency or deposition that influences behavior. In particular, trait anxiety is a motive or acquired behavior disposition that predisposes an individual to perceive wide range objectivity during non-dangerous circumstances as threatening, and to respond to these with state anxiety reactions disproportionate in intensity and magnitude of the objective danger. He has also proposed that trait anxiety scores reflects predisposition to respond with heightened state anxiety to situations involving the possibility of failure or loss of self concept, and not to situation involving harm or the threat of harm.

Spielberger (1966) postulates that anxiety is a feeling that exists in people nature. It occurs under irritating conditions. Excess anxiety may result from abnormal functions of the body. Everybody feels different; anxiety and physiological properties play very important role in this situation.

Levitt (1967) concludes that in athletics performance nearly every concern of human endeavor is thought to be affected somehow by anxiety.

Frost (1971) opined anxiety is uneasiness and feeling of foreboding when a person is about to embark on a hazardous venture, it is often accompanied by strong desire to excel.
Chapter-I: Introduction

Link (1993) concludes anxiety starts gradually and increases step by step. In case it is not controlled, it rises and irritates the people. The main reasons of anxiety are business travel, smoking, alcohol, overweight, failure, inappropriate physical appearance. Anxiety indication may be bone pains, being tired, headache, nervous, poor sleeping, forgetting, hesitations, hypochondriacs etc.

Scanlan and Passer (1978) suggest that anxiety can be experienced at any point during the competition process that a person perceives, including: Prior the competition if the person anticipates an inadequate performance. During competition if the person perceives the ongoing performance to be inadequate, and therefore anticipates future failure.

Terry et al. (1995) reviewed anxiety in sports literature and found that anxiety is a multi-dimensional construct which includes both somatic and cognitive components; cognitive anxiety has an inverse relation with performance such that an increase in irrational thoughts related to anxiety will decrease performance whereas somatic anxiety has an inverted U relationship with performance such that an optimal level of anxiety improves performance whereas too much anxiety will decrease performance.

Taylor (1996) emphasizes the importance of conceptualizing anxiety as intensity because competitors may misunderstand the terms anxiety, nervousness, or arousal. Accordingly, problems can be created for sports persons by both over intensity and under intensity; therefore each sports persons needs to develop the ability to find and maintain prime intensity level that is most optimal to performance.
Therefore, it is summarized from above discussions and definitions that anxiety before or during competitions can hinder one’s performance. The coordinated movement required by athletic events becomes increasingly difficult when one’s body is in a tense state. A certain level of physical arousal is helpful and prepares us for competition. But when the physical symptoms of anxiety are too high, they may seriously interfere with athlete’s ability to compete. Similarly, a certain amount of worry about how one can perform will be helpful in competition. But severe cognitive symptoms of anxiety are too high, they may seriously interfere with athlete’s ability to compete. Similarly, a certain amount of worry about how one can perform will be helpful in competition, but severe cognitive symptoms of anxiety such as negative thought patterns and expectations of failure can bring about a self-failing prediction. If there is a substantial difference between how one performs during practice and how an individual performs during competitions anxiety may be affecting their performance.

**Statement of the Problem:**

The present study will focus on the selected psychological and anthropometrical parameters i.e. Self-concept, Somatotypes, Sensation Seeking and Anxiety State of Body builders and Weight lifters; it may also help to find the differences and relationship between Body builders and Weight lifters. Therefore, the present empirical investigation has been entitled as “The Relationship among Self-Concept, Somatotypes and Sensation Seeking Anxiety State in Body Builders and Weight Lifters.”
Objectives of the Study:

The main objectives of the study are given below:-

1) To determine differences between body builders and weight lifters on physical self-concept.

2) To determine differences between body builders and weight lifters on sports competence.

3) To determine differences between body builders and weight lifters on body attractiveness.

4) To determine differences between body builders and weight lifters on physical condition.

5) To determine differences between body builders and weight lifters on physical strength.

6) To determine differences between body builders and weight lifters on physical self-worth.

7) To determine differences between body builders and weight lifters on sensation seeking.

8) To determine differences between body builders and weight lifters on anxiety state.

9) To determine the category of somatotypes among body builders and weight lifters.

10) To find out the relationship of self-concept of body builders and weight lifters.

11) To find out the relationship of sports competence of body builders and weight lifters.
12) To find out the relationship of body attractiveness of body builders and weight lifters.
13) To find out the relationship of physical condition of body builders and weight lifters.
14) To find out the relationship of physical strength of body builders and weight lifters.
15) To find out the relationship of physical self-worth of body builders and weight lifters.
16) To find out the relationship of sensation seeking of body builders and weight lifters.
17) To find out the relationship of anxiety state of body builders and weight lifters.
18) To find out the relationship of somatotype of body builders and weight lifters.
19) To find out the relationship of endomorphy of body builders and weight lifters.
20) To find out the relationship of mesomorphy of body builders and weight lifters.
21) To find out the relationship of ectomorphy of body builders and weight lifters.
**Purpose of the Study:**

The purpose of this study was to explore the relationships among self-concept, somatotype and sensation-seeking anxiety state in body builders and weight lifters. Physical self-concept will be assessed along five categories: (1) Perceived sport competence, (2) Body attractiveness, (3) Physical conditioning, (4) Physical strength and (5) Global perception of overall physical self-worth.

Somatotypes of body builders and weightlifters would be expressed in a three number rating representing endomorphy, mesomorphy and ectomorphy, using anthropometric measurements.

The current study would be made to use the theory of physical self-concept to examine the possibility that the proposed links would be affected by the type of sport in which athletes participate. Therefore, the invariance of the model will be examined in body builders and weight lifters.

**Significance of the study:**

Sports performance is considered by product of total personality of an athlete. Sports scientists have been trying to prove their supremacy to stress upon the significance of their respective domain on one another. Sports scientists have contended that within the limitation the performance of an athlete ultimately depend upon his physiological and psychological functioning. The present study may be considered significant in the following manner:

(i) The result of the study would provide the criteria for the selection of talented players in body building and weight lifting.
(ii) The study would help physical education teachers and coaches to solve the psychological problems of body builders and weight lifters.

(iii) The study may help physical education teachers and coaches to develop systematic and scientific training programme.

(iv) The present study would help physical education teacher and coaches for the selection of team of both discipline based on anthropometric and psychological variables.

(v) The study would also help and guide the research scholars to undertake similar studies in different games and sports so that the best criteria for selection of players may be constructed for better performance.

(vi) Sports scientists would benefit from such inquiry in that efforts to prepare performers for competition.

(vii) Counseling of athlete (body builders and weight lifters) would be much easier especially during their disappointing phase.

(viii) The outcome of present investigation would also benefit the coaches, trainings, and athlete themselves to formulate and ideal training programme for attainment of peak performance, taking into account the relationships of proposed psycho-physiological variables.

(ix) Body building and Weight lifting are the interesting sports and both have been part of Physical Education. These are the sports in which individual’s psychological and anthropometrical makeup play a significant factor to compete successfully especially at elite level.
When the researcher went through the literature he observed different studies are conducted on body builders and weight lifters but none of researchers tried to study the relationship among psychological variables and somatotypes. For this the researcher had chosen the study with the following hypotheses.

**Hypotheses of the study:**

**H$_1$:** Body builders would report higher level of self-concept as compared to the weight lifters.

**H$_2$:** Body builders would report higher level of the five domains of physical self-concept as compared to the weight lifters.

**H$_3$:** Body builders would report higher level of sensation-seeking as compared to the weight lifters.

**H$_4$:** Body builders would report higher level of anxiety state as compared to the weight lifters.

**H$_5$:** Body builders would show greater somatotype than weight-lifters.

**H$_6$:** The five domains of physical self-concept would be negatively correlated with somatotypes among body builders.

**H$_7$:** The five domains of physical self-concept would be negatively correlated with sensation-seeking among body builders.

**H$_8$:** The five domains of physical self-concept would be negatively correlated with anxiety state level among body builders.

**H$_9$:** There would be positive correlation between somatotypes and sensation seeking among body builders.

**H$_{10}$:** There would be positive correlation between somatotypes and anxiety state level among body builders.
Limitations of the study:

The life style, habits, heredity, study habits, nutritional intake, intrinsic motivation and psychological traits of subjects are beyond the control of researcher. Non-availability of sophisticated instruments and tests were accepted as limitation of the study.

Delimitations of the study:

The study was delimited to:

1) The study was delimited to the age group of 18-25 years.

2) The study was delimited to subjects selected from All India Best Physique and Weight Lifting Intervarsity Competition and similar state and national tournaments.

3) The study was delimited to the selected anthropometric variables as linear measurements, girth measurement, diameter and skinfold measurement.

4) The study was further delimited three psychological variables i.e. self-concept, sensation seeking and anxiety.

5) The study was confined to 250 male (125) body builders and (125) weight lifters randomly selected.

Definition of the terms:

Self-concept

Self-concept is self awareness which a person acquires not only from his/her birth but also is the outcome of his interaction with the environment and social surroundings.
Physical self-concept

Physical self-concept (PSC) is a person’s perceptions of himself formed thorough experience with and interpretations of his environment related to his physical domain (Shavelson, Hubner, and Stanton, 1976).

Self-Esteem

Self-esteem defined as how much a person likes, accepts and respects himself or herself overall as a person (Harter, 1990).

Competitive Trait Anxiety (CTA)

CTA is defined as a tendency to perceive competitive situations as threatening and to respond to these situation with state anxiety, or the subjective consciously perceived feeling of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system (Spielberger, 1966).

Sensation

The information is received through our sensory system. This input of information or stimuli through sense organs is known as sensation or sensory system includes 5 sensory modalities i.e., visual (eyes), auditory (ears), olfactory (nose), gustatory (tongue) and tactile (touch by skin).

The sensory input is the root of all cognitive processes, any defect in the sensory organ may lead to disturbances in the information processing.

Sensation seeker, conceived of as a person who continually searches for noval experiences in order to reach optimal levels arousal.
Anxiety

Anxiety may be defined as subjective feeling of apprehension and physiological arousal.

Anxiety consists of (a) state anxiety (situational) and (b) Trait anxiety (personality disposition).

(a) Cognitive state anxiety: is an emotional state characterized by apprehension, fears and tension accompanied by physiological arousal. It is situational.

(b) Somatic state anxiety: is a bodily related dimension of state anxiety.

Somatotype

The somatotype is defined as the quantification of the present shape and composition of the human body. It is expressed in a three number rating representing endomorphy, mesomorphy and ectomorphy components respectively.

Thrill and Adventure Seeking

Which relates to the willingness to take physical risks and participate in high-risk sports.

Experience Seeking

Which relates to the need for new and exciting experiences and associated with all types of risk taking.

Disinhibition

Which relates to a willingness to take social risks and engage in health risk behaviours.

Boredom Susceptibility

This relates to intolerance of monotony.