CHAPTER-1
INTRODUCTION

"Not in the shouts and plaudits of the throng,
But in ourselves, are triumph and defeat"

The concept of sports and physical activities has undergone tremendous transformation along with the progression of human civilization. From being considered as sheer wastage of time, it has evolved as a life span involvement. The world of sports has witnessed social banishment as well as social acceptance. From being mere physical effort it has emerged as a multi-dimensional concept. The sports world is no more interested in physical prowess alone, but has began to explore the implications of cognitive and psychological aspects of human personality for extending the physical limits. Sports performance is being considered as a psycho-biosocial product. It is becoming more and more significant to identify and utilize the psychological factors that are of paramount importance in sport settings, specially those related to sports performance.

Although cognitive psychologists today often engage in theorizing the computation modeling, their primary method is experimentation with human participants. Psychologists have experimentally examined the kinds of mistakes people make in deductive reasoning, the ways that people form and apply concepts, the speed of people thinking with mental imprints and the performance of people solving problems using analogies. How the mind work must be based on more than "common sense" and introspection, since these can give a misleading picture of mental operations, many of which are not consciously accessible. Cognitive science is becoming increasingly aware of the need to view the operations of mind in particular physical and social environments. Cognitive theorists have proposed that the mind contains such mental representations as logical propositions, rules, concepts, images, and analogies, and that it uses mental procedures such as deductions, search, matching, rotating and retrieval.

It is well recognized by now that along with socio-psychological factor, cognitive factors too make a vital difference in sports performance. Infact, cognitive factors have a very high correlation with performance of an athlete, as these factors
style to denote consistencies in individual modes of functioning in a variety of behavioural situations.

Therefore, it is proper to mention here that cognitive style is conceived as one of the aspects of psychological differentiation. Psychological differentiation refers to differentiate mode of perceiving, judging and appraising thinks to which people are exposed to under different conditions. The notion of cognitive style has been defined as self-evident modes of functioning which the individual shows in his perceptual and intellectual activities (Witkin, et al, 1962). It is conceptualized as stable attitude or habitual strategy which determines a person's typical modes of perceiving, remembering and problem-solving. There are several types of cognitive functioning among which field dependence and field independence are well known. A field dependent individual is found to be passive and less competent in analytical functioning having greater social orientation. He has poor impulsive control and undifferentiated self-concept. He is more socially sensitive. On the other hand, a field independent individual is found to be more active and competent in analytical functioning having less social orientation. He is less impulsive and socially sensitive.

There are many different definitions of cognitive style. Tennant (1988) defined cognitive styles as "an individual's characteristic and consistent approach to organizing and processing information". Riding, Glass, and Douglas (1993) termed cognitive styles as "a fairly fixed characteristic of an individual" and "are static and are relatively in-built features of the individual". Based on the above definitions, it can be contented that cognitive/learning styles refer to the individual's consistent and characteristic predispositions of perceiving, remembering, organizing, processing, thinking, and problem solving.

Different researchers emphasize different aspects of cognitive styles. Therefore, there are various terms encountered in the literature related to this area. These terms include: breadth of categorizing (Kogan & Wallach, 1964), cognitive complexity vs. cognitive simplicity (Kelly, 1955), deep-elaborative vs. shallow-reiterative (Schmack, 1983), divergent vs. convergent (Hudson, 1966), field dependence vs. field independence (Witkin, 1962), global vs. analytical (Kirby, 1988), impulsive vs. reflectivity (Kagan, 1965), leveller vs. sharpener (Holzman & Klein, 1954), need for cognition (Tanaka, Panter, and Winborne, 1986-87), objective
vs. nonobjective (Leithwood & Montgomery, 1982), organizer vs. nonorganizer (Atman, 1988), right- vs. left-brained (Torrance & Rockenstein, 1988), risk-taking vs. cautiousness (Kogan & Wallach, 1964, Kogan, 1971), scanning vs. focusing (Gardner, 1961), sensitizers vs. repressors (Bergouist, Lloyd, & Johansson, 1973), sensory modality preferences (Bartlett, 1932; Galton, 1883), simultaneous vs. successive (Das, 1988), verbalizer vs. imager (Riding & Taylor, 1976), verbalizer vs. visualizer (Richardson, 1977), visual vs. haptic perceptual type (Lewenfeld, 1945); holist vs. analytic (Peters, 1977), holist-analytic vs. verbal-imagery (Riding & Cheema, 1991), holist vs. serialist (Pask, 1972), Kolb’s learning style model (Kolb, 1984), as well as the MBTI learning style model (Lawrence, 1984).

In most situations, the terms cognitive styles and learning styles are used interchangeably. Considerable confusion appears in the literature concerning the terms cognitive style and learning style. Generally, cognitive styles are more related to theoretical or academic research, while learning styles are more related to practical applications. A major difference between these two terms is the number of style elements involved. Specifically, cognitive styles are more related to a bipolar dimension while learning styles are not necessarily either/or extremes. Cognitive/learning styles measures conventionally lie somewhere between aptitude measures and personality measures. In addition, cognitive/learning styles in the literature have been viewed in three major respects—structure, process, or both structure and process (Riding & Cheema, 1991), Squires (1981) notes that learning style has been used as a description for the cognitive process of thinking, perceiving, and remembering. McClusky (1986) states that most definitions of learning style as well as cognitive style, illustrate variations in individual information processing and that no single definition for learning style or cognitive style has been identified. Descriptions of cognitive style, notes McClusky, include: a consistent pattern of behavior within a range of individual variability, a student’s interest and consistent way of responding to and using stimuli in a learning environment, how individuals process information and prefer to learn, the way individuals organize information and experiences, a person’s characteristic style of acquiring and using information, and; an expression of psychological differentiation within characteristic modes of information processing (Witkin & Goodenough, 1977).
interpersonal matters. They tend to choose to specialize in physical sciences. (2) 
Diverger: The divergent learning style has the opposite learning advantages over converger. This style depends mainly on concrete experience and reflective observation; it has great advantages in imaginative abilities and awareness of meaning and values. Therefore, persons with this style tend to organize concrete situations from different perspectives and to structure their relationships into a meaningful whole; they focus on adaptation by observation instead of by action; they are superior in generating alternative hypothesis and ideas, and tend to be imaginative, people- or feeling-oriented; they tend to choose to specialize in liberal arts and humanities. (3) Assimilator: The assimilative learning style depends mainly on abstract conceptualization and reflective observation. This style has great advantages in inductive reasoning, creating theoretical models, and assimilating different observations into an integrative entity. Similar to converger, persons with this style tend to be more concerned about abstract concepts and ideas, and less concerned about people. However, persons with this style tend to focus more on the logical soundness and preciseness of the ideas, rather than their practical values; they tend to choose to work in research and planning units. (4) Accommodator: The accommodative learning style has the opposite learning advantages over assimilation. This style depends mainly on active experimentation and concrete experience; it has great advantages in doing things, implementing plans, and engaging in new tasks. Therefore, persons with this style focus on risk taking, opportunity seeking, and action; they tend to be superior in adapting themselves to changing immediate situations in which the plan or theory does not fit the facts; they also tend to intuitively solve problems in a trial-and-error manner, depending mainly on other people for information rather than on their own thinking. Therefore, persons with this style tend to deal with people easily; they tend to specialize in action-oriented jobs, such as marketing and sales.

According to Kolb (1984), the earlier patterns connected with these four basic learning styles are exhibited consistently at various levels of behavior, from personality type to some specific task-oriented skills and performance, such as professional career and current job role. Kolb's model was also empirically supported by other studies. According to Trevino and others (1990), Kolb's above CE and AC are similar to the perceptive vs. judging dimension measured by Myers Briggs Type Indicator (MBTI). The perceptive persons are expected to prefer rich media, such as
the integrative use of pictures, tables, and diagrams, while the judging persons are expected to prefer lean media, such as without the integrative use of pictures, tables, and diagrams.

Brodzinsky (1985) states that cognitive style deals with the way in which learner's process information in the process of learning. Have a particular style does not mean that one cannot process information in other ways, e.g. reflectively rather than impulsively, but the predominance of processing will follow the preferred pattern. According to Keefe (1988), at a deep level cognitive styles control the individual's information processing system. The cognitive style controls are influenced by the affective and environmental components that the learner brings to the learning system.

Learning styles are cognitive styles applied to the way one goes about learning something. Therefore the use of simultaneous and successive processing make sense even though others deal with them as ability variables. Simultaneous processing describes the ability to deal globally with two or more pieces of cognitive or perceptual information. Successive processing deals with the ability to handle a series of pieces of information like links in a chain.

Dimensions of Cognitive Style

Theories of cognitive styles were developed as a result of early studies conducted by Witkin, et. al (1954; 1962). These studies resulted in theories that generally assumed a single dimension of cognitive style with two extremes. The two extremes were described in general terms by Keen (1973); Mikenney & Keen (1974) and Botkin (1974) as ; Systematic Style and Intuitive Style. The systematic style is associated with logical, rational behavior that uses a step by step, sequential approach to thinking, learning, problem-solving and decision making. In contrast the intuitive style is associated with a spontaneous holistic and visual approach. These two styles however did not reflect the entire spectrum of people's behavior with regard to thinking, learning and especially problem solving and decision making. Therefore, a multi-dimensional model intended to reflect the entire spectrum was postulated (Martin, 1983). This model consisted of two continuum: i.e. (1) High systematic to low systematic and (2) High intuitive to low intuitive. Ongoing observational studies, along with effects to develop measurement devices for
relates to "handedness" (Entwistle 1988). While the specialization of functions is relative rather than absolute and, in normal functioning, the two halves cooperate very closely to produce a unity, he very aptly argues that a perfect balance of strength only exists in about fifteen per cent of normal people: in all other cases, hemisphere strengths are unbalanced.

What are the implications, then, of cognitive style for the development and use of learning strategies? As mentioned above, the construct FD-FI has over the years become very broad and encompasses not only cognitive and meta-cognitive elements but also the socio-affective side of the learner. Here one can refer to a more limited version of the FD-FI dichotomy which was developed with special reference to education and which according to Lovell (1980) has special significance for an individual's choice of learning strategies although Lovell himself gives no examples. This is Pask's (1972) distinction between serialist and holist styles of learning.

A holist style involves a preference for setting the task in the broadest possible perspective and gaining an overview of the area of study so that the details are contextualized (Entwistle 1988). This has implications for metacognitive strategies such as previewing, organizational planning and directed and selective attention. Previewing will tend to come naturally but may be rather indiscriminate. It is perhaps more difficult for holistic to extract the organizing principle from a text without explicit cues. Holists may have more difficulty in attending to task or deciding what is essential in the early stages. On writing task, they are more likely to discover what they want to say through a global strategy of drafting and redrafting rather than filling in an initial outline, and their approach tends to be "idiosyncratic and personalised" (Entwistle 1988). They may have difficulty with evaluating form.

In contrast, a serialist style is described by Pask (1972) as step-by-step learning. The focus is narrow, with the student concentrating on each step of the argument in order and in isolation. Serialists approach the study of new material by stringing a sequence of cognitive structures together and thus tend to be very intolerant of redundant information because of the extra burden it places on memory (Lovell 1980). They are likely to use planning and selective attention strategies too early in an attempt to limit the amount of information they have to deal with. On
writing tasks, they may need to make a considerable effort to "brainstorm" for new ways of approaching a subject and are likely to have difficulty in evaluating content, which "tends to be carefully structured and clearly presented, but may be dull and humourless" (Entwistle 1988) and "lacking in personal interpretation or independent conclusions".

Unlike holists, serialists are good at noticing even trivial differences but are poor at noticing similarities. Thus they may need to use elaboration strategies that emphasise relating different parts of new information to each other as well as relating information to personal experience. A caveat must be added here. As with the FI/FD dimension of which the serialist-holist forms a part, few people are totally serialist or holist in their approach. Pask (1972) found some students who were versatile: they were equally comfortable with either style and could use both as appropriate. Other students, however, showed a marked over-reliance on one or other of these styles which gave rise to characteristic pathologies of learning. It is these individuals who are likely to prove the most impervious to strategy training.

Finally, there is the question of how cognitive style relates to cultural background. Witkin (1975) himself identified field independence with a higher and more advanced degree of autonomy and individualization. Subsequent research on cultural differences has shown that in "loose" migratory; hunter-gatherer societies in which the individual typically works alone and depends upon a high degree of perceptual discrimination and autonomous decision-making, field-independence is favoured. But in more stable, sedentary or stratified societies (usually agrarian) with "tight" family and social networks, relative field dependence seems to be the norm (Willing 1988).

In social stimulus situation, social cognition refers to the ways in which we process, store, remember and use social information (Forgas, 1994; Isen & Baron, 1991). Research on this topic indicates that in fact the relationship between affective and cognitive aspect of behavior is very much a two way street; our feelings and moods exert strong effects on several aspects of cognition, and cognition, in turn, exerts strong effects on our feelings and moods (Seta Hayes & Seta, 1994). Thus, social cognition involves the process through which we notice, interpret, remember and later use information about the social world.
to find more satisfaction in giving than receiving. The capacity to relate to other people in a consistent manner with mutual satisfaction and helpfulness; The capacity to sublimate, to redirect one’s instinctive hostile energy into creative and constructive outlets; The capacity to love.

Individuals who are emotionally mature generally find that they are more comfortable with themselves, and find those things in life that include other people are more enjoyable and much less chaotic than people who are emotionally immature. Emotionally mature handle their problems better, and even reduce the number and intensity of future problematic situations. The mature person has developed attitudes in relation to himself and his environment which have lifted him above “childishness” in thought and behaviour.

Inherent in developing emotional maturity is the willingness to develop and maintain a momentum of self-development. This is an active, on-going and never ending practice which is a critical component of the maturation process. Its goal continues the purification process of deep-seated self-hate and self-doubt.

Emotional maturity is demonstrated in willingness and ability to look to one’s self in times of stress, anxiety and ambivalence. It is reflected in the self-discipline to refrain from blaming for the people and circumstances in life that affect one. Emotional maturity is the understanding and willingness to act on the fact that I and I alone, am responsible for my body, my mind and my spirituality.

A person may be chronologically mature, but emotionally immature. A person may also be intellectually mature, but emotionally immature. There is no correlation between chronological age, intellectual age, social age, or emotional age. Just because someone is “grown-up” by chronological age doesn’t mean they are ‘grown-up” emotionally.

Chronological maturity and intellectual maturity combined with emotional immaturity is not uncommon and potentially dangerous. A person whose body and mind is adult, but whose emotional development is that of a child can wreak havoc in the lives of others as well as himself.
Emotional maturity means, in essence, controlling your emotions rather than allowing your emotions to control you. That does not mean we should hide or repress our emotions, though we can use muscle relaxation, yoga, guided imagery and other relaxation tools to reduce their intensity. According to cognitive-behavioral therapists, our thoughts, in conjunction with our environment, create our emotions. Fortunately, we can control our thoughts by becoming aware of our negative and inaccurate beliefs and ideas. An emotionally mature person will have many of the following traits: Knowing what one wants and making it happen; Thinking before acting and having control over one's behavior; Self-reliance and the ability to take responsibility for one's life and actions; Patience; The ability to connect with others in a cooperative and positive way; Genuinely caring about others and demonstrating that ability; Honesty and living by one's principles; Having moderation and balance in all things; Having the ability to follow through, even when it is difficult; Humility and the ability to say, "I was wrong. I am sorry."

Emotional maturity is a measure of one's capacity to create in a positive mental attitude. Emotions are our specific reactions to a particular event; they serve as a bridge between our thoughts and actions. Since negative emotions tend to make us diffused and unfocused, we attain better results when we act with joy, optimism, trust, and good mood when working with others. Being aware of one's emotional maturity is another step in pursuing an inventive framework. Emotions affect creativity. When emotional conflicts arise, the creative activities of the individual are the most strongly affected of all the thought processes. One's desire to invent and excel in a specific area is driven by emotions. For example, the passion to invent a machine that compensates for one's physical handicap or a strong conviction to invent environmentally friendly devices may be strong motivational forces. On the negative side, insecurity, lack of confidence and unfounded fears could stymie the inventive mind. Recognition of our emotions, whether negative or positive is an important step in emotional maturity.

Obviously, maturity is not determined singularly by skills, age or by experience alone. The level of maturity is a complex combination of our intelligences that allows us to understand and manipulate verbal and mathematic symbols, objects, and most of all, to act wisely with others. Emotionally mature persons tend to become leaders and managers because they are good at harmonizing creative
God's voice. We need this continuous emotional and psychological development in order to become mature Christians. Without emotional maturity, one cannot become truly Spiritually mature.

The ability to love and to work is one definition of maturity. Emotional and spiritual maturity is not necessarily linked to physical age. People can and do grow throughout life. Mature people develop the wisdom to know what they can and cannot control. They understand that they need determined self-discipline to achieve goals. They appreciate their responsibilities as much as their rights. They esteem themselves and others – as people of worth.

Psychological Allport (1960) says maturity is an ability to have warm and intimate relationship marked by empathy and compassion. Mature people show emotional security, humor and insight. They get involved in the community and in causes bigger than themselves.

In Emotional Intelligence, Goleman (1995) links emotional maturity with ethical behaviour: "Those who are at the mercy of impulse – who lack self-control – suffer a moral deficiency: The ability to control impulse is the base of will and character. The root of altruism lies in empathy … Lacking a sense of another’s need or despair, there is no caring."

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Emotions effect creativity. When emotional conflicts arise, the creative activities of the individual are the most strongly affected of all the thought processes. One’s desire to invent and excel in a specific area is driven by emotions. For example, the passion to invent a machine that compensates for one’s physical handicap, or a strong conviction to invent environmentally friendly device may be strong motivational forces. On the negative side, insecurity, lack of confidence and unfounded fears would stymie the inventive mind. Recognition of our emotions, whether negative or positive is an important step in emotional maturity. Obviously, maturity is not determined singularly by skills, age alone or by experience alone. The level of maturity is a complex combination of our intelligences that allows us to understand and manipulate verbal and mathematic symbols, objects and most of all, to act wisely with others. Emotionally mature persons tend to become leaders and managers because they are good at harmonizing creative people to get the work done in the shortest possible time. Emotional maturity is an important requirement to become a good inventor. Emotional maturity means, in essence, controlling your emotions rather than allowing our emotions to control you. That does not mean we should hide or repress our emotions, though we can use muscle relaxation, yoga, guided imagery and other relaxation tools to reduce their intensity. As a cognitive-behaviour therapist, I believe our thoughts, in conjunction with our environment, create our emotions. Fortunately, we can control our thoughts by becoming aware of our negative and inaccurate beliefs and ideas.

Starks (2005) defines psychological maturity as “being able to accept the reality of people and things as they are, without needing them to be other than that”.

Emotional maturity is the ability to experience and understand our own deepest feelings and needs, and to be able to act on and express these feelings and needs in appropriate and constructive ways. This is opposite from “acting out” our needs in unconscious, destructive patterns of behaviour. This aspect of maturity includes the ability to experience and tolerate especially intense feelings – which inevitably occur in life – and to be able to appropriately express these feelings, or contain them until an appropriate and responsible means for expressing them is available.

It is the ability to act on and react to life circumstances with intelligence, sound judgment and wisdom. This aspect of maturity is opposite to the tendency to act
interpreted as that the player will be smaller and physically weaker than many other teammates; however, he may possess excellent timing and coordination. This athlete’s level of mental or intellectual development will enable him to grasp quickly the concepts of his team’s offensive and defensive strategies. The level of social development may lead to this player being very popular with his teammates. This athlete’s advanced level of emotional maturity will help him to control his emotions and thereby allow him to refrain from undesirable actions such as taking unnecessary retaliation penalties.

Frijda and Mesquita (1994) suggest that emotions are not only intrindidual states but also forms of subject environment interaction. This interaction may remain latent when the emotion only a state of readiness; but even then, it is readiness for engaging in or breaking off interaction. By this very nature of readiness for and actual form of interaction, emotions are social events because they lend to occur in a context of socially shared meanings. They are recognized by others, they shed light upon the emotional relevance of the environment, they affect interpersonal relationships, and they in turn evoke responses from others that also affect the relationship from their side.

Scholars began to shift their attention from describing and assessing social intelligence to understanding the purpose of interpersonal behavior and the role it plays in effective adaptability (Zirkel, 2000). This line of research helped define human effectiveness from the social perspective as well as strengthened one very important aspect of Wechsler’s definition (1958) of general intelligence: “The capacity of the individual to act purposefully”. Additionally, this helped position social intelligence as part of general intelligence.

Research exploring the neural circuitry that governs emotional awareness (Lane, 2000), as well as additional emotional and social aspects of this concept (Bar-On et al., 2003) has begun to provide tangible evidence of the anatomical foundations of this wider construct which some have questioned as an intangible myth.

The literature reveals various attempts to combine the emotional and social components of this construct. For example, Gardner (1983) explains that his conceptualization of personal intelligences is based on intrapersonal (emotional)
intelligence and interpersonal (social) intelligence. Additionally, Saarni (1990) describes emotional competence as including eight interrelated emotional and social skills. Furthermore, it has been shown that emotional-social intelligence is composed of a number of intrapersonal and interpersonal competencies, skills and facilitators that combine to determine effective human behavior. Based on the above, it is more accurate to refer to this construct as “emotional-social intelligence” (ESI) rather than “emotional intelligence” or “social intelligence”.

Since the time of Thorndike (1920), a number of different conceptualizations of ESI have appeared which have creating an interesting mixture of confusion, controversy and opportunity regarding the best approach to defining and measuring this construct. In an effort to help clarify this situation, the Encyclopedia of Applied Psychology (Spielberger, 2004) recently suggested that there are currently three major conceptual models: (a) the Salovey-Mayer model (Mayer & Salovey, 1997) which defines this construct as the ability to perceive, understand, manage and use emotions to facilitate thinking, measured by an ability-based measure (Mayer et al., 2000); (b) the Goleman model (1998) which views this construct as a wide array of competencies and skills that drive managerial performance, measured by multi-rater assessment (Boyatzis et al., 2001); and (c) the Bar-On model (2000) which describes a cross-section of interrelated emotional and social competencies, skills and facilitators that impact intelligent behavior, measured by self-report within a potentially expandable multi-modal approach including interview and multi-rater assessment (Bar-On & Handley, 2003).

Emotional maturity is a significant predictor of the level of success that an individual will achieve in their lifetime. Now by success we do not equate this only with wealth. That is only one dimension of success. Others include, general level of happiness, self confidence, success in relationship, the level of well being in terms of emotional and physical health, the health of one’s family, one’s station in life, degree of leadership and responsibility taken in one’s community and the world as a whole. There are similarly dimensions that contribute to emotional maturity. These include the following:

1. Level of self-confidence, self worth, and self esteem.
2. Degree of personal honesty and integrity.
3. Ability to express and feel love towards self, others and the environment.
self-determined behavior. But what is autonomy support, and how do we facilitate a more autonomy-supportive climate? It is first important to remember that the social climate, typically engineered by the authority figure, is what facilitates or inhibits that satisfaction of psychological needs.

First and foremost, a climate perceived as controlling will inhibit the satisfaction of competence, autonomy and relatedness, thus diminishing the opportunity for self-determined behavior. A climate however, that facilitates decision making on the part of the athlete or participant, or that takes into account the individual’s perspective, is considered an autonomy-supportive approach.

Other ways to create autonomy include expressing an understanding of the individual’s feelings; providing feedback that is directed toward accomplishment of tasks and personal improvement; not focusing too heavily on winning or losing; diminishing external pressures and demands; encouraging initiative; and developing a sense of teamwork and mutual support.

These have been shown to lead to the satisfaction of psychological needs and the development of self-determined behavior (Gagne et al, 2003; Reinboth, Duda & Ntoumanis, 2004).

Several studies have also focused on the differences in climates which are task-involved versus those that are ego involved. Task-involved climates emphasized the importance of effort, personal improvement and contributions to the team. Ego-involvement climates, on the other hand, focus heavily on winning and comparisons among athletes based on ability level.

Nicholls (1989) has observed that leadership is the art and science of influencing others through credibility, capability and commitment. In other words, leadership is a skill that a certain individual possesses which includes the ability to instruct, direct and coach by demonstration. Coaches are people that have the ability to understand and play the game to the point of perfection and they know how to teach others to play within the limits and rules of a certain game. Coaching can also be seen as a behavioral process where the individual, coach influences others to do what he or she wants them to do. Coaches are the first individuals people look to if things are not going according to schedule or according to desire, but in the big
picture coaching is much more than telling athletes what to do. Coaching consists of several situational characteristics, where a coach knows what and how to say certain things to a certain athlete. Also important are individual differences such as leadership characteristics which include a coach’s ability to deal with, and coach an athlete and knowing how to distinguish between an athlete that is good at taking negative feedback and an athlete that does not know how to take negative feedback as instruction.

Coaching Style: Athletes may prefer coaches that use an authoritarian style of coaching, which is demanding, consists of enforcing standards, is restrictive and is very controlling. In this style of coaching, coaches tend not to communicate with their athletes and athletes do not know why they receive punishment or why they are disciplined. This type of coaching can cause tense relationship and interactions between coach and athlete where athlete feels intimidated which could ultimately cause level of performance decline, where overall the entire team would suffer.

Leadership in Coaching: Athletes who play for coaches with many different coaching styles see leadership in many different ways. Some coaches who have very positive and somewhat “soft” coaching style, let their athletes just have fun and do not care or express concern for the score or outcome, and then there are coaches who demand attention and pay a lot of attention to the final outcome and demand winning.

Team Cohesion and Satisfaction: Athletes need some sort of support from their coaches and this support comes in different ways, sometimes they need to be told that they are doing a good job and other times they need to be rewarded in some other way. The literature suggests that athletes in general prefer coaches who communicate with them and let athletes put in their input in decision-making. In the future research might focus on team cohesion and individual satisfaction and the connection between the two, which leads to better overall results.

Medvec et al (1995) conducted their study on interesting topic “When Less is more: Counterfactual thinking and satisfaction among Olympic medalists. They found that James’s (1892) observation represents an early statement of a fundamental principle of psychology: A person’s objective achievements often matter less than how those accomplishments are subjectively construed. Being one of the best in the
soothed by the thought that "at least I won a medal." The net result is that with respect to athletic competition, there may be times when less is more. Authors conducted three studies to examine this question. First, they analyzed the affective reactions of bronze and silver medalists as they won their medals in the 1992 Olympic games in Barcelona, Spain. Second, participants were evaluated the Olympians' postcompetition interviews to see whether silver medalists seemed to be focused on the medal they almost won whereas third-place finishers appeared to relish the pleasure simply of being medalists. In the third study, athletes were asked themselves about the nature of their counterfactual thoughts. Authors observed that the athletes on the whole looked happier immediately after their performances than when they were on the medal stand. More important, the main effect of type of medal, F(1, 72) = 18.98, p < .001, indicates that the athletes who finished third looked significantly happier than those who finished second. Silver medalists looked less satisfied with their performances than did bronze medalists, and they did so for reasons unrelated to how well they were expected to perform. There is a potential artifactual explanation of these results, however. In certain Olympic events, the competition is structured such that bronze medalists have just won a match or a game whereas silver medalists have just lost. A bronze medalist in wrestling, for example, would have just defeated the fourth place finisher, and the silver medalist would have just lost to the gold medal winner. We were concerned that being in the immediate aftermath of victory or defeat might have contaminated our comparison of bronze and silver medalists. Fortunately, most Olympic events (such as those in track, swimming, and gymnastics) are not structured in this way. In these events the athletes simply finish first, second, and third depending on how well they do. The results of the second study provide support for the hypothesized difference in the counterfactual thoughts of the bronze and silver medalists. Silver medalists seem to be focused on the gold medal they "almost" won, while bronze medalists seem content with the thought that "at least I did this well." This asymmetry can thus explain the observed differences in the athletes' expressed emotions in Study 1. This can be seen most clearly through an analysis that combines the data from Studies 1 and 2. Fifteen of the 22 athletes whose counterfactual thoughts were assessed in Study 2 were on the immediate-reactions videotape in Study 1. Thus, by focusing on what they achieved, bronze medalists are rather happy; in contrast, a concern with what they failed to achieve makes the silver medalists seem less so.
On the whole, the silver and bronze medalists at the Barcelona Olympics were at the peak of their athletic careers and therefore likely to continue to engage in similar high-level competitions in the future. From an Olympic medalists motivational perspective, then, both groups should have made upward counterfactual comparisons in order to prepare for future contests. The asymmetry in counterfactual comparisons that we observed implies that many counterfactuals are imposed by the nature of the events experienced.

Indeed, Kahneman (in press) outlined a continuum of counterfactual thinking that ranges from "automatic" to "elaborative." Elaborative counterfactual processing is partly brought on through the exercise of choice, and its direction and intensity is influenced by the individual's motives and intentions. Automatic counterfactual thinking, in contrast, is "initiated by the occurrence of an event and...[is]...explainable largely in cognitive terms" (Kahneman, in press). The counterfactual thoughts that distinguish silver and bronze medalists shade toward the latter end of this continuum. Coming close to winning the gold, for example, appears to automatically activate frustrating images of having almost won it all. Their findings suggest that finishing second or coming close to a cherished outcome always leads to less satisfaction than a slightly more modest performance. Finishing second is truly a mixed blessing. Performing that well provides a number of direct benefits that increase our well being—recognition from others, boosts to self-esteem, and so on. At the same time, it can indirectly lower satisfaction by the unfortunate contrast with what might have been. Thus, the inconsistent effect of finishing second is analogous to the "endowment" and "contrast" polarity that Tversky and Griffin (1991) claimed affects the hedonic significance of all experienced events. According to their analysis, any experience has a direct effect on well-being by what it brings to one's endowment—that is, the pleasure or pain derived from the event itself. But a person's experiences also have an indirect effect on well being by altering the adaptation level against which future experiences are contrasted. Their contrast (in which the event itself establishes a new standard against which future events are compared) is different than the one at work here (in which the events' proximity to a better outcome causes one to lose sight of what is and focus on what might have been). The core idea is the same, however. In both cases, the direct effect of the event itself is offset by a comparison process with the opposite effect, be it a
comparison of future outcomes to the present, or the present outcome to a counterfactual alternative that was almost attained.

Tversky and Griffin (1991) have delineated some of the general rules that govern the relative weighting of endowment and contrast, and thus whether the net effect of a given event enhances or diminishes well being. They acknowledged, however, that the degree to which a given event evokes endowment and contrast can be highly idiosyncratic. As a consequence, when applied to a problem such as ours it can be difficult to predict exactly when those who are better off will nonetheless feel worse than those who are less fortunate.

Another unresolved issue, this one more tractable, concerns the duration of the effects we have documented here. We have established that bronze medalists are happier than silver medalists in the short run, but does this effect hold up over time? As yet there are no data to answer this question. Nevertheless, one of the most noteworthy features of life’s near misses seems to be their durability.

Although well-being has been conceptualised in different ways, most definitions emphasise positive psychological states as opposed to the absence of negative cognitions and feelings. Furthermore, according to Caspersen, Powell, and Merritt (1994), well-being is one of the two elements of quality of life and is concerned with the subjective internal states of the individual, or the way in which the individual feels physically and mentally. In their definition of health, the World Health Organization (WHO, 1997) recognises that mental well-being plays an all-important role in health measurements as they state that health incorporates “a state of complete physical, mental, and social well-being not merely the absence of disease”

One theory well suited to study the potential implications of social environmental factors on wellbeing in sport is the recently formalized sub-theory of self-determination theory (SDT) (Deci & Ryan, 1985, 2000), termed basic needs theory (BNT) (Ryan & Deci, 2002). BNT assumes three needs to be fundamental for the nurturance and growth of the human psyche: namely the psychological needs for autonomy, competence, and relatedness. The satisfaction of the need for autonomy involves the experience of choice and the feeling that one is the initiator of one’s own actions, but also that one’s actions are in accordance with one’s values as opposed to being controlled by external forces or internal pressures (deCharms, 1968). The
satisfaction of the need for competence is fulfilled by the experience that one can effectively bring about desired effects and outcomes (White, 1959). Satisfaction of the relatedness need pertains to feelings that one is securely connected to and understood by others (Baumeister & Leary, 1995). According to BNT, variations in need satisfaction will directly predict variations in indices of psychological and physical well-being (Ryan & Deci, 2002).

Applied to the domain of sport, satisfaction of athletes' needs for autonomy, competence, and relatedness via their sport environment should lead to higher levels of well being. To the extent that the needs are suppressed in the sport setting, inverse relationships are hypothesised. What is particularly attractive about the concept of need satisfaction is that it allows researchers to identify the environmental conditions under which the three needs could be satisfied and, in turn, promote well being.

One important social environmental factor assumed to nurture the fundamental needs is the motivational climate created by the coach (Ntoumanis, 2001; Reinboth, Duda, & Ntoumanis, 2004; Sarrazin, Guillet, & Cury, 2001). Coaches design practice sessions, group athletes, give recognition, evaluate performance, share their authority and shape the sport setting. In doing so, they create a motivational climate which can have an important impact on an athlete's motivation. Indeed, past work has suggested that the coach has a major influence on athletes' stress responses, reported enjoyment and feelings of self-efficacy in sport settings (e.g. Scanlan & Lewthwaite, 1986).

Grounded in the achievement goal framework (Ames, 1992), more or less ego-involving (or performance) and/or task-involving (or mastery) climates are hypothesized to exist and sport research has supported this supposition (e.g. Newton, Duda, & Yin, 2000). An ego-involving climate is characterized by interpersonal competition, social comparison and public evaluation. In contrast, an emphasis placed on task mastery, learning, effort exertion and improvement distinguishes a task-involving climate (Ames, 1992; Newton et al., 2000). The motivational climate is assumed to promote the differential occurrences of task or ego states of involvement within the person. When task-involved, a person is trying to demonstrate mastery of the task rather than being focused on showing
normatively high ability. In this case perceived ability is self-referenced and the person feels competent when realizing learning, personal improvement and mastering the particular skill with high effort expenditure. In contrast, when ego-involved, improvement, understanding and learning are seen more as a means to an end rather than outcomes in their own right. The individual in a more ego-involving context will try to demonstrate superiority and is therefore concerned about how able she or he is compared to others (Nicholls, 1989). Recent work has given insight into the underlying dimensions comprising task- and ego-involving climates in sport competitive settings. In the majority of this type of research, the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) has been frequently used to assess athletes’ perceptions of the goal oriented perspectives as emphasised by the coach (Newton et al., 2000).

In a perceived task-involving sport environment, achievement is viewed in a self-referenced manner, which is considered to be more within the individual’s control (Duda, 2001). Being in control of one’s actions also increases the chances of feeling like the originator of one’s own behaviour (deCharms, 1968) and, thus, would be expected to foster athletes’ satisfaction of the need for autonomy. In contrast, a strong ego-involving climate is assumed to lead athletes to focus on outcomes more outside their personal control (e.g. beating others, attaining social approval and rewards; Duda, 2001). Therefore, perceptions of an ego-involving climate are expected to thwart the satisfaction of the need for autonomy.

According to Duda and colleagues (Duda, 2001; Duda & Hall, 2001), a task-involving environmental focus should foster perceptions of competence, because the self-referenced criteria (e.g. effort) underlying competence judgments and ensuing feelings of success are more controllable and readily achievable compared to normative-based criteria (e.g. winning). Also, the emphasis in such environments is on developing competence rather than protecting one’s ability. In contrast, in an egoinvolving climate, perceptions of competence are held to be more fragile because competence is construed on the basis of what others have done/are doing and there is greater preoccupation with the adequacy of one’s ability (Duda & Hall, 2001).

With respect to the need for relatedness, the heightened inter-individual comparison and rivalry among athletes assumed to mark an ego-involving sporting
atmosphere should undermine the sense that one is closely connected with others. In contrast, an emphasis on co-operation is fundamental to a task involving environment. Thus, we would assume that a more task-involving climate should foster 'feelings of belongingness' and promote the satisfaction of the need for relatedness. In support of these assumptions, a study by Chi and Lu S.E. (1995) among intercollegiate basketball teams, found a moderate positive link between perceptions of a task-involving climate and reported task cohesion. A negative relationship emerged between perceptions of an ego involving climate and task, as well as social cohesion.

Increase in the satisfaction of the needs for autonomy (both in terms of the IPLOC and choice aspects), competence, and relatedness (both team and coach) were all positively predicted by perceptions of the coach’s emphasis on task-involving climate structures across the season. By reinforcing effort, personal progress, and the view that everyone has an important role on the team, an over-riding task-involving climate should maximize the opportunities to satisfy all the three needs. In contrast, perceiving the coach to emphasize ego-involving features during the course of the season was a significant negative predictor of team relatedness. Clearly, a team atmosphere which focuses on intra-team rivalry, outdoing others, and recognizing only the most talented players over time would be more likely to reduce feelings of relatedness between members of the same team.

Perceptions of an ego-involving motivational climate did not emerge as a negative predictor of the need for autonomy and competence. This finding is, however, in line with the results by Standage et al. (2003) who did not find any link between perceptions of an ego-involving climate and the satisfaction of the three basic needs. A possible explanation for these non-significant findings may lie in the theoretical proposition of achievement goal theory suggesting that perceived competence would moderate the relationship of an ego goal emphasis on ensuing achievement-related affect, cognition and behaviour (Dweck, 1986; Nicholls, 1989). The findings also make sense from a practical perspective in that even though there may be a strong ego-involving environment operating on a team, it is quite plausible, at least for some players on a team, to have high perceived ability (e.g. if the team is winning). Also, it may be the case that the best players on the team are granted more autonomy (e.g. more involved in decision-making). However, good
emotional maturity for self understanding, and promote the feeling of self satisfaction among the athletes. Theodorakis and Bebetsos (2003) observed that even though athletes are probably the most important component of every sport program or activity, the concept of athlete satisfaction has received very little attention by the researchers.

The investigator had, therefore, undertaken the present study to explore these three indispensable psychological constructs in relation to the participants participating at varying performance levels in three very popular sports disciplines. The focus of this study was to examine the differences between three performance groups and two gender groups as well as to compare the participants of three specific sports disciplines on the selected variables. Efforts were also made to probe the interrelationship and interaction between these psychobiosocial variables. The problem undertaken for exploration in the present study has been titled as:

An Analysis of Selected Psychobiosocial Variables Among Athlete’s Performance at Varying Levels.

OBJECTIVES OF THE STUDY

The objectives of the present study were:

1. To study the differences between three performance level groups and two gender groups as well as their interaction effect on all the selected variables within each of the three sports disciplines i.e. Handball, Hockey, and Basketball.

2. To find out and compare the differences among the participants of three selected sports disciplines within the three performance level groups i.e. State, Interstate and International groups on all the selected variables.

3. To find out the differences among male as well as female players belonging to three performance levels participating in three different sports disciplines i.e. Handball, Hockey, Basketball on the selected variables.

4. To find out the differences with regard to the three overall sports disciplines i.e. Handball Hockey and Basketball on all the selected variables.
5. To find out and highlight the differences among overall male and overall female participants as well as among the overall three performance level groups on the selected psychobiosocial variables.

6. To explore the interrelationship between the selected psychobiosocial variables in relation to the three overall performance groups and the two overall gender groups.

7. To make appropriate suggestions and recommendations on the basis of research findings obtained through the present study.

**HYPOTHESES**

The study had the following hypotheses:-

1. It was hypothesized that there would be significant differences among Handball players performing at three varying levels on the selected psychobiosocial variables that is:
   a) Cognitive Style (Intuitive and Systematic)
   b) Emotional Maturity (including all its sub-scales)
   c) Self Satisfaction (including all its sub-scales)

2. There would be significant gender differences among the Handball Players performing at different levels on the selected variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Emotional Maturity (including all its sub-scales)
   c) Self Satisfaction (including all its sub-scales)

3. There would be significant interaction effect between performance and gender within Handball Sports group on all the selected psychobiosocial variables:
   a) Cognitive Style (Intuitive and Systematic)
   b) Emotional Maturity (including all its sub-scales)
   c) Self Satisfaction (including all its sub-scales)
14. There would be significant differences among Hockey male players participating at three varying performance levels on the variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Overall Emotional Maturity
   c) Overall Self Satisfaction

15. There would be significant differences among Basketball male players participating at three varying performance levels on the variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Overall Emotional Maturity
   c) Overall Self Satisfaction

16. There would be significant differences among Handball female players participating at three varying performance levels on the variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Overall Emotional Maturity
   c) Overall Self Satisfaction

17. There would be significant differences among Hockey female players participating at three varying performance levels on the variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Overall Emotional Maturity
   c) Overall Self Satisfaction

18. There would be significant differences among Basketball female players participating at three varying performance levels on the variables
   a) Cognitive Style (Intuitive and Systematic)
   b) Overall Emotional Maturity
   c) Overall Self Satisfaction
19. The players from three overall sports disciplines (i.e. Handball, Hockey and Basketball) would differ significantly from each other on all the selected psychobiosocial variables:

a) Cognitive Style (Intuitive and Systematic)
b) Emotional Maturity (including all its subscales)
c) Self Satisfaction (including all its subscales)

20. There will be significant gender differences among overall male and overall female players on the selected psychobiosocial variables i.e.

a) Cognitive Style (Intuitive and Systematic)
b) Overall Emotional Maturity
c) Overall Self Satisfaction

21. There will be significant differences among overall three performance level groups on the selected psychobiosocial variables i.e.

a) Cognitive Style (Intuitive and Systematic)
b) Overall Emotional Maturity
c) Overall Self Satisfaction

22. There would be significant interrelationship between the selected psychobiosocial variables with regard to

a) State level performance group
b) Interstate level performance group
c) International level performance group
d) Overall male participants
e) Overall female participants

DEFINITIONS AND EXPLANATIONS OF THE TERMS USED

**Ability Utilization:** Satisfaction with how the coach uses and / or maximizes the individual athlete’s talents and / or abilities.

**Academic Support Services:** Satisfaction with the academic support services provided to the athletes.
healing to further supplement and boost the fighting spirit. An attempt was also made to explore the interrelationship of cognitive style, emotional maturity and self satisfaction among athletes which will influence the overall mental makeup of an athlete.

Hence this study has far-reaching implications in understanding the dynamics of cognitive style in relation to sports performance. Understanding the role of emotional maturity in sports settings will be further helpful in creating congenial environment for successful and mature performance. Self satisfaction of the athlete is also foremost requisite for any positive sports encounter. In the present research pursuit these psychobiosocial variables have been explored at length especially as related to three specific team sports (having diverse nature of game structure) and with three different levels of participation. These variables are so paramount that they reflect on an athlete's overall personality concerning competitive performance in sports. In the present investigation intersport and inter performance level variations which demand specific psychological behaviour from participants to give out their best performance have also been examined. This study will also be helpful in understanding the interrelationship between these variables. Therefore, this study will be of great value to physical educationist, coaches and all other concerned directly or indirectly with sports performance. Study will serve as a guideline in formulating the practice schedules, training programmes and selection procedures. Findings of this study will facilitate in development of new techniques and strategies to further promote these psychobiosocial variables among sports participants of varying levels.