CHAPTER - I
INTRODUCTION
1.0 INTRODUCTION

“We are responsible for what we are, and whatever we wish ourselves to be, we have the power to make ourselves. If what we are now has been the result of our own past actions, it certainly follows that whatever we wish to be in future can be produced by our present actions; so we have to know how to act.”

- Swami Vivekananda

In the game of volleyball, the success is not a sole product of a player, but it is a collective effort of the team. Each player therefore has to accommodate and survive with fellow players who are varied in characteristics during the game situation. Unless a player understands the situations and others in high level competition, specifically a competition at par, competitive stress makes the player to perceive the competition as the threats and fears. Thus, the mind is the prime mover for all the functional aspects of a player. These functional aspects are basically underlying the psychobiological factors of an individual since these are mostly in inherited nature, and in these aspects individuals also are differed from one another. By this it is believed that the difference exists on psychobiological factors among the individuals might have been the source for an individual to be a successful player. Earlier studies have already been confirmed in these aspects that within the game and the same age group, players are significantly differed on ability of perception, apprehension, discriminating and identifying the right stimuli, coping the stress at various levels. Hence spotting the influence of psychobiological factors on the performance of a player may be helpful to determine the functions and success of a player in the game of volleyball.
In this game, problems related to performance are not a result of poor conditioning, inadequate coaching or a lack of physical skills or technical abilities. However, these physical or mechanical factors can sometimes cause at par play. When the heat of competition is turned up high, the individual performer or team that falls apart most often does so, because of mental factors like run away, nervousness, intimidation, poor concentration, negativity, lack of confidence or an inability to let go of mistakes or bad breaks. Such a negative thought of a player psyche down them when they reach the zero hour of competition. It affects the individual perception and perception of their fellow players. Finally, the team ends up with failure in displaying their potential performance at a competition.

Now a days, the playing ability of a player is believed to be a sum of select psychobiological traits. Hence, concentration on psychobiological traits of a player is an essential step for both players and coaches to attain their goal positively in time. Psychobiological traits are underlying the physical, physiological and psychological structures. As far as these traits are concerned, they are not identical to all sports and games instead in their influence, differed in nature. Hence, in this competitive world, success in any game can be spotted only through spotting the right factors that are mostly associated with the game concerned. With this thirst, the investigator has taken up the present study to spotting the psychobiological-based success traits on overall playing ability of volleyball players at the state level in Tamilnadu.
1.1 NATURE OF THE GAME

Volleyball is a team-sport, throughout the world widely accepted as a highly competitive game. Volleyball as a thrilling game, and as such in executing the movements it requires the whole body and mind. Competitively, this game requires a deep concentration, a quick thinking and a great deal of movements that are physically and psychologically refreshing and it must be suitable even to aged people.

As a team sport, volleyball is played by two teams on a playing court divided by a net. Though the sport originated in the United States, it has received popularity on a global basis. The object of the game is for each team to send the ball regularly over the net to ground it on the opponent's court, and to prevent the ball from being grounded on its own court. The ball is put into play by the right back-row player who serves the ball by hitting it over the net to the opponent's court. A team is allowed to hit the ball three times (in addition to the block contact) to return it to the opponent's court. A player is not allowed to hit the ball twice consecutively, except when attempting a block. The rally continues until the ball touches the ground/floor, goes "out" or a team fails to return it to the opponent's court or commits a fault.

1.1.1 Competitive Pressure in Volleyball

Competition breeds pressure. This is especially true in the unpredictable volleyball environment where emergencies are often the rule rather than the exception. Some players feed off competitive pressure, improving their focus and raising their game to a higher level, while others allow themselves to be
overwhelmed by pressure, choke, and fold. How can individuals respond so very differently to the same demands? Athletes at all levels experience increased physiological arousal (e.g., butterflies, nervousness, perspiration) as a result of competitive pressure. These natural responses increase as the match becomes more meaningful to the individual and the ability levels of the players become more similar. They are the normal results of sincere effort rather than pathological anxiety states. Although performance is often improved following normal increases in arousal, the complexity of fine motor skills required in volleyball dictates a guard against over-arousal. As such, responding to competitive pressure with additional increases in arousal due to cognitive anxiety (e.g., worry, concern, self-doubt), inevitably destroys performance. It also steals attention away from what is important, wasting it on irrelevant fears. It is unrealistic, and perhaps fruitless, to try to eliminate natural competitive pressure. However, studies suggest that the way an individual appraises stressful events determines whether the experienced emotion will be positive or negative. In other words, differences in the way individuals evaluate competitive pressure situations, rather than the situations themselves, explain why some athletes thrive while others whither under such pressures. Hence any competitive pressure appraised as negative will inevitably lead to unhealthy anxiety and less proficient volleyball performance. In contrast, pressure welcomed as a necessary challenge of the thrill of competition guards against over-arousal caused by needless worries, and thus increases attention to the task at hand and improves overall performance.
1.2 FEAR

"Fear is an illusion" goes the saying. One should never look at the consequences of making a mistake during a match. Otherwise, it tends to lead to think of a negative result only. Some people become "frozen" because of their fear of failure. They get this fear from worrying about what their peers will think or from just thinking about the possibility of a negative result. They might be afraid of looking bad or being embarrassed. These are invalid reasons for not being successful. Fear can also come from a lack of focus or concentration.

1.2.1 Fear of Failure

Fear of failure has both positive and negative outcomes. On the positive side, fear can motivate athletes to work hard and improve, but it also can lead to an ineffective mindset when it is time to compete in the big game and the game matters a lot for some players. Typically, intelligent, perfectionist, goal-oriented athletes battle the fear of failure. Many challenges come with the fear of failure and there are many different fears associated with fear of failure. Fear of embarrassment is one of the fears associated with the fear of failure. This is experienced when a player is afraid to play poorly in front of others (teammates, fans, coaches, parents) for fear of embarrassment and fear of what they may think about his or her performance. Fear of making mistakes arises when a player plays very tentatively or defensively because he is afraid of making mistakes, losing the puck, missing a shot, or having the other team score on him. Fear of losing is another prevalent fear for many athletes. Many players cannot stand to lose and thus become over wrought with anxiety and
tension, which prevent them from playing freely and up to their potential. Regarding the fear of losing, when during the last minute of the game, mental error is made by a player such as trying too hard to force a pass up and it costs him a scoring chance.

1.2.2 Confronting Fear in Volleyball

According to Webster, “Fear is a distressing emotion aroused by impending pain, danger or evil, whether real or imagined”. In volleyball, fear is usually brought on by the possibility of making a mistake, appearing incompetent, or losing. Other descriptions of fear are self-doubt, worry, concern, and negative thoughts or feelings. Fear is seldom helpful in volleyball. It may lead to negative outcomes including dangerously high arousal, impaired concentration, reduced confidence, tensed muscles, lost rhythm, indecision, expectations of failure, and lowered perceptions of control. Although this emotion effectively alarmed our ancestors of approaching predators, the most threatening predator to-day on the volleyball court often is fear itself.

Typically, fear increases with the perceived importance of the situation. Play becomes more conscious, careful and tentative in an attempt to avoid mistakes. The term "choking" is used to describe this effect. A serve that was once aggressive and difficult to return is reduced to a high percentage side out opportunity for the opponent. Crisp passes that were on target become awkwardly steered and pushed for added security. Opponents not overcome by these same tendencies quickly realize an opportunity, play more aggressively, and assume total control of the match.
It is important to distinguish fear from nervousness. While fear is always a negative mental state, nervousness is a physical condition (e.g., increased heart rate, sweating) that can actually improve play. So while nervousness provides a great source of energy to enhance performance in critical moments, fearful thinking about what might go wrong is a useless menace.

1.3 ANXIETY

Anxiety is in reality a relationship occurring through time between a person and the situation he or she faces. It can be referred to as the behavioural and physiological responses directly induced by a situation (Hallam, 1992). Specific symptoms of the anxiety expectation include heart palpitation, disturbances of respiration, sweating, tremor and shuddering, vertigo and other physiological and behavioural manifestations (Freud, 1924). Anxiety is distinguishable from other unpleasant affective state (emotional) such as anger, grief, or sorrow by its unique combination of phenomenological and physiological qualities. This gives to anxiety a “character of unpleasure” which although difficult to describe seems to possess a particular note of its own (Freud, 1936).

Apart from the generalization, in day to day human life and in sports and games, anxiety plays very crucial role as a determinant factor. Smith (1986) cited anxiety as a product of stress and persistent feature of competitive sport. It can be a positive factor as accorded by the need to reach and maintain the optimal arousal prior to and during the event or a negative one as evident in both externally derived pressures such as meeting
the expectation of coaches, fans and teammates and internal emotions. When these unpleasant sources of stress are chronic, the output may lead to burnout, demotivation, poor sports performance, and eventual withdrawal of the athlete from competitive sport.

1.3.1 Nature of Anxiety

All of us are anxiety-prone; the problem is to find out what makes our process actual. As a signal of danger, anxiety is accompanied by a host of interrelated romantic process, which is of the nature of preparatory to emergency action. Often, these are patterned and derived from the subject’s early learning. Whatever the later stimulus may be, the persona pattern is evoked and recognizable with decreasing psychological defenses and loss of control, anxiety mounts and somatic process which tends to become discrete in pattern, and more diffuse, global and undifferentiated. Similarly the same differentiation can be seen in the cognitive, and behavioural process as the defensive responses to the anxiety signal breakdown.

Unconscious anxiety can not be measured, as it has no external reference. Unfortunately, much of psychosomatic research as have been based upon these assumed affects which are vaguely implicated in consciousness and expressed indirectly only in the symbolic form. Anxiety in some subjects in stressful situations can be nascent, in other words overt anxiety can appear in time after certain other indicators have made their presence known. Generally anxiety is unitary in the sense that no matter what its source is, how it came into being, the experience is dreadful and foreboding (Grinker, 1959).
Grinker and Speigel (1945) cited the experience from the second World War that many individuals regressed both psychologically and physiologically under extreme stress. When anxiety reached a certain level, the world seemed to be a dread and dangerous place. There was a marked decrease in perceptual efficiency and a tendency to react with a startle as if the slightest noise was an indication of some overwhelming threat.

1.3.2 Concept of Anxiety

According to Spielberger (1966), “Anxiety seems to be the dominant factor and is threatening to become the dominant cliché of modern life. It shouts in the headlines, laughs nervously at cocktail parties, nags from advertisements, speaks suavely in the board room, whines from stage clatters from the wall ticker jokes with sake youthfulness on golf course and whispers in privacy each day before the shaving mirror and the dressing table”.

The three main attributes of anxiety are specific pleasurable quality, efferent or discharge phenomena and the perception of these (Freud, 1933). Anxiety is characterized by subjective consciously perceived feelings of apprehension and tension which are accompanied by or associated with activation (arousal) of the autonomic system. Anxiety level of individuals fluctuated over time in response to both internal and external stimulation from which source, anxiety would be manifested in any given situation (Spielberger et al., 1958).
In learning theory, anxiety state is viewed as a complex process of largely internal response that has both stimulus, and stimulus-drive properties (Dollard and Miller, 1950). In learning theory, anxiety state is viewed as a complex process of largely internal response that has both stimulus, and stimulus–drive properties (Dollard and Miller, 1950).

1.3.2 State Anxiety and Trait Anxiety

Ambiguity in the conceptual status of anxiety arises from more or less indiscriminate use of the term to refer to two very different types of concepts. Anxiety is perhaps most commonly used in an empirical sense to state the condition of the organism that varies in intensity and fluctuates over time. But the term anxiety is also used to refer to a personality trait to individual differences in the extent to which different people are characterized by anxiety states and by prominent defenses against such states.

Empirical evidence of different types of anxiety concepts has emerged from factor analytic studies of Cattel and Schier (1958). They identified two distinct anxiety factors as trait anxiety and state anxiety. The trait anxiety factor was interpreted as measuring stable individual differences in a unitary, relatively permanent personality characteristic. The state anxiety factor was based on a pattern of variables that co-varied over occasions of measurement, defining a transitory state on condition of the organism which influenced over time. Component characterological variables that loaded the trait anxiety factor included “ergic tension”, “ego weakness”, “guilt proness” “suspiciousness,” and “tendency to embrassment”. Anxiety neurotics obtained high scores on the factor of physiological variables such as
respiration rate, systolic blood pressure markedly loaded the state anxiety factor, but had only slight loadings on trait anxiety.

Mandler and Waston (1966) argued that the emotional states of anxiety and distress can be deduced from the arousal following interruption coupled with unavailability of alternative responses. These two determinants of anxiety occur when the organism is helpless.

1.3.3 Competitive Trait Anxiety

Competitive anxiety is a personality disposition akin to trait anxiety. It reflects an individual’s tendency to perceive threat and experiences stress in situations that involve open competitions. Individuals with higher levels of competitive trait anxiety respond to competitive situations with state anxiety on transitory feelings of tension and apprehension more frequently and or more intensely than do those people with lower competitive trait anxiety. Literatures on competitive state anxiety portray anxiety as a multi-dimension phenomenon with relatively independent somatic and cognitive components. Somatic aspects of anxiety include perception of autonomic arousal and physiological responses. Cognitive anxiety expressions encompass worries or concerns about the adequacy and consequences of one’s performance.

1.3.4 Predictors of Competitive Trait Anxiety

Experience of stress and perceivenss of threat is possible when perception individuals believe that necessary resources are not available to meet environment demands in situations where important consequences are expected from such demand resource imbalances. Moreover, the variables
like self esteem, generalized expectancies for performance, the relative importance to an athlete of performing well and winning a tournament and the degree of negative affect typically experienced with poor performance, are highly associated with Cognitive and Somatic State Anxiety (Lewthwaite and Scanlam, 1989).

1.4 COMPETITION AND ANXIETY

Competition is an opportunity for success rather than failure. Players must learn as much as possible from their competitive experiences, analyze what they do well and what they don’t do well, and resume training with a new agenda and a renewed determination to improve. Competition as a reference point for players helps them to measure their own progress. Sometimes, the pressures of competition can result in athletes setting goals that are unattainable. Goals that are too high guarantee failure even when the athlete performs well. So players should set realistic goals. Generally, the goals of an individual are bred from their needs. In sports, the players’ needs are the need to have fun and the need to feel worthy. Certainly, when athletes have fun, they appear to be challenged, excited, stimulated and focused. Also, they express feelings of enjoyment, satisfaction and enthusiasm. When players have a need to feel competent, worthy and positive about themselves, sports can be a factor of threatening since there is the need of social security. Social evaluation and expectations of others are other major causes of anxiety. Athletes become anxious when they are uncertain about whether or not they can meet the expectations of their coaches, parents, peers or even themselves. The more uncertainty athletes have, and the more important they perceive the outcome to
be, the greater their feelings of anxiety. The very nature of sports involves an exhaustive evaluation of the skills of the participants. Any situation involving social evaluation of abilities that a player considers important can be threatening if he or she anticipates failing or receiving negative evaluations.

Most players place great value on athletic competence, and are particularly sensitive to appraisal of their abilities by others. Mistakes and errors, which are a natural part of the learning process, can be misinterpreted as failure or incompetence. These competitive pressures can result in players setting unrealistic standards of near-perfect execution, which virtually assures that they will fail. Hence, players have to learn that they should satisfy their need for fun by structuring their sport experience so it challenges and excites without being threatening. As players, it is essential to learn quickly that others judge their worth largely by their ability to achieve. To win is to be a success and to lose is to be a failure. This attitude causes tremendous anxiety in many young athletes.

1.5 ANXIETY AND ATHLETICS

A great deal of research has been devoted to the effect of anxiety on sports performance. Researchers have found that competitive state anxiety is higher for amateur athletes in individual sports compared with athletes in team sports (Simon & Martens, 1977). In addition, participants in individual non-contact sports have been found to report lower levels of state anxiety than participants in individual contact sports (Lowe & McGrath, 1971). This section will review this research from the perspective of the theoretical models discussed above.
Cognitive anxiety has been found to exert a powerful influence on performance. This statement holds true regardless of the individual's skill level. Participants in a collegiate softball tournament were put into one of two conditions: high situation criticality or low. While somatic anxiety did not differ in the two situations, those athletes in the high criticality condition had significantly higher levels of cognitive-anxiety (Krane, Joyce, & Rafeld, 1994). Clearly, the cognitive interpretation an individual gives to a situation exerts an effect. Researchers have found that athletes that are successful interpret arousal to be facilitative. Research conducted with an elite group of swimmers found that anxiety intensity levels were higher in subjects who interpreted their anxiety as debilitative than those who reported it as being facilitative (Jones, Hanton, & Swain, 1994). This has been found to be true of gymnasts (Jones, Swain, & Hardy, 1993) as well as basketball players (Swain & Jones, 1996). Gould, Petrchlikoff, and Weinberg (1984) have reported that the strongest predictor of cognitive anxiety was years of experience such that the more experience an individual had the lower the level of cognitive anxiety. This was supported by research conducted with a group of tennis players. Advanced subjects (individuals who had been participating in the sport for an extended period of time) reported more facilitative interpretations of their anxiety than novices (Perry & Williams, 1998). Similar results have been observed among a group of elite swimmers (Jones, Hanton, & Swain, 1994). Perhaps this is due to previous experience with arousal and how to cope. This conclusion is supported by the research of Jones, Swain, and Cale (1990), which found that cognitive anxiety was best predicted by an evaluation of previous performances, individual's perception of preparedness, and goal setting.
The amount of self-confidence that an individual possesses has been found to differ among elite and novice athletes. Research with a group of tennis players indicated that the advanced players had significantly higher levels of self-confidence (Perry & Williams, 1998). This has been found to be true of gymnasts (Bejek & Hagyet, 1996) as well as swimmers (Jones, Hanton, & Swain, 1994). The predictors of self-confidence identified by research are perception of preparedness, and external conditions (Jones, Swain, & Cale, 1990). Other researchers have found that the strongest predictor of self-confidence has been found to be the amount of ability that an individual believed he or she had (Gould, Petrchlikoff, & Weinberg, 1984). This makes sense given an individual’s previous experience in a given situation. Self-confidence has been found to account for a greater proportion of variance in performance than cognitive or somatic anxiety (Hardy, 1996). This suggests that the most powerful quality that elite performers possess is a high level of self-confidence which may act as a protective factor from cognitive anxiety.

Although the research conducted focusing on cognitive anxiety and self-confidence provides some insight into their effect on athletic performance, the interaction of these variables in conjunction with somatic anxiety provides a better understanding of the true effects. Among a group of 91 athletes ranging in age from 14 - 36 years old who participated in soccer, swimming, and track and field, those individuals with higher scores on self-confidence and lower scores on cognitive anxiety and somatic anxiety perceived their overall anxiety levels as more facilitative of athletic performance (Wiggins & Brustad, 1996). Research conducted comparing athletes competing in team sports (basketball)
with those competing in individual sports (track and field) has found that subjects competing in individual sports report significantly lower self-confidence and higher somatic anxiety than team sport athletes (Kirby & Liu, 1999). This is supported by a research that has been conducted with figure skaters as well. Martin and Hall's (1997) research demonstrated that skaters experienced greater cognitive and somatic anxiety prior to an individual competitive event than prior to a team competition. Perhaps this is due to a diffusion of responsibility that occurs in the team framework but not in an individual framework. Important gender differences have also been found by researchers focusing on the relationship between cognitive anxiety, self-confidence, and somatic anxiety. Females had lower self-confidence and higher somatic anxiety scores than males on the CSAI-2 (Thuot, Kavouras, & Kenefick., 1998). This research also focused on the location of an athletic event as well, finding that away games resulted in increased somatic anxiety and lower self-confidence. Finally, Thuot et al. (1998) found that adolescents, regardless of gender, experienced significantly higher levels of cognitive and somatic anxiety and lower levels of self-confidence as the ability of opponents increased. This was partially supported by research that had focused on the determinants of anxiety as well as gender. Among males, cognitive and somatic anxiety was rather strongly affected by their perception of opponent's ability and probability of winning (Jones, Swain, & Cale, 1991). Females' cognitive anxiety and self-confidence are determined by readiness to perform and the importance they personally placed on doing well (Jones, Swain, & Cale, 1991). These gender differences are indicative of the need to develop
interventions that are tailored to individual needs and the importance of considering all factors when developing an intervention.

Clearly, anxiety exerts a variety of effects on athletic performance. These effects vary based on sport, gender and level of experience. In order to facilitate peak performance by athletes, sport psychologists must consider the three different facts of anxiety: cognitive anxiety, somatic anxiety, and self-confidence. Given the research that indicates that successful athletes who interpret their anxiety as being facilitative is characterized by high scores on self-confidence and low scores on somatic and cognitive anxiety. Sport psychologists should work towards achieving this ideal state among their clients.

1.6 SELF CONFIDENCE

Sport psychologists define self-confidence as “the belief that one can successfully perform a desired behaviour” (Bandura, 1984). Confident athletes expect success and have a high level of self-belief that appears crucial in determining how far they strive towards their goals. It is largely confidence that determines whether people give up or remain committed to their goals following a series of setbacks. For the sake of simplicity, self-confidence may be considered as conceptually opposite to cognitive anxiety (negative beliefs and performance worries). Both are related to one’s beliefs and both, ultimately, influence one’s performance. Coaches can often see fluctuations in the balance between these two opposing states reflected in the behaviour of their athletes. While confident athletes are not afraid of making mistakes, often taking calculated risks in order to take charge of a situation, self-doubters often
avoid responsibility, becoming over-conservative and paralysed by fear of failure. At this puncture, it is appropriate to think of a football striker who has not scored for a number of successive matches and is riddled with self-doubt. When presented with a half-chance which would usually result in a snap-shot, he may elect to avoid responsibility and pass to a team mate.

According to psychologist Albert Bandura, performers’ situational-specific confidence, or ‘self-efficacy’, is based on four primary sources of information, represented graphically in Figure 1 below.

Unfortunately, the flip side of this principle is that repeated failures can give rise to a downward performance spiral and a ‘snowball effect’ whereby a performer starts to believe that success is unattainable. Of course, such an athlete does not mysteriously lose his or her physical skills and talents, but without confidence in these abilities high-level performance is rarely achieved.

Bandura’s work related to self confidence highlighted the following aspects: i) for the coach the perception of athletes are of overriding importance
was, ii) athletes could gain confidence by viewing successful performance of others at similar levels better known as ‘modelling’ or ‘vicarious experience’, iii) coaches can build confidence among their athletes by verbal persuasion i.e confidence building measure, iv) confidence building could be done using deception to persuade their athletes that goals can be achieved – of which more later. Verbal persuasion can also take the form of ‘self-talk’, whereby the athlete convinces himself that success will follow. Clearly, confidence is enhanced by good preparation, planning and a sense of optimism. Conversely, negative thinking and pessimism can undermine performance and limit progress. By expecting failure, we set our belief system to a negative channel and start favouring information that is consistent with these beliefs.

1.7 STRESS AND PERFORMANCE

Pribram and McGuinness (1975) identified three separate but interacting neurophysiological systems involved in the control of attention. 1. An "arousal" system located in the reticular formation and anterior hypothalamus and controlled by the amygdala. It controls all phasic physiological responses and in particular the orienting reflex. It is proposed as affecting or energizing perceptual processes. 2. An "activation" system in the medial forebrain bundle, lateral hypothalamus, and basal ganglia which is responsible for tonic readiness to respond. It is proposed as affecting motor preparation processes. 3. An "effort/co-ordination" system centered in the hippocampal and septal areas which co-ordinates the arousal and activation systems to establish relationships between perception and effort (i.e., decision-making). It is proposed as the source of demanding effort on the part of the organism.
"Stress will arise whenever the effort mechanism is either seriously overloaded or fails to accomplish the necessary energetical adjustments. Stress may arise because effort fails in correcting too low or too high level of arousal, too low or too high level of activation, or because there is a failure to supply sufficient energetical resources to decision-making. Arousal is a response to input whilst activation is viewed as being instrumental in preparing the action." Many sports skills require an athlete to carry out cognitive functions as quickly and efficiently as possible.

According to Jones and Hardy (1989), stress and cognitive functioning in sport is one of the major concerns of any athlete striving for a peak performance in controlling his/her internal state. A deciding factor in competitive performances is not the degree of skill of the athlete, but the ability to perform that skill under competitive stress. This paper considers the relationships between stress, cognitive functioning, and sports performance.

1.8 ANXIETY AND PERFORMANCE

Stress is a state that results from the demands that are placed on the individual which require that person to engage in some coping behavior (Jones, 1990). Arousal can be considered to be a signal to the individual that he or she has entered a stressful state and is characterized by physiological signs (Hardy et al., 1996). Anxiety results when the individual doubts his or her ability to cope with the situation that causes him or her stress (Hardy et al., 1996). Another important point that needs to be clarified is the difference between state and trait anxiety (Spielberger, 1966). While state anxiety can be considered to be more situational in nature and is often associated with arousal
of the autonomic nervous system, trait anxiety can be thought of as a world
view that an individual uses when coping with situations in his or her
environment (Spielberger, 1966). Trait anxiety influences performances in that
individuals with high trait anxiety will attend more to information related to
state anxiety (Hardy et al., 1996). Previous research outside of sport and
exercise psychology has indicated that individuals with high trait anxiety who
are state anxious attend to threat related information, while individuals with
low trait anxiety who are state anxious will attend away from threat related
information (MacLeod, 1990). Within the context of sports, those individuals
who are low trait anxious and experience high state anxiety would find it
facilitative to a peak performance; but, those individuals who are high trait
anxious and experience state anxiety will find it debilitating to athletic
performance (Hardy et al., 1996).

1.9 STATEMENT OF THE PROBLEM

The purpose of the study is to spotting psychobiological based success
traits with overall playing ability of volleyball players at state level.

1.10 HYPOTHESES

The hypotheses formulated in the present study are as follows.

1. It was hypothesized that there is a systematic functional association
   between the psychobiological traits based success traits and the
   overall playing ability of volleyball players.
2. It was hypothesized that there is a significant association within the psychobiological traits based success traits namely cognitive anxiety, somatic anxiety, self confidence, general fear, systolic blood pressure, diastolic blood pressure, heart rate and body temperature.

1.11 SIGNIFICANCE OF THE STUDY

The significance of the present study is given here under.

1. The findings of the present study would help the players to identify their own level of psychobiological traits and make them aware of these.

2. The equation formulated using the model fitting results of the present study in predicting the overall playing ability of volleyball players would be a source for the physical education teachers and coaches to study the influence of psychobiological traits in the overall playing ability of volleyball players.

3. Having the status of psychobiological traits of the players in the competitive situations at hand, physical education teachers and coaches can implicate the psycho regulatory technique as a part of their training to facilitate the players for needed coping ability.

4. Spotting the psychobiological based success traits in the overall playing ability of volleyball players can help the coaches, trainers and physical education teachers to design scientific means in maximizing the performance of volleyball players.
5. Since earlier studies confirm the influence of psychological traits on individual performance, the findings of the present study would be a viable source for coaches and physical educationists to develop a concrete, sound, and scientific training programme.

6. Findings on the relationship within the psychobiological based success traits spotted and between the psychobiological based success traits spotted and overall playing ability of volleyball players in the present study would help the players to wield control over one another.

1.12 DELIMITATIONS

The present study was delimited into the following aspects.

1. In determining the success traits pertaining to overall playing ability of volleyball players, the present study was confined to the selected psycho-physiological traits only.

2. In selection of psychological traits, it was further delimited to traits namely fear of experiencing shame and embarrassment (FSE), fear of devaluing one’s self-estimate (FDSE), fear of having an uncertain feature (FUF), fear of important others losing interest (FIOLI), fear of upsetting important others (FUIO), general fear, cognitive anxiety, somatic anxiety and self confidence which are closely associated with performance of players very specifically during the competitive situations.
3. In selection of biological traits, it was confined to the traits namely systolic blood pressure, diastolic blood pressure, heart rate, body temperature and age alone.

4. As for as subjects of the present study are concerned, it was delimited to players who were the participants of a state level intercollegiate volleyball tournament.

5. Selection of players as subjects for the present study were further confined to men section only.

6. The age of the players’ was fixed at the age group of 18-24 years.

7. Since the present study was mainly conceived with spotting the success traits towards the overall playing ability of the volleyball players, it was delimited to the period of competition only in order to ensure the quality in data structure.

8. Further to ensure the quality of data, it was confined to the state level tournament only which was recognized by the Tamil Nadu State Volleyball Association.

9. For measuring the psychological traits of volleyball players, it was confined to the standardized tool of Competitive State Anxiety Inventory – Form 2 and the Performance Failure Appraisal Inventory.

10. In the present study to have the homogeneity in selection of samples and to overcome the differences in the skill levels, on the base of
selection of samples, it was confined to the performance on overall playing ability of the players in the range of 6 to 7. Further in selecting the teams to select the players as samples for the present study, further it was delimited to the teams who were qualified for the quarter finals in state level inter-collegiate Volleyball tournament which is considered as the second biggest tournament in India.

1.13 LIMITATIONS

The limitations of the present study are as follows.

1. The environmental pressures from the natural forces on players during the game situations and the competitive period were not considered in the present study.

2. Since the present study mainly comprised psychobiological traits, the feelings stem from the players on collection of data other than sports related were considered as one of the limitations of the present study.

3. Geographically the area of the present study was a very large one. Living conditions of the subjects also are varied in socio-economic conditions. Since the subjects of the present study hail from varied socio-economic conditions, the influences of those factors on the subjects were considered as a limitation.

4. In nature the players might have been differed on the characteristics that are needed for the success of the game because of their positional play. But in this competitive world, to attain the success in
high level tournament as in the case of the present study, players are in need to perform well in characteristics that are underlined the success of the game. Thus the influence of players positions, if any, on criterion variables which was considered as a limiting factor in the present study.

1.14 DEFINITIONS OF OPERATIONAL TERMS

Anxiety

It is a negative emotional state with feelings of nervousness, worry and apprehension associated with activation or arousal of the body.

Cognitive Anxiety

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

Somatic Anxiety

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

Self Confidence

It is the belief that one can successfully perform a desired behaviour.
Volleyball

Volleyball is a game played indoors or outdoors by two teams whose members seek to score points in the course of hitting a ball back and forth across a net.

Anxiety

Anxiety is defined as “a tensional state of such severity that work efficiency was interfered with and medical advice was sought, and which was characterized by one or more of the following complaints. Persistent feelings of tension and strains irritability, unremitting, worry, restlessness, inability to concentrate, feelings of panic in everyday life situations” (Malmo and Shagass, 1949).

Competitive Anxiety

Competitive anxiety is a personality disposition akin to test (trait) anxiety, that reflects an individual's tendency to perceive threat and experience stress in situations that involve sport competitions (Martens, 1977).

Cognitive Anxiety

Cognitive anxiety expressions encompass worries or concerns about the adequacy and consequences of one's performance (Morries et al., 1989).

Somatic State Anxiety

Somatic state anxiety, a measure of one's perceptions of his physiological assessments such as heart rate and brain wave activity (Morries et al., 1989).