CHAPTER - I

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1.0 INTRODUCTION

In sports, every athlete aims at bringing the loyal to him and his own country. For which individuals in sports and games are striving to show their excellence to win the event in competitions in which they participate. As a basic need of competitive sports, success stimulates the participants to think about the pros and cons about the way of attaining. In high level competition winning is just a hairline margin over to the looser. But such a hairline margin gained by the athlete because of his mental ability to accommodate the competitive pressures. Generally in sport, competitive situation involves demands that are placed on athletes to perform their very best, often under intense pressure and specific conditions. As the outcome of the event, success is generally of great importance and highly valued by both the athlete and others. At the same time success is often perceived as highly uncertain as the competitors’ are almost identical in skills. Such a nature of sports competition makes it a powerful stressor, which, consequently, can increase sudden intense emotional stress responses among athletes.

From a psychological perspective, stress is generally discussed in relation to an imbalance between the demands of the situation encountered by an individual and the perceived ability to cope or adjust to these demands (Lazarus, 1991). Stress can have beneficial effects in terms of mobilization of bodily resources to meet demands, but also detrimental effects when the perceived demands exceed the individual’s resources (McEwen, 2002). One of various stress responses anxiety an unpleasant emotion evoked when the individual appraises the stressful situation as threatening. 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 or during the event or a negative one as evident in both externally derived pressures.

In sports, anxiety arises at the moment the athlete receives the message about the time of competition. Then the anxiety about the competition progressively increased to peak or optimum till to zero hour of competition. Thus the competitive anxiety takes place among the players. During this course, the individual cognitive pressures drag the individual to negative mental health. It affects the players’ physical and physiological mechanism. It results in somatic anxiety. Somatic anxiety is a byproduct of cognitive anxiety. In such a state no one reaches the constructive decision rather they are tempted to the situation of approach and avoidance conflicts. These types of situations decline the amount of self-confidence among the player.

Hence it is a need of hour for sports participants to give due consideration to their mood states and strengthen their psychological constructs that are needed for getting success in sports. Having the psychological strengths an athlete can regulate his own physiological system optimally which in turn help them to execute his physical skills successfully in high level sports competitions. Thus such a triangular relationship exists among the psychological, physiological and physical capacities of an athlete, is the conceptual theme of the present study of concentrating the psychological skill training of Visual Motor Behaviour Rehearsal on development of psychological skills of athletes.

Following this rationale, so as to understand the nature and scope of the study, the psychological aspects of sports performance, psychological skill training, assumptions, significance, delimitations, limitations and definition of terms described in their respective heads are presented in this chapter as follows.
1.1 PSYCHOLOGICAL ASPECTS

In the present study the selected psychological aspects of competitive anxiety, its sub components (cognitive, somatic and self confidence) and mood states were analysed. The nature of theses aspects with its various dimensions is explained as follows.

1.1.1 ANXIETY

Anxiety is the sense of uneasiness that is experienced in the individual’s relationships with other people. In any situation where the person’s vanity is undermined, fear arises. The conjunction of this fear with the vanity creates anxiety. Specific symptoms of the anxiety include heart palpitation, disturbances of respiration, sweating, tremor and shuddering, vertigo and other physiological and behavioral 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). Anxiety as a personality trait (A-trait) regarded as: a motive or acquired behavioral disposition that predispose an individual to perceive a wide range of objectively no dangerous circumstances as threatening, and to respond to these with A-state reactions disproportionate in intensity to the magnitude of the objective danger”. Anxiety as a state (A-state) “subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system” (Spielberger, 1966).

Anxiety can be sub-divided into somatic and cognitive anxieties. Somatic anxiety refers to the bodily symptoms of autonomic reactivity; butterflies, sweating, increased heart-rate and shaking. Cognitive anxiety
refers to the negative concerns about performance, lack of concentration and poor attention. Levels of anxiety can affect athletes individually; the effects of anxiety on performance are largely attributable to whether the athlete perceives anxiety to be facilitating or debilitating (Gill, 2000).

1.1.2 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, the persona pattern is evoked and recognizable with decreasing psychological defenses, anxiety mounts and somatic process which tend to become discrete in pattern, and more diffuse and undifferentiated. Similarly the same differentiation can be seen in the cognitive, and behavioral 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 has been based upon these assumed affects which are vaguely implicit in consciousness and expressed indirectly only in the symbolic form. Anxiety in some subjects in stressful situations can be nascent that is 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 or how it came into being the experience is dreadful and foreboding (Grinker, 1958).

1.1.3 COMPETITIVE ANXIETY

Competitive anxiety is viewed as perceived feelings of nervousness and or physical tension associated with activation in an athlete due to an imbalance between the demands of performance and the individual's ability to achieve this objective (Gould et al., 2002). This imbalance is likely to
induce stress, which indicates anxiety is a negative emotional state. Because of this perception, most people view anxiety as a negative construct. This can also affect perceptions in sport competitions, where a large majority of athletes consider anxiety to be debilitative towards performance, which may result in decreases in performance. However, the view of anxiety only having an intensity component has been challenged in recent years. Several studies (Jones & Hanton, 1996; Jones & Swain, 1992, 1995; Jones et al., 1993; Jones et al., 1994; Perry & Williams, 1998; Wiggins, 1998) have concluded a directional component to anxiety exists; suggesting that the way athletes view their anxiety symptoms prior to a competition can have a significant effect on performance. Those athletes, who interpret their anxiety symptoms as facilitating, or in a positive manner, are more likely to perform better than athletes who interpret anxiety symptoms to be debilitating, or in a negative manner.

1.1.4 COMPETITIVE TRAIT ANXIETY

Martens (1977) describe competitive trait anxiety as the nature of individuals which predispose them to perceiving competitive sport situations as threatening, and as a result, responding with state anxiety. Competitive anxiety is a personality disposition a kin to trait anxiety. It reflects an individuals’ tendency to perceive threat and experience stress in situation that involve open competition. 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 suggest 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.

1.1.5 COMPETITIVE STATE ANXIETY

Competitive state anxiety is viewed as a competitive, situation-specific emotional state where apprehension and tension occur due to perceptions of threat in the present situation. Those individuals with high trait anxiety are predicted to perceive more conditions as threatening, and therefore are more likely to become anxious than lower trait anxiety individuals. Earlier researchers in sports psychology were predominantly interested in the arousal construct, but more recent research has frequently focused on state anxiety in preference to arousal. State anxiety is generally regarded as an unpleasant emotional reaction related to stressful situations, in which the arousal component is one inherent element (Woodman & Hardy, 2001). An important distinction between arousal and anxiety is that anxiety involves interpretation of the situation as threatening, whereas arousal is unrelated to any such interpretations (Hammermeister & Burton, 2001). Moreover, anxiety has been suggested as a better predictor of the performance outcome than arousal when the tasks are of a more complex nature and contain a higher cognitive load (Arent & Landers, 2003).

Sport-related cognitive anxiety (cognitive A-state) was described as being closely related with worry, and included negative expectations about performance and negative self-evaluation. Somatic state anxiety (somatic A-state) was referred to as the individual’s experience of physiological and affective parts of the anxiety response, stemming directly from autonomic arousal. Hence, perceived responses such as rapid heart rate, tense muscles, shortness of breath and “butterflies in the stomach” were suggested to reflect indicators of increased somatic state anxiety among athletes. Yet, these symptoms were viewed to only affect performance if they preoccupied the athletes’ thoughts (Martens et al., 1990a).
1.2 EMOTION, MOODS AND COPING

Athletes' experiences of being anxious are referred to mood state. Emotion and mood are closely related, on a theoretical level they refer to distinct constructs (Beedie, Terry, & Lane, 2005). Moods are proposed to predominantly impact the cognitions of the individual. Emotions on the other hand, are often regarded as short-lived and more intense reactions tied to a specific event or object, evaluated as significant for the individual, that could be real but also subjectively appraised (Lane & Terry, 2000; Vallerand & Blanchard, 2000). Moreover, unlike moods, emotions are suggested to not only make individuals feel or think something but also to increase the urge to act or alter the behaviour.

1.3 ANXIETY AND PERFORMANCE

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 with who are high trait anxious and experience state anxiety will find it debilitative to athletic performance (Hardy et al., 1996).

1.4 PERFORMANCE DETERIORATION UNDER PRESSURE

Performance deterioration under pressure disrupts the normal and automatic processing, and the performance regresses to an earlier stage of skill acquisition (Masters, 1992). As Pijpers and colleagues (2003) stated: “performing a learned task in a threatening situation can be considered as performing a “new”, unfamiliar task for which a new solution has to be found”. Repeated exposure to a stressful competitive situation has also been proposed to teach the athlete not only how to perform the skill properly but also how to execute it under pressure. Mullen, Hardy and Tattersall (2005) failed to find support for the conscious processing hypothesis, but suggested that multiple mechanisms, including both conscious processes and distraction effects, might affect performance in a complementary manner depending on the nature of the task.

Self Confidence

Self confidence may be the most critical self-perception in sport psychology (Gill, 2002). Self-efficacy is a situation form of self-confidence or the belief that one is confident and can perform within a specific situation. Self efficacy is very important in a sport where the performer must believe they can perform well at the required time. Bandura (1977) stipulates that self-efficacy is directly related to athletic performance. Increases in self-efficacy are mirrored by improvements in performance. Subsequently decreases in performance limit both performance and training (Silva & Stevens, 2002).
Visual-Motor Behavior Rehearsal (VMBR) is a psychological skill training extensively used in the field of sports to develop the psychological aspect of athletes (Weinberg, Seabourne, & Jackson, 1981). VMBR involves three phases, first, an initial relaxation phase to retrieve a psychological state conducive for mental imagery, second, visualizing performance through various imagery techniques, and finally, performing the actual skill under realistic conditions.

By repeating this process with the intended skill during training it is hoped that real-time feedback ensues between mentally coordinating the visualization and imagery component with actual performance, thereby, minor changes in either the skill, and/or the imagery process, can be maintained in parallel. The rationale behind VMBR is keeping mental imagery and skill performance closely associated in training, which should correspond to an increase in performance because the individual can fine-tune both processes simultaneously. Before VMBR can begin, the mental imagery techniques are required to be learnt and understood within the context of performance, otherwise, VMBR can be detrimental to the motor skill activity. This is because insufficient attention during motor performance may result if the individual is concentrating to heavily on the method of mental imagery due to unfamiliarity with procedure (Lane, 1980).
1.6 STATEMENT OF THE PROBLEM

Performance in sports is a product of both physique and mind as these two are functioning at equal distant. The present day sport training emphasis mostly the physical training to develop the components related physique, needed for sport, but now days either to attain the peak performance or sustain the peak performance, sports participants have to face lot of competitive pressures in various corners. When an athlete does not possess enough psychological skills to cope up with stressful situations then it will affect both physical and physiological skills gained form physical training.

Resulting of this, an athlete failed to produce the performance even having the potentials. Hence in sport developing the psychological skills is a need of the hour. Having the thirst, the investigator has taken the present study to develop the psychological skills that will enable the athlete to maximize the performance.

1.7 HYPOTHESES

The hypothesized formulated in the present study is as follows.

1. The changes made on psycho-physiological variables from the baseline to post treatment of psychological skill training may be a significant one.

2. There is a significant mean difference on psycho-physiological variables between psychological skill training (Visual Motor Behaviour Rehearsal) group and control group.
1.8 SIGNIFICANCE OF THE STUDY

The significance of the present study is as follows.

1. As the present study is mainly concerned with developing the psychological skills of athletes, measuring the psychological aspects of players before they imparted to treatment helps the athletes to identify their level on psychological aspects.

2. The results on evaluation of psychological skills of athletes before treatment help the trainers, physical education teachers and coaches to understand their athlete’s level of psychological skills which enables them to train accordingly and place them in events based on their psychological nature.

3. Earlier studies have already proved that mind is playing crucial role in deciding the performance of sports participants. Hence, the results of the present study on psychological training helps the athletes to extract their full potentials which improve the performance of athletes.

4. In nature, in the psychological skill training imagery will be used as a part of training, which demands the athletes to recollect their previous experiences at various occurrences with varied intensities. In enables the athletes to understand their earlier performance visually, this helps them to make correction wherever necessary. Thus the results of psychological skill training develop the self-confidence and apprehend the situations even during high level competitions.

5. The results of the present study would enhance the awareness on psychological skill training and its need in sports among the physical education teachers, training and coaches.
6. Having the healthy aspects of psychological skills derived from psychological skill training athletes may be benefitted in their day to day life in addition to sports careers

1.9 DELIMITATIONS

The present study is delimited to following aspects.

1. As subjects for the present study, athletes who participated in track and field events were considered.

2. In selecting the athletes for this study, it was confined to boys who are in the stage of adolescence only.

3. The range of the age for subjects was confined to 15 to 17.

4. As psychological variables, it was confined to cognitive state anxiety, somatic state anxiety, self-confidence, anger, tension, depression.

5. As physiological variables, the present study was confined to heart rate, systolic blood pressure and diastolic blood pressure.

6. In measuring the psychological variables, it was confined to psychological tools namely, competitive state anxiety inventory and Brumers mood scale.

7. For collecting the data on psychological variables used in the study, it was delimited to the competitive situation. i.e., a day before the competitive was used to measure the variables for both prior to and after the treatment period.

8. In the present study, as a psychological skill training, it was confined to Visual Motor Behavioural Rehearsal technique developed by Suinn.

9. As treatment period, it is confined to 12 sessions throughout the training period of twelve weeks.
1.10 LIMITATIONS

The following factors are considered as limitations in the present study.

1. The life style, food habits and the family background of the subjects were considered as limiting factors.

2. The influence of individual motivational structure on the response of subjects while collecting data was not taken into account.

3. The influence of socio economic conditions prevailing in the performance of criteria variables are also considered as a limiting factor.

1.11 Definitional Terms

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 every day life situations" (Malmo and Shagass, 1949)

Competitive Anxiety

Competitive anxiety is a personality disposition akin to test (trait) anxiety, that reflects an individuals 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).

Cognitive Anxiety

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

Somatic Anxiety

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

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 sports competitions (Martens 1977).

Self-Confidence

Self-confidence may be defined as the amount of ability that an individual believes that he or she has (Gould et al., 1984).
Heart-Rate

Heart-rate or pulse-rate is known today is the rate of beating of the heart per minute.

Blood Pressure

“Blood pressure is the pressure in a blood vessel (or) the force that the blood exerts against the wall of vessels.” (Guyton, 1980).

Systolic Blood Pressure

The highest level to which the arterial blood pressure rises during the systolic rejection of blood from the ventricles (Morehouse and Miller 1976).

“Systolic pressure is the highest blood pressure of the cardiac cycle occurring immediately after systolic of the ventricles of the heart” (Guyton 1980).

Diastolic Blood Pressure

“Diastolic pressure is the lowest arterial blood pressure of the cardiac cycle occurring during diastolic of the heart” (Thomson 1985).

“The lowest level to which the arterial blood pressure tells in the interval between successive heart beats” (Miller 1976).

Physical Exercise

Physical Exercises improve the circulation of voluntary system, thereby resulting in better muscular development as a result of improved function of the muscles.
1.12 Operational of the Definitional Terms

Anxiety

Anxiety state is viewed as a complex process of largely internal response that has both stimulus, and stimulus-drive properties.

Somatic anxiety

Somatic anxiety refers to the bodily symptoms of autonomic reactivity; butterflies, sweating, increased heart-rate and shaking.

Cognitive anxiety

Cognitive anxiety refers to the negative concerns about performance, lack of concentration and poor attention.

Psychological Skill Training

Psychological Skill Training refers to systematic and consistent practice of mental skills such as imagery, arousal regulation, increased motivation and commitment, confidence, Attention and concentration, mental plans and mental preparation used to enhance performance.

Psychophysiology

Psychophysiology is concerned with the physiological bases of psychological processes as it studies the changes occurred on physiological system of an individual due to the impact of psychological aspects during the competitive conditions.

Visual Motor Behaviour Rehearsal Training

VMBR is psychological skill training, underlies the cognitive training technique combining progressive relaxation and mental practice. It includes relaxing the athlete's body; mental practice related to the demands
of the athlete's sport; and imagery to mentally practice a specific skill in a lifelike stressful environment.

**Adolescence**

Adolescence extends from onset of puberty till sexual maturation is completed usually it ranges in boys from 13-15 yrs of age.