

## PRECOMPETITION ANXIETY AND STRESS IN TENNIS: REVIEW OF LITERATURE

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**Abstract:** *The purpose of this project is to examine the impact of competitive stress on tennis athletes and propose solutions for controlling and treating it. Pre-competition stress is a negative feeling for an athlete, which most often comes from expecting a victory. In the present work a general reference is made initially to human stress, which is caused by a variety of factors, whether specific or not, afflicting a large part of the population. Then follows an introduction to the basic features of pre-competition anxiety, followed by an observation on the psychological stress-relief skills and how they can be applied. In conclusion, the overcome of the stressful situations depends on maintaining focus of predefined goals, gaining competitive experience and preserve emotional balance during the process.*

**Key words:** *stress, emotions, psychological adaptation, sports competitions, sport performance.*

### 1. Introduction

The term anxiety and especially the anxiety before the race is not always clear although both coaches and athletes often refer to it. The term "pre-competitive stress" contains the word stress that derives from agitation, i.e., drowning, and means excessive anxiety and mental distress where they most often come from a possible over-anticipation of an event [5], [20], [22].

That kind of expectation is that of an athlete or an athlete before the race. Researchers differ on the definition of stress and on how it is scientifically approached for examination. The problem is that stress is a theoretical concept that cannot be observed, such as we can observe somebody moving nervously or trembling. What can be observed is a part of the bodily reactions that is caused by a mental state of anxiety that is not visible and that is why the concept is confused, and which happened,

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happens and will often be an important subject of study [7].

The causes of anxiety can be attributed to many and different factors, such as specific events, a lifestyle or a special effort. Some events, such as the loss of a loved person, the experience of a violent or unpleasant event, can have a decisive impact on everyone, making them feel emotionally charged. In many cases, one's beliefs, feelings, and behaviors in relation to sources of stress in combination with their physical condition determines the degree to which each of us feels pressured. That is why people do not react in the same way to the same situations [31].

The intense pressure of short or long duration can cause the following: quarrels, the possibility of a divorce or marriage, abandonment, minor injuries or illnesses, a dismissal from the workplace, etc. Over the years, there are other sources of "stress" that are related to:

1. Addiction to substances: smoking, drinking alcohol or taking drugs have a serious impact and may increase the risk of developing chronic diseases, such as cardiovascular disease or depression or diabetes.
2. Characteristics of a person's personality: The difficulty of expressing emotions such as anger, frustration, guilt or low self-esteem affects negatively the organism.
3. The level of interpersonal relationships: The inability to find someone to trust and be able to express their feelings, confirm their choices, or feel excluded from their surroundings creates intense anxiety.
4. The profession: Feeling unable to control things, constant searches for ways to improve, or lack of self-concentration diminishes the quality

of life. In the case of sport that we will examine in this project self-esteem is mainly responsible for more players' maneuverability in relation to their physical or cognitive stress [4].

Till nowadays, many definitions of stress have been given by experts and non-specialists alike. Some identify anxiety with fear and regard it as a common reaction in humans and animals and others with suspense. It would be better, however, to consider stress as a reaction to distress against present or past stimuli. Stress is also related to the future, individual or social developments [9].

The ability to deal with stress and pressure is an integral part of sport, especially among athletes. But most of the time anxiety is unpleasant and is often associated with uncertainty and anxiety about what will happen. This view gives stress the concept of excessive emotional tension and mobilization, in relation to the anxiety and uncertainty that is observed about what is happening to everyone at the moment or what is expected to happen. This is the so-called 'connected stress'. Note that all that has been mentioned so far does not imply so-called "pathological anxiety", which is too much worry about something that is waiting or is about to happen, but it is not finally happening [2], [24].

Simopoulos [25] says that if a reaction is excessive, it is judged by comparing it to other people who share the same qualities (age, gender, occupation, etc.). It is obvious from what has been mentioned here in the present work, how difficult it is for one, even if a specialist, to accurately define the stress. This difficulty is quite common in almost all psychological problems and issues that cannot be addressed in a few words. So justified is

the confusion that most people feel when dealing with stress and which is often not stress, but some emotions, more or less intense. Creative stress is a term that raises many questions such as: is this term correct? Is there creative stress? This seems to be partly the case. This is what a tennis athlete feels before serving, i.e. hits the ball several times or asks for a towel to wipe his sweat, or what the athlete of the high jump does shortly before he jumps, that is, he shakes his legs, tightens and unzips his punches, arranges his shorts, and generally all these movements mentioned for both athletes, many people refer to him as nervousness, "the term is anti-scientific" writes Simopoulos or according to sports reporter, preheating.

Competition is a term that is directly linked to human stress. One has to wonder what has deeply affected the soul of today's people: the blind passion for money and glory. No deep psychological analysis has been done on these motives yet, but it seems very likely that, except for greediness of ownership or social promotion, stress plays a key role. The stress of being overwhelmed by others, or not facing an exhaustive and eventually failing to meet the demands of others (for example coach, social and family surroundings) creates a sense of vanity and insecurity. The body perceives emotions [17], [27].

From ancient times, the fear has accompanied man during his evolution. When fear grows stronger, we call it terror. Also, several contemporary authors [15], [26] considers, whatever its form is, affects the body directly and in the long run. It reacts immediately when one begins to feel that they are going through a stressful situation. The body in turn

begins to secrete chemicals that lead to: Increased heart rate, blood pressure, digestive process slows down, a large amount of sweat is secreted and the pupils dilate. The body in general is on alert until the brain is instructed to relax and stop producing the above chemicals so that the body can return to its normal function. It takes 30 to 60 minutes at least for the body to get rid of these substances, so if it feels pressure again this body will not be able to relax. Hypertension is a first sign of the inability to recover from stress, which can also affect the body and brain. When the brain is overloaded, one cannot concentrate and it is the first result of the emerging stress. It could also be described as a sign that the body indicates that it needs to discharge and prevent long-term adverse effects. Low and intense tension is not harmful, as long as it is not frequently experienced, so that the body can return.

Chronic stress, on the other hand, results from constant pressure. In the human body, the cardiovascular system, the nervous system and the immune system are most affected by chronic stress. It has a significant effect on the immune system, helping to understand the way it affects one's health as a whole. When stress weakens the body, it is more susceptible to illness or chronic illness.

## 2. Methods

This study was elaborated following the identification of the sources in the specialized literature that focused on the concept of anxiety and stress in general and in tennis in particular. There were accessed bibliographic sources that aimed at the field of psychology, but also studies that refer to interdisciplinary fields, of

these latter ones of interest were those with a predilection oriented towards sports psychology and sports training. In this regard, various international databases were accessed (Web of Science, Scopus, Pub Med, Springer Link, DOAJ, and Google Scholar). Also, we watched some interviews with prestigious personalities who study and investigate the anxiety and its reactions in humans, we visited sites of psychotherapists to complete as much as possible the conceptual area of our study topic.

In order to identify these bibliographical sources we used the following terms in our search boxes: anxiety, stress, precompetitive stress, adaptation to stress in tennis. We focused mainly on sources after the year 2015, trying to choose the newest ones.

### 3. Results

Self-esteem is threatened when an athlete struggles before the race. This reaction is a negative feeling. The stress is therefore caused when the athlete realizes that he is not capable of meeting the requirements of the race and expects that the consequences of his participation will be negative. The intensity just before the race is greater for individual athletes such as tennis, where social appraisal is greater than that for group games, the intensity of emotions can be high even after the competition is over.

In an effort to synthesize [10], [11], [19], [38], interdependent stress reactions are classified into:

a) Behavior: Changes in sleep and rest, eating appetite, digestive process or the presence of "nerves" are phenomena that indicate the existence and size of stress;

b) Physiological: Increased sweating and changes in the autonomic nervous system are phenomena that also determine the existence of stress;

c) Psychological: Usually written tests seek to somehow separate the athlete's trait anxiety from stress. As a particular condition (state anxiety).

Many scientists [8], [14], [21], [25] have developed stress-measuring instruments for athletes. There are certainly reasons that contribute to creating a favorable climate for competitive anxiety. Although there are individual differences in the occurrence of competitive stress in repetitive racing conditions, there are other factors that predispose athletes that need to be considered. Some of the athletes' personal perceptions of their athletic ability, the expectation of success in sport, the expectation of negative feedback on their performance, the relationships among athletes and parents, athletes and other adults and friends and the history of failures and successes are some of them:

1. Personal Fitness Perception: The way that every athlete perceives his or her personal performance ability is a process of comparison with other athletes that starts at a very young age and continues until the end of his or her athletic career. This comparison inevitably generates negative tension (stress).
2. Success expectation: Success is defined differently by different individuals. For some, success is about winning, while for others it is about doing well. However, the athlete's expectation of success is an important element of competitive stress.
3. Expectation of negative reviews: Sport offers many evaluation situations.

4. Interestingly, studies have found that adult or significant individuals are a greater source of stress for athletes than their peers. Particularly in athletes who did not exhibit stressful reactions even after negative personal performance, anxiety appeared when they expected a negative evaluation from their significant or close people.
  5. Relationship between parents and athletes: this kind of relationship is an invisible factor that influences the development of their personality. Positive and negative feedback on various behaviors is the crucial element in the process of raising a child. Children who are brought up with obvious disagreements (different measures and weights) in their reward and punishment tend to behave to this way. That is, they behave inappropriately, because they are not sure what the rules of the "game" of life are. This inability is also transferred into the game they play every day, in sports. Children who are brought up with a constant disposition to be punished by their parents become insensitive to punishment and cause discipline problems at school, on the field and at all sporting events (see Hooligan). Children who are brought up with a balanced proportion of rewarding punishment from their parents become more capable and more effective in both sports and situations in the "games" of life.
  6. Relationships between friends and teammates: Almost all athletes know the importance of the opinions and ratings of their friends and teammates. Sport creates an environment of interdependence such that inadequate appearances and mistakes affecting others must necessarily be treated with leniency by teammates.
  7. History of Failures and Successes: Failure can contribute to competitive anxiety in at least two ways. First, continuous failures increase the chances of athletes, friends, and teammates being badly evaluated. Second, repeated failure can lead to the perception that every sporting event is a threat to the athlete himself. All these are essential elements for creating stress before a race of an athlete, who must overcome it for a good and within the scope of his goals. So there comes the science of sports psychology to help overcome these problems.

According to the 1983 Olympic Committee of America, there are three areas in which sports psychologists are involved: that of clinical work, education and research. First, clinical sports psychologists mainly provide assistance to athletes who have a problem, such as personal, interpersonal, or injury. They also intervene directly in crisis situations. Second, educational sports psychologists usually work in teams and teach athletes relaxation, concentration and positive insight techniques so that the latter can achieve their highest level of performance [16].

Finally, sports research psychologists [12], [23] are interested in what contributes to an excellent performance in sports, to the potential psychological benefits of exercise to the common man (non-athletes), a field known as health promotion, to learning processes and finally to understand children and their abilities, a field known as youth sports. More specifically, six areas of work for sports psychologists can be identified:
1. Creating programs to improve athletes' performance, which include ways for athletes to gain motivation, self-

control techniques such as monitoring body functions such as rhythm heart and breathing through thought, meditation, behavior change through change of mind or stimulation of concentration through exercises, as well as repetitive exercises like mental re-training, visualization and progressive relaxation.

2. The use of psychometry or otherwise of psychological measurement techniques for the selection, recording of abilities, therapeutic counseling and predicting the success of athletes through the evaluation of behavior, questionnaires and interviews

3. Improving communication between athletes, between athletes and coaches and among coaches so that the entire sports system works smoothly. Ethics, productivity and leadership are some of the issues that this sector deals with.

4. Providing counseling, such as crisis management, counseling, program creation and therapeutic counseling. In crisis management, a sports psychologist is called upon to intervene immediately in times of crisis, such as the temporary inability of an athlete or coach to help them regain their strength and control quickly. The purpose of counseling and program development is to teach and supervise coaches and people who work directly with athletes. Finally, despite the fact that therapeutic counseling may be needed for cases such as substance use, depression, injury, severe anxiety and behavioral adjustment problems, the sports psychologist should limit himself to recognizing the above problems and not to try to heal them. It is best to refer the athlete to a clinical psychologist or psychiatrist.

5. Promoting health by transmitting knowledge of the benefits of frequent and repetitive exercise to the average person,

thereby contributes to good quality and health of life.

6. Recognizing the most appropriate learning periods, ideal experiences and factors that attract children and adolescents to sports, in the context of youth sports.

To deal with and relieve stress, it is considered that the stages of its development must be taken into account, in order to reduce it. Initially the stressors of the environment can be reduced e.g. the behavior of coaches and even the parents who stress athletes. Following the awareness and belief in their personal worth and abilities, the particular way of life, the smooth integration into society of their behavior and their daily survival, is a set of key elements to better combat this unpleasant emotional state of the human body in which one feels tension, fear, anxiety and uncertainty for an unexpected person. a risk that threatens him and leads to psychosomatic disorders. It is also advisable for athletes of all sports to learn techniques to reduce the importance of fractures or any other conditions that may arise as their frequency is very high. They do not have to wait for their needs to be met instantly, but be able to wait till they are met in the following time, that is, be patient [4], [30].

In the opinion of some authors [18], [28] personalized stress management programs are useful for athletes who have difficulties with self-esteem and confidence. Even racing stress can be reduced by careful and consistent racing schedules, for example to select opponents in such a way that they have good chances of success; this is especially true at the beginning of their athletic career. Finally, the right setting of goals, the well-chosen and executed motivation

in a warm, friendly and enjoyable climate from coach to athlete, as well as the ability of the athlete to concentrate in the time required, contribute to the best fight against stress.

Anxiety studies have shown that top athletes use strategies to control their stress such as relaxation techniques, diaphragmatic breathing, positive thoughts and focusing on the right. When setting goals for a person, he or she must follow appropriate steps in their path. This is not so simple and obvious, nor is it often achieved, self-help best-seller psychiatrist and book author of self-help best-sellers. Most people either set unrealistic goals (or try hardly to achieve them) or set no goals at all and are then unhappy with it. The best way for successful goals is to start by setting a goal, recording steps and techniques to follow, and then moving on to practice. Collaboration between team members is especially important for success in the sport. It is not meant to try one alone and the others enjoy the fruits of this effort [1], [29].

Not only in team sports but also in everyday life, only one is who 'earns points', but the full and best cooperation with the other team members is a prerequisite for achieving this. That is, they do not blame each other for the mistakes made, they do not persist and insult, they do not blame each other for being responsible and they do not give up trying when things tend to be different. On top of that is a series of "life and collaboration exercises" that are given at Harvard Business School with the aim of fostering a cooperative spirit in future managers. Proper mentality is a key factor in achieving the goals that are set because if there is no then there is not much that can be done. There is a need for calm,

self-centeredness and positive thoughts. Dr.'s research Benson [3] Professor of Medicine at Harvard University, concludes that the ability of someone to devote on their positive side and at the happy end of a situation helps things to end really well.

However, the presence of low stress is justified where, according to various studies, the presence of low stress levels helps to achieve the goals, while the absence or presence of high stress levels is inhibitory. Proper spiritual disposition presupposes stress relief, as long as there is self-awareness of what one wants to achieve and that one can visualize one's own success in it. When one wishes for something but is unable to envision himself in this situation, or when he makes pessimistic scenarios, he is prevented from concentrating his spiritual powers on the desired course, rather than self-destructing. Benson and his team [3] have shown that this mental imagery can greatly contribute to a person's successful career. Particularly in sports psychology, thinking the player mentally (for example, a player imagining moves for a strong serve or to counter a difficult ball) is an important part of the training process. For this reason, it is equally essential in training to achieve the goal.

Depending on the group one belongs to, it is identified as a unit, cultivates, and develops its individual characteristics. Therefore, even in the case of indirect involvement in the team (someone who is not a player), it can contribute positively to its success by creating a positive atmosphere or as in the case of fans who support their team and contribute to its victory, according to recent English studies. The confidence associated with whether a person believes in himself or herself and the team itself is useful as a

collective concept so that the team is not cowardly when facing difficulties or leaving unfulfilled effort, but also not to deal with malicious comments that do not act constructively.

Finally, the confidence in the coach's face for his knowledge and team cohesion, according to research by Gayle [13] is a major contributor to sports success. Even in individual disagreements, team members should be able to recognize that the leader (whether coach or manager) is responsible for promoting the success of the team and not for self-promotion or pursuing personal gain, which is may the result of team success, because in case of failure it will assume responsibility. Of course, team cohesion, in the sense of team spirit, focusing on common goals, mutual respect, mutual support and continuous cooperation are what determine the successful evolution of the team. As it can be seen, stress can be reduced when learning efficiency increases, both on a personal and group level. In all these those who main help are the coach and the athlete's environment, who must ensure the best possible conditions in which the athlete can move.

The goals set through a properly executed motivation of the coach help fight stress, and even act as guidelines in athletes' actions. They increase patience and willingness to strive. Goals play a key role in an athlete's competitive psychology and are an essential prerequisite for pre-race control. Athletes practicing goal setting learn to choose realistic goals and to rank them in the immediate, long-term and medium-term.

The objectives must be precisely worded so that their conquest allows for comparisons and enhances the experience of positive outcomes. Another learning

objective is the realistic critique of successes and failures so that they can find ways and adapt to the goals. The goal of both the coach and the athlete himself should be to create a pleasant atmosphere and enjoyment. It should also provide opportunities for enhancing the satisfaction of its athletes, applying methods to deal with stressful situations or reducing their effects. Supporting primary motivation is one of the key goals of a coach. Both athletes and the coach must pay attention to the expressions, words, and terms they use because speech is known to act as a spokesperson for all internal emotions and motivations. They should also be aware that by creating internal divisions, in short time, the incentive climate could be enhanced [6], [8], [30].

The game of tennis is no exception to these characteristics, being an individual sport, the responsibility for success or failure in performance belongs directly to the athlete. The ability to successfully overcome the precompetitive stressful situations specific to this sport, is largely due to the emotional balance, the ability to maintain focus on preset goals, competitive experience and last but not least confidence in one's own strengths.

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