# The effect of trait anxiety on success in individual athletes

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**Abstract**

Many athletes are not able to show their performances in their training sessions under stressful competition conditions. One of the important reasons for this problem is the anxiety level of the athletes. But anxiety can be a necessary function for success as well as an athlete's ability to make a right decision by making the right decisions. When the athlete is in anxiety, he or she will be better motivated and better able to succeed. With all this, the aim of this study is to determine the effect of success on individual sports. For this purpose, a questionnaire was applied to a total of 407 individual sportsmen in Konya. According to the results of the research, a statistically significant difference was found between the trait anxiety scores of the subjects participating in the research according to the sports branches.

**Keywords:** Anxiety, success, trait anxiety.

## INTRODUCTION

At present, the development of physical capacities is not considered sufficient alone in maximizing the performance of those in sporting activities. It is emphasized that the psychological capacity has become important as well as the improvement of the physical capacity for performance enhancement. Athletes are experiencing intense stress and anxiety during competition periods. When anxiety cannot be controlled, it can affect the athletes' performance and achievements negatively and lead them to failure. The anxiety experienced by the athletes influences their achievements and their confidence. Learning the anxiety levels and being able to cope with it is very important for both the coach and the athlete (27). When athletes are worried, the body is out of control and there are many warnings. Some of the stimuli are stretching of the muscles, nervousness, nausea, elevation of tension and respiration, confusion, concentration, deciding, applying old habits, forgetting details. In addition to these, the ease and smoothness of movements may be impaired, and the control and concentration may experience deterioration (1).

According to Gümüş; Excessive levels of anxiety can cause athletes to misjudge and misjudge what they are in, leading to confusion (4). However, anxiety is also important as a necessary function for success. When the athlete is in anxiety, he will be better motivated and motivated to succeed (13). From this point of view, it is aimed to determine the success effect of continuous loss in individual sports by taking into consideration both the positive and negative effects on the loser's athletes.

### Anxiety concept

According to Anthony and Swinson, the notion of anxiety, which was introduced by the translation of the notion of "anxiety" into wisdom from western sources, is a reflection of an uncertain fear, anxiety, and distress felt due to an unknown cause, as a cause (9). Anxiety is defined as the reaction that individuals experience in their lives during periods of time and feelings of insecurity, ambivalence, and conflict that are shaped by the thought of confronting events that will enter into difficulties in future life (18).

Spielberger studies in two categories as anxiety, "State-anxiety" and "Trait anxiety" (23). According to Öner; Trait Anxiety is the perception of stressful situations as dangerous or threatening, and the increasing frequency and intensity of emotional reactions to these threats and continuity (5). However, it is expressed that the situations that are constantly languishing, not only dependent on the surrounding threats, but harmless, are perceived by

the person as dangerous and threatening to the person, and the sense of dissatisfaction and unhappiness experienced (7).

State anxiety is defined by Cox as an acute anxiety and tension feeling accompanied by an emotional state and physiological stimulus that is characterized by fear, anxiety, and tension. Spielberger emphasizes that the state anxiety is the instantaneous reaction that occurs at various levels of violence and the subjective fear that the individual feels due to the stressful situation they are in (10). Nevertheless, Jones and Konter are influencing motivation, concentration, decision-making ability, self-confidence, conditioning and coordination skills that may be decisive on the performance of the athlete (15).

According to Köknel; Constant anxiety is more stable and persistent than state anxiety, and the severity and duration of such anxiety vary according to personality. The tendency of the personality structure to be anxious affects the level of trait anxiety and changes in the perception of the dangerous situation, interpretation, and single word evaluation that people's anxiety levels are different from each other (6).

The severity of the lethargy and the level of difficulty of the task that one wishes to accomplish determines that the lethal is useful or harmful. In the case of achieving a task involving highly complex cognitive processes such as understanding and analyzing a difficult physics problem, it is observed that the lethargic is harmful; such as selecting specific objects to predetermined groups, in cases where a simple operation is required, moderate anxiety has been found to be useful for relative and early start and early termination (20).

Cüceloğlu expresses the causes of loss under 5 items. These:

✓ **Support Retreat:** People are worried when the usual environment is left behind.

✓ **Waiting for a Negative Resultant:** We worry about situations where negative results will occur. Do not enter the test without much preparation, for example, waiting at the traffic court to determine traffic penalty can be given as an example.

✓ **Internal Contradiction:** When there is a contradiction between an idea that we believe and care for and behavior that we do, we feel a kind of anxiety.

✓ **Cognitive Contradiction is a Significant Motivation and Source of Excitement:** We are looking for a solution to the contradiction; we are somewhat concerned about reaching the solution.

✓ **Uncertainty:** Not knowing what will happen in the future is considered one of the most important causes of concern for people (12).

According to Köknel, anxiety can be cognitive, emotional, behavioral and physiological. These include psychological anxiety, tension, insecurity, fear, panic confusion, anxiety, somatic mouth instability, headache, dizziness, nausea, palpitations, weakness, fatigue, loss of appetite, blood pressure drop or elevation, muscle tension, gastrointestinal symptoms may include respiratory rate increase, sweating, tremor, and insomnia (14).

Although some of the factors that create anxiety are not explicitly described in certain lines, some research has revealed some factors that indicate what constitutes anxiety (26). Factors affecting anxiety are generally considered as age, parental attitudes, inheritance, number of siblings, social economic status, education and occupation status of parents, gender, the success of the student (6).

*Anxiety and Learning Relation:* According to Morgan and King; Anxiety is an influential influence on learning. Excessive anxiety has an adverse effect on learning and anxiety on a very low level makes it difficult to learn. A moderate level of anxiety affects learning in a positive way. (6).

*Anxiety and Sport:* According to Konter; In order to achieve high performance in the sport, in addition to being physically strong, it needs to be strong and strong in terms of psychological (mental and emotional). In order to be more psychologically strong, psychological skills training should be included in addition to physical studies. Achieving peak performance requires a holistic approach to the athlete. In this totality, being strong psychologically is important (9).

Continuous competition anxiety is defined as the perception of oppression and the reaction to fear and tension in these environments. The athlete who has high competition anxiety perceives the competition environment as anxious, while the athlete with low competition anxiety perceives it as the opposite (19).

*Anxiety and Fear:* Anxiety is often confused with the notion of fear. The fear, however, is a sign of danger

and threat that comes from your person, who creates anxiety (11).

According to some psychologists, there are three important differences between fear and anxiety. If we explain them by example:

✓ Source: As it is the case of "I fear from behind!", We know the source of fear, but the source of the loss is not exactly clear.

✓ Violence: Fear is more intense than worry.

✓ Duration: Anxiety persists longer than fear.

Cüceloğlu; Based on these differences as well as the similarities between fear and anxiety, psychologists suggest that physiological occurrences during fear can be observed at the moment of anxiety (16).

Anxiety has been studied by various researchers throughout history and many theories have been created (24). These theories are considered as psychoanalytic theory, cognitive theory, behavioral theory and existential theory.

## Concept of Success

*Measurable Achievement:* Measurable performance is based on metrics based on evaluation and measurement, whatever the case may be. The individual's psycho-physical skills; strength, durability, speed, quickness, coordination, flexibility, softness and self-hanging, eyebrows and heartiness form the basis of performance (27).

*Evaluating Success:* Evaluable success is also; as well as measurable success, such as meters, seconds, and kilograms and so on. There are no measurement values such as. For this reason, it is possible to find a number of individual differences in evaluation. Evaluable success takes place in intricate artistic movements. Most importantly, the psychological state of the individual is also assessed (such as desire, struggle, continuity, aggression, anxiety, etc.) (27).

*Mental and Emotional Success:* Mental and emotional success is the best way to evaluate, experience, feel, hear and achieve high achievement in terms of energy, technique, tactics, and skills (27).

## Psychological Factors Affecting Success on Sport

*- Physical Factors:* Fitness, Strength, Durability, Speed, Mobility, Dignity.

*- Mental Factors:* Perception, Attention, Memory, Intelligence, Learning is expressed in the form of learning is divided into five in itself. These are the

Classical and Tolerant Conditioning; Learning by Trial and Error; Model Learning; Learning through Comprehension; Chain Learning Theory.

*- Emotional Factors:* Motivation, fear, anxiety, and stress (17).

## MATERIALS & METHODS

### Material

The universe of the research is composed of individual branch sportsmen. The sample of the research is; there are 300 teams from the taekwondo branch in Konya center, 690 from the karate branch, 475 from the wrestling branch, 250 from the judo branch, and 500 from the kick box branch, 70 from the table tennis branch, 40 from the archery branch and 40 from the fencing branch athletes. 50 people selected by chance from the taekwondo branch, 50 from the karate branch, 50 from the wrestling branch, 50 from the judo branch, 50 from the kick box branch, 50 from the table tennis branch, 30 from the archery branch and 27 from the fencing branch, a total of 407 surveys were conducted. Survey data were collected using the survey technique and State-Trait Anxiety Inventory (STAI) developed by Spielbergler et al. was used to measure the anxiety level of the athletes.

### Method

The continuous anxiety scale consists of 20 questions. The scale was developed by Spielbergler et al. to determine the level of trait anxiety of the individual. The scale, which is a type of self-assessment, contains 20 items consisting of short expressions. The scale consists of a 20-item "continuous anxiety form" that was formed to identify the feelings of the last seven days. The emotions and behaviors expressed in the trait anxiety scale items are desired to be answered according to the severity of the experiences: 1) Never, 2) Somewhat, 3) Frequently, 4) Very Frequently (25).

### Validity - Reliability Study of Trait Anxiety Inventory

Inal; Reliability coefficients determined by alpha correlations, an improved form of the Kuder-Richardson 20 formula, ranged from 0.83 to 0.87 for the Trait Anxiety Scale and 0.94 to 0.96 for the Situation Anxiety Scale (22). Reliability correlations of item-item reliability (Item Remainder) were 0.34 to 0.72 for the Trait Anxiety Inventory; The State Anxiety Scale is between 0.43 and 0.85 (22). For the test-retest reliability, the reliability coefficients were 0.71 to 0.86 for the Trait Anxiety Inventory; For the

State Anxiety Scale, it was found to be between 0.26 and 0.68. These situations indicate that the Turkish material is reliable (2).

Table 1. Reliability statistics for the scale used in the survey.

| Name of Scale | Number of Expressions | Cronbach's Alfa ($\alpha$) |
|---|---|---|
| Constant Anxiety | 20 | 0.564 |

The reliability (internal consistency) of the Trait Anxiety scale used in the study was found to be higher than the acceptable level, $\alpha = 0.50$, as seen in Table 1.

**RESULTS**

Data obtained in the study were analyzed using reliability analysis, descriptive statistics, and analysis of variance (ANOVA).

When we look at the demographic characteristics, it is seen that the vast majority of participants participating in the survey were male, almost equal to all branches, and most of the participants did not have the nationality.

Table 2. Comparison of trait anxiety scores of subjects participating in the study compared to sports branches.

| Independent Variable | Dependent Variable | Sum of Squares | Squares Average | F | p |
|---|---|---|---|---|---|
| Constant Anxiety | Inter branches | 2908.842 | 363.60 | 5.058 | 0.000* |

*p<0.05

Table 3. Multiple comparisons of trait anxiety scores compared to sports branches in subjects participating in the study.

| (I) Branch | | The Difference of Averages (I-J) | SE | p |
|---|---|---|---|---|
| Taekwondo | Karate | 2.740 | 1.696 | 0.796 |
| | Wrestling | 0.260 | 1.696 | 1.000 |
| | Judo | -5.953* | 1.687 | 0.014 |
| | Kick boxer | 2.660 | 1.696 | 0.821 |
| | Ping pong | -0.274 | 1.704 | 1.000 |
| | Archery | -2.980 | 1.958 | 0.845 |
| | Fencing | 0.790 | 2.025 | 1.000 |
| | Those who do not play sports | -1.880 | 1.696 | 0.973 |
| Karate | Taekwondo | -2.740 | 1.696 | 0.796 |
| | Wrestling | -2.480 | 1.696 | 0.872 |
| | Judo | -8.693* | 1.687 | 0.000 |
| | Kick boxer | -0.080 | 1.696 | 1.000 |
| | Ping pong | -3.014 | 1.704 | 0.703 |
| | Archery | -5.720 | 1.958 | 0.087 |
| | Fencing | -1.950 | 2.025 | 0.989 |
| | Those who do not play sports | -4.620 | 1.696 | 0.143 |
| Wrestling | Taekwondo | -0.260 | 1.696 | 1.000 |
| | Karate | 2.480 | 1.696 | 0.872 |
| | Judo | -6.213* | 1.687 | 0.008 |
| | Kick boxer | 2.400 | 1.696 | 0.892 |
| | Ping pong | -0.534 | 1.704 | 1.000 |
| | Archery | -3.240 | 1.958 | 0.774 |
| | Fencing | 0.530 | 2.025 | 1.000 |
| | Those who do not play sports | -2.140 | 1.696 | 0.942 |
| Judo | Taekwondo | 5.953* | 1.687 | 0.014 |
| | Karate | 8.693* | 1.687 | 0.000 |
| | Wrestling | 6.213* | 1.687 | 0.008 |
| | Kick boxer | 8.613* | 1.687 | 0.000 |
| | Ping pong | 5.679* | 1.696 | 0.025 |
| | Archery | 2.973 | 1.951 | 0.844 |
| | Fencing | 6.743* | 2.018 | 0.025 |
| | Those who do not play sports | 4.073 | 1.687 | 0.279 |
| Kick boxer | Taekwondo | -2.660 | 1.696 | 0.821 |
| | Karate | 0.080 | 1.696 | 1.000 |
| | Wrestling | -2.400 | 1.696 | 0.892 |
| | Judo | -8.613* | 1.687 | 0.000 |
| | Ping pong | -2.934 | 1.704 | 0.733 |
| | Archery | -5.640 | 1.958 | 0.097 |
| | Fencing | -1.870 | 2.025 | 0.992 |
| | Those who do not play sports | -4.540 | 1.696 | 0.159 |

Continuation of Table 3.

| | | | | |
|---|---|---|---|---|
| Ping Pong | Taekwondo | 0.274 | 1.704 | 1.000 |
| | Karate | 3.014 | 1.704 | 0.703 |
| | Wrestling | 0.534 | 1.704 | 1.000 |
| | Judo | -5.679* | 1.696 | 0.025 |
| | Kick boxer | 2.934 | 1.704 | 0.733 |
| | Archery | -2.706 | 1.965 | 0.906 |
| | Fencing | 1.064 | 2.032 | 1.000 |
| | Those who do not play sports | -1.606 | 1.704 | 0.990 |
| Archery | Taekwondo | 2.980 | 1.958 | 0.845 |
| | Karate | 5.720 | 1.958 | 0.087 |
| | Wrestling | 3.240 | 1.958 | 0.774 |
| | Judo | -2.973 | 1.951 | 0.844 |
| | Kick boxer | 5.640 | 1.958 | 0.097 |
| | Ping pong | 2.706 | 1.965 | 0.906 |
| | Fencing | 3.770 | 2.249 | 0.761 |
| | Those who do not play sports | 1.100 | 1.958 | 1.000 |
| Fencing | Taekwondo | -0.790 | 2.025 | 1.000 |
| | Karate | 1.950 | 2.025 | 0.989 |
| | Wrestling | -0.530 | 2.025 | 1.000 |
| | Judo | -6.743* | 2.018 | 0.025 |
| | Kick boxer | 1.870 | 2.025 | 0.992 |
| | Ping pong | -1.064 | 2.032 | 1.000 |
| | Archery | -3.770 | 2.249 | 0.761 |
| | Those who do not play sports | -2.670 | 2.025 | 0.925 |
| Those who do not play sports | Taekwondo | 1.880 | 1.696 | 0.973 |
| | Karate | 4.620 | 1.696 | 0.143 |
| | Wrestling | 2.140 | 1.696 | 0.942 |
| | Judo | -4.073 | 1.687 | 0.279 |
| | Kick boxer | 4.540 | 1.696 | 0.159 |
| | Ping pong | 1.606 | 1.704 | 0.990 |
| | Archery | -1.100 | 1.958 | 1.000 |
| | Fencing | 2.670 | 2.025 | 0.925 |

Analysis of variance (ANOVA) was conducted to determine whether the levels of trait anxiety differed according to the branches of participants participating in the research. It is understood from the results in Table 2 that this difference is statistically significant.

When Table 2 was examined, it was found that there was a statistically significant difference between trait anxiety points of the subjects participating in the research according to the sports branches ($p < 0.05$).

When the sports branches were examined in terms of trait anxiety points, the multiple anxiety scores of the judiciaries were significantly higher than the anxiety scores of taekwondo, karate, wrestling, judo, kick box, table tennis and fencers ($p < 0.05$). There was no statistically significant difference in terms of trait anxiety scores in the comparison of the other branches ($p > 0.05$; Table 3).

## DISCUSSION

It was seen that the participants participating in the survey were almost evenly distributed to all branches, and the majority of participants did not have the nationality. Variance analysis (ANOVA) was conducted to determine whether the level of trait anxiety varies according to the branch. This difference is statistically significant ($p < 0.05$).

When the sports branches are examined in terms of trait anxiety points, the multidimensional Judiciary anxiety score is significantly higher than the anxiety scores of taekwondo, karate, wrestling, judo, kick box, table tennis, and Fencing ($P < 0.05$). There was no statistically significant difference in terms of trait anxiety scores in the comparison of the other branches ($p > 0.05$).

In the study, a statistically significant difference was found between trait anxiety points of subjects participating in the research according to sports branches. When the sports branches are examined in terms of trait anxiety points, the taekwondo trait anxiety score is significantly higher than the trait anxiety scores of the wrestlers ($p < 0.05$).

There was no significant difference between the Taekwondo athletes trait anxiety score and the wrestler's trait anxiety scores in the study conducted by Başaran ($p > 0.05$) (3). This result does not support research findings.

Civan et al. In the study they conducted, they were conducted on 396 athletes participating in the 1999-2000 Universities Turkey Championship competitions. She has worked on wrestling and judo

from individual sports, badminton from racket sports and tennis team sports on football, basketball, and handball. As a result of the study: A significant difference was found according to the sports type variable in terms of the state and trait anxiety scores of the athletes (8). This result supports the research.

A statistically significant difference was found between trait anxiety scores in the individual sports branches in the study (p<0.05). In his study Yücel; As a result of the study conducted with the participation of 195 athletes from 24 universities in Turkey, there is a significant difference between the athletes who have achieved success and the anxiety levels of successful athletes (p<0.05) (3). In his study of the Relationship between Trait Anxiety and Sports Branches, It has been found that there is a difference between trait anxiety and sports branches, especially the difference between sportsmen who are interested in swimming and basketball (21). There was no difference between the other branches. These results seem to support the results of the research.

In the light of the results of the research, in order to have a positive effect on the success of the individual sports, it is necessary to investigate the solutions that will reduce the continuous worries of the athletes especially by the trainer and to share with the athlete, to decrease the level of anxiety by increasing the self-confidence and motivation of the athlete, it may be advisable to have fun not only in training but also in social activities. It is thought that coaches should pay attention not only to the development of physical skills but also to programs for the development and acquisition of psychological skills. At the same time, it was concluded that the optimal level of anxiety is required for the athlete to achieve the desired performance. In addition, with the broader application of this study, different results can be obtained for different levels of athletes.

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