

## Examination of State-Trait Anxiety Levels for Student Candidates Preparing for the Special Talent Exam

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**Abstract---** The aim of the study is to review the pre-exam state-trait anxiety levels of candidates preparing for the sports science special talent exam in the summer of 2021.

The research group consists of 375 participants, 60.5% male and 39.5% female, using the "Google survey" data collection method from different regions of Turkey. The "State-Trait Anxiety Inventory" developed by Spielberger, Gorsuch and Luschene, (1970) and whose Turkish adaptation, validity and reliability studies were carried out by Öner and Le Compte (1983) was used as data collection tools.

IBM SPSS 26.vs package program was used in the analysis of the data. Normality assumptions of the data were checked and independent t-test and one-way analysis of variance (ANAOVA) techniques, which are among the parametric test methods, were used.

According to the research results, there is no significant difference in state-trait anxiety scores based on age and athlete history variability, while there are significant differences in state-trait anxiety scores according to gender, the department and the material situation variables in which it is prepared.

**Keywords---** State Anxiety, Constant Anxiety, Special Talent Exam.

### **I. Introduction**

The origin of the word anxiety is used in the ancient Greek for "anxietas" and is used today in terms of anxiety, fear, curiosity (Koknel 1988). Anxiety is "an subjective sense of fear and an increasing psychological strain" (Levitt 1980).

The concept of anxiety is addressed by Spielberger in two ways: State Anxiety and Trait Anxiety. State-anxiety of the situation is defined as "a form of anxiety arising from environmental stresses, often due to logical reasons, which can be understood by others and is usually linked to the temporary situation that each individual is experiencing" (suggest and Le Compte, 1998; Selia, 1998; Kuru, 2000).

State -anxiety of the situation is an important indicator of trying to understand the athlete. It is an important type of anxiety for the athlete in ongoing competitions, after and before competitions. It's about the athlete's personality (İkizler, 1993). Trait-anxiety is defined as "perceived as dangerous or threatening of the stressful situation and the increased frequency and density of the emotional reactions and the continuity of the situation" (Kuru, 2000). The severity and duration of this type of anxiety depends on the personality structure. The susceptible nature of the personality affects the level of trait-anxiety (İkizler, 1993). Trait-anxiety cannot be directly observed in the individual's behavior. However, the severity and frequency of the anxiety reactions identified in different times and conditions can be utilized (Öner & Le Compte, 1998).

There are many psychological phenomena in sports that affect performance. One of the most important of them is anxiety. Anxiety is "a state of anticipation that upsets and bores people about the future, a state of excitement mixed with a sense of insecurity" (Öncül, 2000; Coskun and Günbey, 2009) are also defined as "a possibility of danger from the outside world or an emotion in the face of any situation perceived and interpreted as dangerous by the person" (Alisinanoğlu & Ulutas, 2000). In case of anxiety, the individual feels like an alarm and something is going to happen, he feels agitated (Nar, 2005). One of the most important reasons is the unconscious moment (Morgan, 2000) of a terrifying warning, which indicates a table that is watching with physical symptoms such as trembling, sweating, palpitations and high pulse (Beck & Emery, 2006).

Anxiety can adversely affect the ability of athletes to make the right decision in their behavior. As the anxiety level rises, the athlete moves away from making the right decision and being able to demonstrate his skills. Athletes under extreme pressure can make some false moves. Extreme anxiety can make athletes forget some of the moves they know and practice over and over again, and can cause confusion in their emotions and make some negative moves (Gümüş, 2002).

Students preparing for the special talent exam are preparing for the talent exam as if they are preparing for a pre-exam competition. These exams require a number of sporty skills and performance, which are important because one is a university student and has a significant place in future planning. As the exam process approaches, it is considered that stress and anxiety conditions are increasing, and is the purpose of this study, whether the state-trait

anxiety levels in student candidates differ according to gender, age, athlete history, the department in which it is prepared and the material situation variables.

## II. Method

### Study Model

The study uses a screening model from descriptive research methods intended to determine the current situation in the study for the purpose of the study. Scanning is a research approach that aims to describe a situation that exists before or today without intervention. The case, fert or object subject subject to the investigation is tried to be identified in its own terms and/or exactly. There is no attempt to randomly influence or modify them (Karasar, 2020).

### Study Group

**Universe:** Student candidates preparing for the sports science special talent exam in the summer of 2021.

**Sample:** The sample of research consists of 375 Student candidates preparing for the sports science special talent exam

### Data Collection Tools

Spielberg's state-trait anxiety scale (STAI), widely used in the psychological field, has been used in various studies for many years, and validity is shown by large sections as credibility. The original form of the scale is prepared by Spielberger, Gorsuch and Luschene, (1970) to determine the levels of state-trait anxiety separately from each other. In Turkish, Öner and Le Compte (1983) conducted the adaptation, validity and reliability studies. The scale consists of two parts: State anxiety 20 substances, trait anxiety 20 substances. On the scale of the 4 Likert type, negative statements are reversed. The total score value from the scale can vary between 20 and 80. The high rating indicates a high level of anxiety and a small rating indicates a low level of anxiety. 0-40 points: No anxiety 40-60 points: Mild anxiety 61 > points: Severe anxiety symptoms are also evaluated.

The normality assumption test for the scale used has been taken into account the head and skew values, and Cronbach's Alpha values have been reviewed to test the level of reliability of the scale. The relevant values are provided in Table 1.

Table 1: Kurtosis and Skewness Values of the Scales

Variables	Skewness	Kurtosis	Cronbach's Alpha
State Anxiety	,055	-,530	.83
Trait Anxiety	,072	-,547	.85

The findings of the skew and heapness values for the answers given to all sub-dimensions of the scales used are between -1.5 and +1.5 in the chart 1. Since the skew and offset values are within  $\pm 1.5$ , the data is considered to be a normal distribution (Tabachnick, Fidell, & Ullman, 2007).

The Cronbach's Alpha coefficient, a measure of the internal consistency of substances, is used to describe or question the homogeneous structure of substances on scale. It is commented that substances of a high scale of the Cronbach's Alpha coefficient are made up of substances that measure the same characteristics as each other. Cronbach's Alpha is often used on likert-type scales. The Cronbach's Alpha values are expressed as follows:

- 0 < R2 < 0.40 is not reliable
- 0.40 < R2 < 0.60 low reliable
- 0.60 < R2 < 0.80 rather reliable
- 0.80 < R2 < 1.00 highly reliable

**Resource:** Alpar, 2013.

The Cronbach's Alpha values of the scale sub-dimensions are between 0.80 < R2 < 1.00 and are highly reliable.

### Analysis of Data

Analysis of data uses IBM SPSS Statistics 26.0 Package program. To determine the appropriate analysis method before proceeding to the analysis of data, the data is determined by the values of the head and skew, whether the data is distributed normally. Independent samples T-Next, and one-way variance analysis (ANOVA) tests are used from test methods to determine differences between groups.

## III. Finding

Table 2: Demographics Information of the Participants

Variables		Frequency	%	Cumulative %
Gender	Male	227	60,5	60,5
	Female	148	39,5	100,0
	Total	375	100,0	
Age	17-18 years old	196	52,3	52,3
	19-20 years old	148	39,5	91,7

	21 and over	31	8,3	100,0
	Total	375	100,0	
Athlete History	Yes	242	64,5	64,5
	No	133	35,5	100,0
	Total	375	100,0	
Which chapter are you prepared for	Teaching Departman	214	57,1	57,1
	Coaching Departman	131	34,9	92,0
	Sport management Departman	30	8,0	100,0
	Total	375	100,0	
Economic Status	Low	54	14,4	14,4
	Medium	231	61,6	76,0
	High	90	24,0	100,0
	Total	375	100,0	

When Table 2 is examined, 60.5% of 375 participants are male, 39.5% are female, 52.3% are 17-18 years old, 39.5% are 19-20 years old, 8.3% are 21 and above. It is seen that the age of 21 and above. According to the question of athlete history, 64.5% have a history of athletes, 35.5% have no history of athletes. It is seen that 57.1% of them are prepared for teaching, 34.9% for coaching, and 8.0% for sports management when asked which department are you preparing for. According to the economic status question, it is seen that 14.4% of them have low economic status, 61.6% of them have medium economic status, and 24.0% of them have high economic status.

Table 3: Identifying Statistics Points for Anxiety Levels

Scales	N	Minimum	Maximum	Mean	S.D.
State Anxiety	375	23,0	70,0	47,24	10,16
Trait Anxiety	375	26,0	60,0	43,55	7,06

When Table 3 is examined, it is seen that the state-anxiety scores of the participants are minimum (n=23), maximum (n=70), the mean is ( $\bar{x}$ =47.24), and the trait anxiety scores are minimum (n=26), maximum (n=60). It is seen that ( $\bar{x}$ =43.55). According to the Scale Evaluation, the score obtained from the sum of both scales takes a minimum of 20 and a maximum of 80. A high total score indicates an increase in anxiety, and a low score indicates a decrease in anxiety (Gülçek, 2015).

A total score above 60 points indicates that the individual needs professional support (Kurnaz, 2007). According to the averages, it is stated that the anxiety levels are in the range of 40-60 points in the areas of state anxiety and trait anxiety, and this is an indicator of mild anxiety symptoms.

Table 4: T-test Results Showing the difference between Levels of Anxiety by Gender Variable

Scales	Gender	N	Mean	S.D.	T	P
State Anxiety	Male	227	46,136	10,217	-2,633	,009*
	Female	148	48,939	9,853		
Trait Anxiety	Male	227	42,911	6,744	-2,193	,029*
	Female	148	44,540	7,442		

\*P<0.05

When table 4 was examined, a significant difference in state-trait anxiety scores was detected in relation to gender variability (p<0.05). According to this difference, the status of female participants and the state-trait anxiety points are higher than those of male participants. Female participants are more anxietyed than men.

Table 5: ANOVA Test Results Showing the difference between Anxiety Levels based on Age Variance

Scales	Yaş	N	Mean	S.D.	F	P
State Anxiety	17-18 years old	196	46,2959	9,17936	2,260	,106
	19-20 years old	148	47,9459	11,44213		
	21 and over	31	49,8710	8,99904		
	Total	375	47,2427	10,15507		
Trait Anxiety	17-18 years old	196	43,3571	6,82792	,215	,807
	19-20 years old	148	43,8514	7,63216		
	21 and over	31	43,3871	5,73107		
	Total	375	43,5547	7,06362		

\*P<0.05

Table 5 No significant difference in state-trait anxiety scores according to age variable was detected when reviewed ( $p>0.05$ ). Age variable has no significant effect on state-trait anxiety levels.

Table 6: “Do Participants have Athlete History?” T-test Results Showing the difference Between Anxiety Levels based on Variable

Scales	“Do participants have Athlete History”	N	Mean	S.D.	T	P
State Anxiety	Yes	242	47,491	9,817	,640	,522
	No	133	46,789	10,764		
Trait Anxiety	Yes	242	43,624	7,073	,256	,798
	No	133	43,428	7,070		

\* $P<0.05$

Table 6 No significant difference in the state-trait anxiety scores of the participants was found in accordance with the variability of the athlete's history ( $p>0.05$ ). Participants have no meaningful impact on anxiety levels whether they have a history of athletes or not.

Table 7: “What Part of the Participants are you Preparing for?” ANOVA Test Results Showing the difference between Anxiety Levels based on Variable

Scales	Department	N	Mean	S.D.	F	T	Difference
State Anxiety	Teaching Department	214	47,897	9,853	7,988	,000*	1-3 2-3
	Coaching Department	131	47,771	10,460			
	Sport management Department	30	40,266	8,456			
	Total	375	47,242	10,155			
Trait Anxiety	Teaching Department	214	43,644	7,163	,158	,854	-
	Coaching Department	131	43,305	6,485			
	Sport management Department	30	44,000	8,800			
	Total	375	43,554	7,063			

\* $P<0.05$

When table 7 is reviewed, there is no significant difference in the state anxiety scores according to the department variable in which participants are prepared ( $p>0.05$ ), a significant difference in the trait anxiety scores has been detected ( $p<0.05$ ). As a result of sub-tests (Tukey) to determine which groups this difference is among, it has been found that those preparing for the teaching and coaching department have more state anxiety than those preparing for the sports management department.

Table 8: ANOVA Test Results Showing the difference between Levels of Anxiety based on the Entrants' Physical Status variant

Scales	Economic Status	N	Mean	S.D.	F	P	Fark
State Anxiety	Low	54	55,4444	8,41980	49,316	,000*	1-2 1-3 2-3
	Medium	231	48,0216	9,43188			
	High	90	40,3222	8,39185			
	Total	375	47,2427	10,15507			
Trait Anxiety	Low	54	49,7407	4,97611	80,617	,000*	1-2 1-2 2-3
	Medium	231	44,4935	6,45444			
	High	90	37,4333	4,88531			
	Total	375	43,5547	7,06362			

\* $P<0.05$

When Table 8 is examined, a significant difference was found in the state and trait anxiety scores of the participants according to the economic situation variable ( $p<0.05$ ). As a result of the subtests (Tukey) conducted to determine between which groups this difference is, it was seen that those with low economic status had higher scores than those with medium and high economic status.

#### IV. Discussion and Conclusion

In this study, the state-trait anxiety levels of the student candidates who took the special talent exam in the summer term of 2021; It is aimed to determine whether it is affected by factors such as gender, age, athlete background, department, economic situation.

As a result of the research, the average of the state anxiety points ( $\bar{x}=47.24$ ) was found to be the average of the trait anxiety points ( $\bar{x}=43.55$ ). According to the Scale Assessment, the score from the sum of both scales is a minimum of 20 maximum of 80. The higher the total score, the higher the anxiety level, the lower the anxiety level (Gülçek, 2015).

A total score of over 60 points indicates that the individual needs professional support (Kurnaz, 2007). According to the average, the levels of anxiety are within the range of 40-60 points in the areas of state anxiety and trait anxiety, and are a sign of signs of mild anxiety.

It has been determined that there is a significant difference in the state-trait anxiety scores according to the gender variable, and this difference is high in favor of women. Female participants have seen more anxiety than men. when the relevant literature is examined, there are results which are contradictory to the results of the study. Engür (2002), 55 women, 224 men and 279 athletes who participated in the study entitled "impact of Success motivation in Elite Athletes on state anxiety levels", found no statistically significant difference in comparison to the levels of status anxiety in relation to gender. In his study, "Comparison of Level of state anxiety and respect of Self in Sports", Öğüt (2004) showed no gender differentiation in the total score of continuous anxiety. In a research conducted by Özbekçi (1989), he found that there was no relationship between the gender of athletes and their anxieties in the competition. Yucel (2003) in his research on techno docs, the levels of status and constant anxiety did not differ significantly according to gender. As it turns out, it is emphasized that athletes have no significant impact on gender factor anxiety situations.

There has been no significant difference in status and continuous anxiety scores based on age variation. Age variable has no significant effect on status and constant anxiety levels. Civan, Ari, Görücü & Özdemir (2010) in his work to compare individual and team athletes' pre-and post-competition situations and continuous anxiety levels, he did not make any significant difference in both groups according to age variability. As a similar result, the Özbekçi (1989) has not detected a significant difference in status and constant levels of anxiety in relation to the age variance of Arseven & Güven (1992). These results support the findings in the study.

According to the athlete's history variable, no significant difference was detected in the participants' state-anxiety scores. Participants have no meaningful impact on anxiety levels whether they have a history of athletes or not. In the related literature, this variable has been considered as the year of sport or the age of the athlete.

According to the results of the research, Arseven & Güven (1992), Yücel (2003), Erbaş (2005), Adalı (2006), Bingöl at all. (2012), Karabulut at all. (2013) in their work with different groups, they found that athletes did not influence the levels of state-trait anxiety of the year of exercise. The findings support research findings.

There is no significant difference in the state-trait anxiety scores according to the department variable where participants are prepared, but a significant difference in the state anxiety scores has been detected. According to this difference, it has been found that those preparing for the teaching and coaching department have more state anxiety than those preparing for the sports management department. This is believed to be due to increased demand from teaching and coaching departments.

A significant difference in state-trait anxiety scores has been identified in relation to the participants' economic situation variant. Those with low economic status experience more trait-anxiety than those with medium and high economic status. It is thought that the high level of anxiety of those with low financial status is due to the future apricot. Individuals with good financial status may have lower anxiety levels than others, as they have an alternative such as studying at a private university.

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