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Investigation of State and Trait Anxiety Levels of Paragliding Pilots According to Some Variables

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Abstract

The aim of this study is to examine the state and trait anxiety levels of paragliding pilots in terms of some variables. The study group consisted of 206 licensed paragliding pilots in Turkey. "State and Trait Anxiety Inventory" consisting of 20 questions and administered in two parts was applied to the volunteer participants. In addition to the inventories, a "Personal Information Form" was added to determine the demographic information of the pilots. Of the pilots, 35 were female (17%) and 171 were male (83%). Skewness, Kurtosis (normal distribution of the data) values and Levene's test (equality of variance) results were analyzed and it was decided that the data met the parametric test conditions. Accordingly, t-test and ANOVA tests were applied to evaluate the state and trait anxiety levels of the participants according to various demographic characteristics. In addition, the level of relationship between the scales was evaluated by Pearson correlation analysis. As a result, it was observed that there was a significant difference between the state and trait anxiety mean scores of pilots according to gender, certification level and family support variables. In addition, a significant difference was found between the mean state anxiety scores of pilots according to the variables of age, marital status and duration of interest in the branch.

Keywords: Anxiety, State Anxiety, Trait Anxiety, Paragliding Pilot**.**

Introduction

Anxiety comes from the Greek word "anxietas" and means worry or fear (Khyati, Sushant & Anup, 2016: 980). It is a negative emotional state characterized by nervousness, worry and anxiety and is related to the body's activity or level of arousal (Cheng, Hardy, & Markland, 2009: 271; Weinberg & Gould 2015: 76). However, anxiety is also one of the basic and frequent emotions that people experience such as happiness, sadness, and anger (Zeidner, 2010: 2; Freeman, 2012: 1). Anxiety is not only a normal and basic emotion but also vital for the organism to survive (Kennerley, 2017: 41). Anxiety is a state of worry that arises in the face of bad possibilities, which is felt more or less, continuously or suddenly. The concept of fear, which is often confused with anxiety, exists in the face of a clear or visible threat. The source of the stimulus that creates fear is clearly known (Gall, 2006: 55). People in anxiety generally feel uncomfortable, distressed, afraid and experience many other unpleasant feelings, and there is no apparent reason for these unpleasant feelings (Türk Dil Kurumu Sözlüğü, 2024). It occurs when stimuli that would not cause fear in people under normal conditions cause fear. In other words, there are emotional states that have nothing to do with reality and are difficult to understand and explain. Anxiety creates the feeling that something bad will happen to people in the future (Köknel, 1990: 16). Fear can be distinguished from anxiety because it is an emotion whose cause is known and recognized by the person (Şahin, 2019: 119). Anxiety is a feeling of fear arising from the expectation of a threat that may happen to oneself or others (Gall, 2006: 9).

According to ethnologist Konrad Lorenz, at the beginning of human history, when we were still living together with animals, we were often confronted with threats to life. We had to either flee or fight to cope with these threats. Today, however, we rarely face real threats to life as we have many dangers under control. However, because the survival instinct in our evolution requires us to be always alert to threats from our environment, fear - anxiety - has become a part of our lives, whether subtle or not. These anxieties that we have to live with arise from the necessity of our survival instinct in a world where our evolutionary biological structure has not changed but world conditions have changed (Dağ, 1999: 169).

Anxiety is one of the emotions that people frequently encounter in daily life and is present at different levels in all people. There is no person who does not feel anxiety in daily life, but the degree to which anxiety is experienced is important. If anxiety becomes constant and becomes the center of one's life, then one cannot lead a healthy life (Cüceloğlu, 2006: 440). In psychology, it is known that fear with an unknown object is called "anxiety" and its source is considered by some to be a part of the innate temperament seen in the unconscious depths of the personality. It is formulated by some as a learned response, by others as a means or result of perceiving existence. Our worries, which we call anxiety in daily language but which do not fit the scientific definition, occupy a large place in our lives (Green, 2016: 17). Unless the causes of anxiety are not eliminated, it may become permanent and the person may enter into a vicious circle. This cycle can be sustained by physical sensations, a psychological reaction, a certain behavior or social conditions, and sometimes a combination of all these factors (Kennerley, 2017: 41). In other words, momentary anxiety can turn into trait anxiety when anxiety becomes continuous and takes up more space in a person's life. State anxiety is the short-term and temporary reactions of the organism in the face of immediate threats. On the contrary to state anxiety, trait anxiety is a state of anxiety that lasts for a long time, is continuous and takes place in the daily life of the individual by affecting the personality.

The distinction between state and trait anxiety is as follows: State anxiety indicates frequently changing moods. It is an emotional state characterized by a personal and consciously

perceived sense of fear, tension and excitement, mostly related to the activation or stimulation of the autonomic nervous system. Unlike state anxiety, trait anxiety is part of the personality. People with trait anxiety tend to think that they are threatened by many conditions that are not actually threatening (Kapur et al., 2019: 1080). While state anxiety is a temporary state of anxiety that occurs in the event of danger, trait anxiety is a long-term state of anxiety arising from personality and in which the individual feels constantly threatened (İyigün, 2024: 11).

Anxiety is an intangible concept. It refers to the unbalanced perception between the skills and desires in a particular sport activity. The effect of anxiety on sport performance depends on how it is interpreted. If anxiety is accepted as a normal competitive psychology response, performance will be less affected (Karageorghis & Terry, 2015: 89-90). A high level of anxiety can cause a person to perform below his/her potential in any performance area. For athletes, anxiety is a common emotion that includes feelings such as worry, worry, fear and restlessness. Anxiety has an important place among the situations that affect sports performance. This is one of the reasons for a mistake made at a critical moment of performance or for the athlete to freeze (Karageorghis & Terry, 2017: 89).

Researchers working in the field of sport psychology generally agree on the necessity of a moderate level of anxiety for high performance and its performance-enhancing effect (Başer, 1986: 92-93). However, anxiety levels that are too high or too low can negatively affect performance. High levels of anxiety can cause unnecessary worries, while low levels of anxiety can lead to negligence on the part of the athlete. Worry or negligence impairs the athlete's muscle coordination and increases the likelihood of making mistakes (Yıldız, 2019: 29-30). Generally, people with high anxiety levels have low self-confidence. The opposite is also true. A low level of anxiety can be caused by overconfidence on the part of the athlete, while a high level of anxiety can be caused by a lack of confidence in one's abilities and a fear of not being able to fulfill tasks. In this case, the person avoids performing complex skills and believes that he/she is unable to fulfill challenging tasks (Kaya & Tastan, 2020: 305). Athletes show an increase in anxiety levels as they approach the upper limit of their performance capacity. As the athlete has to push the limits of his/her abilities and perform above his/her capacity, he/she experiences high levels of anxiety (Gümüş, 2002: 4). In case of high anxiety, athletes are exposed to the effects of many stimuli secreted by their bodies. These stimuli include many negative conditions such as anger, blood pressure, increased respiratory rate, muscle tension, and decreased decision-making speed. It also complicates the flow and execution of movement and reduces control over movements (Cüceloğlu, 2015: 440-441; Demir, 2005: 49).

Due to the concept of fear in the definition of anxiety, anxiety can also be mentioned in extreme sports. However, considering the negative impact of high anxiety on performance, it is one of the last emotions that can be desired in extreme sports. On the other hand, since extreme sports are intertwined with nature and relatively more open to danger, anxiety and fear can be felt intensely.

Extreme sports are leisure activities where a mismanaged accident or mistake can potentially result in death. Participants experience this anxiety when they undertake their chosen activity. This type of sport can cause high levels of fear and puts a person in extreme contact with nature. Extreme sports provide powerful psychological experiences in which participants are fully aware that death may be imminent, but at the same time they have powerful psychological experiences (Brymer & Oades, 2009: 11). One of the most popular extreme sports is paragliding. Paragliding has rapidly entered the category of high-risk extreme sports due to increased flight intensity and serious injuries (Schulze et al., 2002: 365). Parachuting

involves high risks, serious injuries or death are always possible (Powell & Verner, 1982: 184).

Paragliding offers a flight experience that can last for kilometers or hours depending on the quality of the material used, the experience of the pilot and other factors (Bako, 2016: 18-19; Sunar et al., 2018: 1424). Pilots are similar because they take off on foot like birds, ascend at similar rates, and are exposed to similar environmental stressors. They are exposed to factors such as cold, wind, noise and anxiety while experiencing the reality of life at extreme points (Wilkes et al., 2017: 1). The biggest challenge for paragliding pilots is to be able to anticipate the meaning and consequences of risk to their physical integrity (Paixão & Tucher, 2012: 9). In the light of this information, paragliding pilots' one-to-one contact with nature, long flight time, fear of death and weather events may cause fear and anxiety. According to Cüceloğlu, anxiety arises when we do not know what will happen and cannot make sense of it. The most important reasons for pre-flight anxiety and stress in paragliders are the feeling of falling, fear of having an accident, injury and death. It can be said that experienced pilots are less stressed, but this may vary according to geographical factors (Özçiriş, 2017: 69).

Paragliding pilots may experience anxiety due to their vulnerability to natural conditions, the high risk of death in case of an accident, the risk of serious disability and injury in the event of the slightest mistake, and their inability to predict the threats in the air and on the ground. However, considering the negative effects of high anxiety, paragliding pilots flying with moderate anxiety will reduce the possibility of making mistakes.

In this context, the aim of this study is to determine the state and trait anxiety levels of paragliding pilots according to some variables.

METHOD

Research model

In order to determine the state and trait anxiety of paragliding pilots, a descriptive/survey model that provides the opportunity to evaluate the existing situation in a broad way was used. The survey model is a research approach that aims to investigate and describe a past or current situation as it is. In the survey model, in a universe consisting of a large number of elements, the whole universe or a group or sample to be taken from the universe is scanned in order to make a general judgment about the universe (Karasar, 2008). Descriptive studies are observations that aim to determine a situation and aim to obtain a description of the subject or forms of interest (Şavran, 2009). The study consists of two parts: practical and theoretical. In the first part, the literature on the subject was utilized and a detailed framework was drawn with the results of previous studies and the findings obtained. In the second part, based on this framework, hypotheses were tested according to some variables that paraglider pilots have by using the State and Trait Anxiety Scale and the state and trait anxiety levels of paragliding pilots were determined by obtaining the data of the quantitative part.

Participant Group

The study group of the research consists of 206 paragliding pilots in Alanya district of Antalya in 2022, determined by convenience sampling method (Bishop, 2018). Of the pilots, 35 were female (17%) and 171 were male (83%).

Data Collection Tools

The State-Trait Anxiety Inventory (STAI) developed by Spielberger et al. (1970) was adapted into Turkish by Le Compte and Öner (1983). State Anxiety Inventory aims to determine how the person feels in the face of the current situation and the situation. The Trait Anxiety

Inventory, on the other hand, aims to determine how the person feels in general terms, regardless of the situation and conditions in which the person finds himself/herself. Each of the State and Trait Anxiety Inventories consists of 20 items. The statements in the items are scored between 1 and 4. In the State Anxiety Scale, one of the options such as (1) not at all, (2) a little, (3) a lot and (4) completely is selected. In the Trait Anxiety Scale, one of the options such as (1) almost never, (2) sometimes, (3) most of the time and (4) almost always is selected (Le Compte & Öner, 1998; Aydemir & Köroğlu, 2000). There are inverted statements in the State and Trait Anxiety Scales. These statements are ten in the State Anxiety Scale (items 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20) and seven in the Trait Anxiety Scale (items 1, 6, 7, 10, 13, 16 and 19). To determine the anxiety scores of the participants, the total score of the direct statements is subtracted from the total score of the inverted statements. The result is summed with a predetermined and unchanging value. This value is 50 for the State Anxiety Scale and 38 for the Trait Anxiety Scale. The final score is the anxiety score of the individual.

The data collection tools were interviewed one-on-one with the paragliding pilots and they were asked to fill them in voluntarily after their consent was obtained. The Trait Anxiety Scale was administered at a time when the pilots were not preparing for a flight or when they could not go on a flight. The State Anxiety Scale was administered and collected 20-30 minutes before the flight when they were preparing for the flight. In addition to the Trait and State Anxiety Scales, variables such as age, gender, marital status, duration of interest in the sport, paragliding pilot certification level, and family support were included in the personal information form to determine the demographic characteristics of the participants.

Data Analysis

The data obtained from the research were analyzed with the help of SPSS 25.0 program. The normality distribution of the data was examined with Skewness and Kurtosis (normal distribution of data) values and Levene (equality of variance) test, and Pearson correlation analysis, t-test and ANOVA tests were performed for related samples to determine the differences and relationship between variables. Cronbach Alpha reliability coefficient was calculated to determine the reliability of the measurement tools. In the statistical analysis and interpretations of the data, $p<0.05$ significance level was taken into consideration.

In this direction, it was aimed to examine the state and trait anxiety levels of paragliding pilots according to variables such as age, gender, marital status, duration of interest in the sport, certification level of pilots, and family support.

Within the framework of these aims, answers to the following questions were sought:

Is there a relationship between state and trait anxiety levels of paragliding pilots?

Do the trait and state anxiety levels of paragliding pilots differ according to their gender?

Do the trait and state anxiety levels of paragliding pilots differ according to their age?

Do the trait and state anxiety levels of paragliding pilots differ according to their marital status?

Do the trait and state anxiety levels of paragliding pilots differ according to their duration of interest in the sport?

Do trait and state anxiety levels of paragliding pilots differ according to their certification levels?

Do trait and state anxiety levels of paragliding pilots differ according to family support?

FINDINGS

In this section, firstly, the table showing the frequency distribution of the research group according to their demographic characteristics is given. Afterwards, the table showing the distribution of the scores of the scales, the table showing the relationship between state and trait anxiety levels, and the results tables showing the difference between the averages of the scales and demographic variables (gender, age, marital status, duration of interest in the branch, certificate level and family support) are given respectively.

Table 1. Frequency Distribution of the Research Group According to Demographic Characteristics

Variables	Subgroup	N	%	Total
Gender	Female	35	17.0	206
	Male	171	83.0	
Age	20 years or younger	21	10.2	206
	20-25 years old	57	27.7	
	26-30 years old	43	20.9	
	31-35 years old	29	14.1	
	36-40 years old	24	11.7	
	41 years or older	32	15.5	
Marital Status	Married	81	39.3	206
	Single	125	60.7	
Duration of Interest in the Branch	1-5 years	122	59.2	206
	6-10 years	57	27.7	
	11-15 years	27	13.1	
Certificate Level	P2	69	33.5	206
	P3	33	16.0	
	P4	17	8.3	
	P5	33	16.0	
	Tandem Pilot	54	26.2	
Family Support	Yes	163	79.1	206
	No	43	20.3	

It was determined that 83.0% of the paragliders included in the study were male, 27.7% were in the 20-25 age group, 60.7% were single, 59.2% had been interested in paragliding for 1-5 years, 33.5% had a P2 level certificate and 79.1% were supported by their families (Table 1).

Table 2. Distribution of State and Trait Anxiety scores

Scale	Item	Mean	Sd.	Skewness	Kurtosis	C.Alpha
State Anxiety	20	1.55	0.515	1.073	0.799	0.92
Trait Anxiety	20	1.67	0.475	0.892	0.489	0.86

Table 2 shows that the mean State Anxiety score of the paragliding pilots in the study was 1.55. Cronbach Alpha internal consistency coefficient was calculated as 0.92 for State Anxiety. The average score of Trait Anxiety, which is another scale within the scope of the research, is 1.67. The Cronbach Alpha internal consistency coefficient of Trait Anxiety was calculated as 0.86. According to Kılıç (2016), the criterion values for the reliability coefficient are; $0.00<\alpha<0.40$ is "not reliable", $0.41<\alpha<0.60$ is "low reliability", $0.61<\alpha<0.80$ is "moderately reliable", $0.81<\alpha<1.00$ is "highly reliable". In the light of these criteria regarding

the reliability coefficient, it can be said that the internal consistency coefficients of the current study have a high level of reliability.

When the skewness and kurtosis values are examined, it is observed that the data fulfill the normality assumption. According to Tabachnick and Fidell (2007), skewness and kurtosis values are within ±1.50 and according to George and Mallery (2010), values within ±2 are acceptable for normality. From this point of view, it was decided to apply parametric statistical techniques for the analysis procedures for the determination of relationship and difference.

Table 3. Pearson correlation analysis results showing the relationship between state and trait anxiety

Scale		1	2
1.State Anxiety	R	1	.357**
	p		.000
	n	206	206
2.Trait Anxiety	R	.357**	1
	p	.000	
	n	206	206

*p<0.05, **p<0.01

When Table 3 is examined, it is seen that there is a significant positive relationship between state and trait anxiety total score (R=.357; p<0.01).

Table 4. *Results of t-test analysis according to gender variable*

Scale	Gender	N	Mean	Sd.	T	p
State Anxiety	Female	35	1.76	0.539	2.714	0.007*
	Male	171	1.51	0.501		
Trait Anxiety	Female	35	1.83	0.582	2.079	0.039*
	Male	171	1.64	0.445		

* p<0.05

The analysis results in Table 4 show that there is a significant difference in the mean state and trait anxiety scores of the research group according to the "gender" variable (t=2.714, p>0.05 / t=-2.079 p<0.05). Accordingly, it can be said that women have higher state and trait anxiety levels than men (Table 4).

Table 5. ANOVA analysis results according to age variable

Scale	Age	N	Mean	Sd.	F	p	Significant difference
State Anxiety	**1.** 20 years or younger	21	1.77	0.543	4.973	0.000	1-5* 1-6* 2-5* 2-6*
	2. 20-25 years old	57	1.72	0.515			
	3. 26-30 years old	43	1.58	0.606			
	4. 31-35 years old	29	1.46	0.412			
	5. 36-40 years old	24	1.34	0.382			
	6. 41 years or older	32	1.30	0.366			
Trait Anxiety	**1.** 20 years or younger	21	1.87	0.482	1.451	0.208	
	2. 20-25 years old	57	1.72	0.481			
	3. 26-30 years old	43	1.66	0.483			
	4. 31-35 years old	29	1.54	0.475			
	5. 36-40 years old	24	1.60	0.362			
	6. 41 years or older	32	1.65	0.503			

* p<0.05

The ANOVA test results show that there is a significant difference in the mean state anxiety scores of the research group (F=4.973, p>0.05) according to the "age" variable. Accordingly, the state anxiety levels of pilots aged 20 years or younger are higher than those of pilots aged 36-40 years and pilots aged 41 years or older. Again, the state anxiety levels of pilots between the ages of 21-25 are higher than those of pilots between the ages of 36-40 and 41 or above. When the same table is analyzed, the results show that there is no statistically significant difference in the mean scores of trait anxiety of the group (F=1.451, p>0.05) according to the "age" variable (Table 5).

Table 6. Results of t-test analysis according to marital status variable

Scale	Marital Status	N	Mean	Ss	T	p
State Anxiety	Married	81	1.41	0.473	3.334	0.001*
	Single	125	1.64	0.522		
Trait Anxiety	Married	81	1.61	0.438	1.645	0.101
	Single	125	1.72	0.494		

* p<0.05

The results of the analysis show that there is a statistically significant difference in the mean state anxiety scores of the research group (t=3.334, p<0.05) according to the "marital status" variable. Accordingly, married participants had lower state anxiety levels than single participants. In the mean scores of trait anxiety (t=1.645, p<0.05), there was no statistically significant difference according to the "marital status" variable (Table 6).

Table 7. ANOVA analysis results according to the duration of interest in the branch

Scale	Duration of Interest in the Branch	N	Mean	Sd.	F	p	Significant difference
State Anxiety	**1.** 1-5 years	122	1.74	0.542	23.658	0.000	
	2. 6-10 years	57	1.29	0.326			1-2*
	3. 11-15 years	27	1.26	0.326			1-3*
Trait Anxiety	**1.** 1-5 years	122	1.72	0.504	2.283	0.105	
	2. 6-10 years	57	1.56	0.377			
	3. 11-15 years	27	1.72	0.499			

* p<0.05

The ANOVA test results show that there is a statistically significant difference in the mean state anxiety scores of the research group (F=23.658, p<0.05) according to the variable "duration of interest in the sport". Accordingly, it can be said that the state anxiety levels of pilots who have been interested in paragliding for 1-5 years are higher than pilots who have been interested in the sport for 6-10 years and 11 years or more. There was no statistically significant difference in the group's mean scores of trait anxiety (F=2.283, p<0.05) according to the variable "duration of interest in the sport" (Table 7).

Table 8. ANOVA analysis results by certificate level variable

Scale	Certificate Level	N	Mean	Sd.	F	p	Significant difference
State Anxiety	**1.** P2	69	1.90	0.487	22.953	0.000	1-2*
	2. P3	33	1.62	0.593			1-3*
	3. P4	17	1.53	0.410			1-4*
	4. P5	33	1.38	0.390			1-5*
	5. Tandem Pilot	54	1.18	0.215			2-5*

							3-5* 4-5*
Trait Anxiety	**1.** P2	69	1.83	0.530	4.505	0.002	1-5*
	2. P3	17	1.71	0.483			
	3. P4	33	1.65	0.480			
	4. P5	54	1.66	0.450			
	5. Tandem Pilot	21	1.48	0.328			

* p<0.05

The ANOVA test results show that there is a statistically significant difference in the mean state and trait anxiety scores of the research group (F=22.953, p>0.05 / F=4.505, p>0.05) according to the "certification level" variable. Accordingly, it can be said that as the certification level of paragliding pilots increases, their state and trait anxiety decreases (Table 8).

Table 9. Results of t-test analysis according to family support variable

Scale	**Family Support**	**N**	**Mean**	**Sd.**	**t**	**p**
State Anxiet	Yes	163	1.46	0.489	-5.018	0.000*
	No	43	1.88	0.480		
Trait Anxiety	Yes	163	1.63	0.453	-2.579	0.011*
	No	43	1.84	0.522		

* p<0.05

The results of the analysis showed that there was a statistically significant difference in the mean state and trait anxiety scores of the research group (t=-5.018, p<0.05/t=-2.579, p>0.05) according to the "family support" variable. Accordingly, paragliding pilots with family support have lower state and trait anxiety levels than pilots without family support (Table 9).

Discussion And Conclusion

This study aims to determine the state and trait anxiety levels of paragliding pilots. In addition, it is aimed to determine the differences in state and trait anxiety levels according to variables such as gender, age, marital status, duration of interest in the sport, pilots' certification level and family support.

According to the findings in Table 3, there is a positive relationship between state and trait anxiety of paragliding pilots. Unlike state anxiety, trait anxiety is a long-term emotional state that is acquired as a result of experience and becomes a part of the personality. People with high levels of trait anxiety tend to experience high levels of anxiety when they are under pressure (Weinberg & Gould, 2015: 77). Therefore, it can be concluded that as pilots' trait anxiety increases, their state anxiety also increases.

Başaran et al. (2009) stated that there is a statistically significant relationship between trait anxiety score and state anxiety score in athletes. Civan et al. (2010), on the other hand, found that there was a positive relationship between trait anxiety score and state anxiety score of individual and team athletes and that state anxiety score increased with the increase in trait anxiety score. Yalçın (2021) reached similar results in his study on folk players and found that trait anxiety levels of folk players predicted state anxiety levels in a statistically significant and positive direction.

According to Table 4, a significant difference was found between the gender of paragliding pilots and their state and trait anxiety scores. It was observed that female pilots had higher state and trait anxiety levels than male pilots. Considering that trait anxiety depends on personality traits and subjective factors, it is natural to expect gender-based differences. Since paragliding pilots are exposed to similar threatening situations, it can be thought that there will be no difference in state anxiety levels according to gender. However, it can be thought that the protective and cautious attitudes that women develop depending on their gender characteristics affect their anxiety levels.

Karakaya et al. (2006) conducted a study on 31 swimmers between the ages of 9-13, and according to the results, the trait and state anxiety levels of female swimmers were found to be significantly higher than male swimmers, which is consistent with the findings of this study. On the other hand, Kartopu (2012) conducted a study on high school students and teachers and found that women had higher trait anxiety levels than men, which is consistent with the findings of this study. However, in terms of state anxiety levels, it was found that men had lower levels and this is different from this study. In the studies conducted by Öztürk (2019) on dart athletes and Hacıcaferoğlu et al. (2015) on folk players, no significant difference was found between trait anxiety levels according to gender. However, state anxiety levels were found to be higher in men, which is different from this study. Başaran et al. (2009) conducted a study on a total of 324 athletes (132 women and 192 men) in basketball, volleyball, handball, teakwando and wrestling branches and found that state anxiety scores of male subjects were higher than female subjects. However, no differentiation was found in terms of trait anxiety. Özçiriş (2017), in his study on the anxiety levels of paragliding pilots, did not find a significant difference between state and trait anxiety according to gender among a total of 170 athletes, 30 females and 140 males, which does not coincide with this study.

There are other studies in which there is no difference between the gender of the athletes and their state or trait anxiety (Yücel, 2003; Gül Akmaz & Ceyhan, 2009; Civan, Arı & Görücü, 2010; Yokuş et al., 2013; Öner, 2015; Karabulut & Mavi-Var, 2019).

According to the findings in Table 5, a significant difference was observed between age and state anxiety level. Accordingly, state anxiety of paragliding pilots decreases with increasing age. However, no significant difference was found between age and trait anxiety level. Advancing age brings about a decrease in anxiety levels as a result of experiences and experiences. It is a general idea that with the stagnation and calmness of age, individuals' reactions to events become more mature. For this reason, older individuals are expected to have lower levels of anxiety than younger individuals.

In the study conducted by Koç (2004), it was observed that as the age of professional soccer players increased, their state anxiety levels decreased. Öztürk (2019), on the other hand, stated that there was a significant difference between age and state and trait anxiety in his study on 146 dart athletes. Accordingly, state and trait anxiety levels of darts athletes between the ages of 14-17 were found to be higher than those of athletes aged 22 and over. Hacıcaferoğlu et al. (2015) found that state anxiety levels of public players decreased with increasing age. The aforementioned studies are supportive of the result we obtained in this study. On the other hand, in the studies conducted by Taşmektepeligil (2004) on 132 referees from different branches and by Demirli (2017) on 39 elite wrestlers, no statistical difference was found between age and anxiety status, which is not compatible with this study.

There are also studies showing that anxiety level has no direct relationship with age (Yücel, 2003; Tekkoyun, 2008; Erbaş & Küçük, 2012; Türkçapar, 2012; Yokuş et al., 2013; Kardaş, 2018; Karabulut & Mavi-Var, 2019).

When the findings in Table 6 are analyzed, it is seen that there is a significant difference between marital status and state anxiety of paragliding pilots. Accordingly, married pilots have lower state anxiety levels than single pilots. Married pilots may be more careful and cautious due to their responsibilities towards their families. This may reduce state anxiety levels during risky activities. No significant difference was found between the marital status of the pilots and their trait anxiety.

The study conducted by Oktay and Yıldız (2018) revealed that there was no significant difference between state anxiety and marital status of first-time divers. However, in the same study, it was found that single divers had higher levels of trait anxiety compared to married divers. In the study conducted by Taşmektepligil (2004), no significant difference was found between the state anxiety levels of the referees and their marital status, which is not in parallel with this study.

According to the findings in Table 7, it is seen that the state anxiety levels of paragliding pilots decrease as the duration of interest in the sport increases. This may mean that the state anxiety levels of paragliding pilots decrease with age as they practice this sport for a long time. Similarly, it is expected that the excitement or fear of paragliding pilots who continue this activity for a long time will also decrease. Moreover, when we look at the same table, there is no significant difference between the duration of paragliding pilots' interest in the sport and their trait anxiety.

Öntürk et al. (2019) stated in their study that taekwondo players' trait anxiety increased as the years of interest in their sport increased, but there was no significant difference in their state anxiety. Saylam (2021) in his studies on archers, Demirli (2017) on wrestlers, and Öztürk (2019) on dart athletes did not find a significant difference between the duration of interest in sports and state and trait anxiety, which does not coincide with the results of this study.

According to the findings in Table 8, there is a significant difference between the certification level of paragliding pilots and their state and trait anxiety. Accordingly, tandem pilots have lower state and trait anxiety levels than P5 pilots, P5 pilots have lower state and trait anxiety levels than P4 pilots and P4 pilots have lower state and trait anxiety levels than P2 pilots. Considering that tandem pilots take responsibility for passengers and passengers may be more anxious, tandem pilots are expected to be anxious. However, it is also possible that the death anxiety level of tandem pilots and passengers is low, there is not much difference between the death anxiety of passengers and pilots, and professional flight conditions may reduce the anxiety level (Çalık, 2021: 21).

The most important reason why paragliding pilots feel anxiety and stress before the flight is the feeling of falling, having an accident, injury, and fear of death. In addition, while experienced pilots are less stressed, this situation may vary according to geographical effects (Özçiriş, 2017: 69). It can be argued that the increase in the training received in parallel with the level of certification, the knowledge and experience gained increase the self-confidence of the pilots and reduce their anxiety. Aksu (2020) did not find a significant difference between the certification levels of football coaches and Yıldız (2021) did not find a significant difference between the state and trait anxiety of volleyball coaches, which does not coincide with this study.

According to the findings in Table 9, a significant difference was found between state and trait anxiety of paragliding pilots and family support. Pilots who did not receive family support had higher levels of state and trait anxiety than pilots who received family support.

There is no study in the literature examining the difference between state and trait anxiety and "family support" variable.

As a result, it was observed that there was a significant difference between the mean scores of state and trait anxiety of pilots according to gender, certificate level and family support variables. In addition, a significant difference was found between the mean state anxiety scores of pilots according to the variables of age, marital status and duration of interest in the branch.

Recommendations

It has been observed that there are not many studies on the psychological status of paragliding pilots in the literature. The number of studies to be conducted in this direction can be increased. Paragliding pilots can use different methods to reduce their anxiety and stress levels. These include pre-flight breathing exercises and using the right equipment. They can also connect with other pilots through support systems or groups to support each other and thus help them cope with anxiety and stress. During certification training, simulation-based training can help pilots avoid excessive anxiety during flight.

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