

# Determination of Anxiety Levels of Female and Male Athletes for Catching Corona Virus

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## ABSTRACT

**Background:** The Covid-19 epidemic has greatly changed the lifestyles and habits of millions of people around the world, and it has been observed that these changes have become permanent.

**Aim:** The aim of our research is to examine the anxiety levels of female and male athletes for catching the new type of corona virus (Covid-19).

**Method:** The survey method, one of the quantitative research models, was used in the study. The population of the research consisted of athletes (n=198) who were actively involved in sports in various sports clubs and in various branches in the districts of Istanbul, on the European side (Bakırköy, Güngören, Zeytinburnu). The data were collected online by applying the survey technique. The New Type Coronavirus (Covid-19) Anxiety Scale of the athletes (SYTKYKÖ) was used as a data collection tool. As a statistical procedure, it was determined that the data did not show normal distribution and Mann Whitney U, Kruskal Wallis-H analyzes from non-parametric tests were used.

**Findings:** It is seen that there is a difference between the anxiety levels of catching Covid-19 according to the gender of the athletes, their education level, the status of people around them catching covid-19, the level of chronic disease, and their training status. There was no difference between the anxiety levels of catching Covid-19 according to the age, sports branch and years of doing sports of the participants.

**Result:** As a result, it was concluded that the anxiety levels of the athletes of catching Covid-19 were high.

**Key words:** Pandemic, anxiety level, sports

## INTRODUCTION

The covid-19 pandemic, which started in Wuhan, China at the beginning of 2019 and affected humanity deeply, spreading rapidly on a global basis and affecting the whole world, is one of the biggest epidemics the world has ever experienced.<sup>1</sup> In line with the first determinations made by Chinese scientists on the disease, they stated that the disease is a disease that causes severe acute respiratory syndrome with diarrhea, fever, cough, headache and muscle aches, and even death in humans.<sup>2-3</sup>

For this reason, the World Health Organization (WHO), declaring that the world is facing a major problem, declared the epidemic as a pandemic process. Declaring that a series of measures and restrictions should be made around the world, it aimed to reduce the spread of the epidemic. Despite all the warnings and all the measures taken, the rate of spread of the disease has increased gradually, and it has infected close to 96 million people worldwide, causing the death of more than 2 million individuals among these people.<sup>4</sup>

The Covid-19 epidemic has greatly changed the lifestyles and habits of millions of people around the world, and it has been observed that these changes have become permanent.<sup>5</sup> Epidemics not only changed people's lifestyles, but also caused great fear and panic throughout their lives, but also led to radical social changes in the long run.<sup>6</sup> While the world is struggling with the covid-19 epidemic, it has deeply affected the entire sports community. Sudden cessation of sports activities, postponement or cancellation of competitions affected the world economically, sociologically, psychologically and spiritually.<sup>7-13</sup>

It is known that humanity has experienced much more painful periods in the past, experienced greater losses and struggled to cope with the disasters it has experienced for a long time. It is not the first time that the sports world is in such a chaos. However, this is the first time that such a universal problem has been encountered. The world is at war with an invisible enemy, and this enemy affects everyone regardless of social status, gender, race, language, religion and nationality.<sup>6</sup> It is known that human beings use sports as a tool in order to get rid of all the negativities experienced at different times, both at the global and regional level, to relieve themselves and the societies in which they live, even to a certain extent. Therefore, when the literature is examined, it has been found that the definition of sport in Latin is used with the meaning of having fun, lingering, loafing and it is thought that this definition strengthens our assumption.<sup>13</sup>

In addition, sport is defined as all of the socio-cultural, cognitive and physical activities that have certain rules, provide skill development by using many materials, are done individually or as a team, involve struggle, provide a professional career, and are made for recreational and competitive purposes.<sup>14</sup> One of the most important factors that bring success in sports is the psychological readiness of the athletes for the competitions and competitions they have made in order to improve their physical and cognitive status and skill capacity against all kinds of struggles.<sup>15</sup>

Based on these definitions, due to the socio-cultural structure of sports, it creates a mass movement of people, and due to its cognitive and physical structure, it is based on struggle and includes close contact. There have been many negative events such as competitions canceled due

to the reason, postponed important organizations and athletes who are in quarantine. It has become almost impossible not to experience anxiety in such a negative process.

In this process, athletes should abandon the factors they cannot control, focus on the factors they can control, and focus on activities that will enable them to cope with stress.<sup>16</sup> Because of the nature of uncertainty caused by the loss of the source of control, human nature has fallen into the trap of choice. This situation can also stimulate their emotions, increase anxiety and stress levels, and lead to depressive symptoms.<sup>17</sup> It is also stated that intolerance of uncertainty can negatively affect personal happiness.<sup>18</sup>

Anxiety is a part of life. Anxiety can be felt about different situations in all areas of life. Many situations such as a time-limited study, exam, physical problems, economic expectations and family situation can be the reason for our anxiety. Anxiety also helps the individual to be prepared for situations that may be encountered, to make quick decisions and to produce solutions in her study on anxiety, is the state of being tense with the increase of behavioral threat, which consists of psychological, physiological and internal reactions defines anxiety as "emotional responses that examine the state of tension, negative thinking, worry and bodily variability together".<sup>19-21</sup> Two different types of anxiety are mentioned by Spielberger; trait and state anxiety.<sup>21</sup>

State anxiety is a non-permanent emotional response that varies in response to the behavior encountered. In this context, if she feels the situation as a threatening factor, her level of state anxiety will be high, if she does not feel it as a threat factor, it will be low the effect of state anxiety on the athlete is high.<sup>22</sup> It can affect their physical, psychological and social abilities in a good or bad way.<sup>23</sup> Trait anxiety, on the other hand, is defined as the state of being unhappiness, being anxious, being overly sensitive when under pressure, and reacting too enthusiastically, regardless of environmental conditions.<sup>24</sup> For example, the fact that the athlete has an anxious character in general is an example of constant anxiety when she is tense and anxious before each competition. It is not possible to understand, observe and determine the movements of the person who is constantly anxious. For this reason, trait anxiety can be understood from the frequency and excess of anxiety in different times and conditions.<sup>25</sup>

Although anxiety usually seems like a negative situation, it can direct the individual to things that are known to be positive, such as examination, acquisition and production. The anxiety experienced during the education period motivates the individual in the name of positive anxiety. Negative anxiety, on the other hand, can be shown as an example of anxiety in many situations such as the inadequacy of the financial situation, the inconvenience of the individual in life standards.<sup>26</sup> It is seen that anxiety has a very important place on sports and restricts the performance of the athlete. It may differ according to the value of the competition and the hardness and purpose of the athlete. Anxiety affects the performance status of the athlete significantly by causing some changes in the physical and mental characteristics of the athlete. Therefore, anxiety is accepted as a serious psychological condition.<sup>25</sup>

The psychological states that change the performance of the athlete consist of variables such as motivation, stability, self-control, attention, and self-confidence.<sup>27</sup> In general, the increase or decrease in the anxiety level of the anxious athlete negatively affects the athlete's performance in terms of self-confidence, motivation, attention and decision making.<sup>28</sup> In line with this result, flexibility, speed, technique, tactics, strength and endurance can be affected during the performance of the athletes.<sup>29</sup>

## MATERIAL & METHODS

**Research Model:** The survey method, one of the quantitative research models, was used in the study. In quantitative research, cases and situations should be clear, specific and understandable.<sup>30</sup> Cases and situations can be measured and explained with numerical data.<sup>31</sup> The scanning method is defined as a model that aims to describe the current situation without any changes.<sup>32</sup>

**Population and Sample of the Research:** In our study, in the study carried out to determine the anxiety levels of athletes catching the new type of coronavirus (Covid-19), the population of the research consists of individuals who actively do sports in various sports clubs and various branches in the districts of Istanbul, on the European side (Bakırköy, Güngören, Zeytinburnu). A total of 198 athletes, 98 women and 100 men, participated in the research voluntarily.

**Data Collection Tools:** In the personal information form consisting of eleven questions developed by the researcher by examining the literature on the subject, demographic (gender, age, educational status, sports age, financial situation of the family, sports branch, whether or not he has a chronic disease, whether he trains, how many days a week he trains, there are questions that question features such as whether he has a friend who caught Covid-19, whether he and his training are affected, depending on whether he has a friend who caught Covid-19 or not.

To the participants, The "Athletes' Anxiety of Conceiving New Type Coronavirus (Covid-19) Scale" (SYTKYKÖ), consisting of 16 questions and 2 sub-dimensions, which was developed by the study, was applied.<sup>33</sup> Questions 1-11 of the scale constitute the dimension of individual anxiety, questions 12-16 constitute the dimension of socialization anxiety. Item 2 of the scale was reverse scored. Scoring from the scale is expressed as the lowest 11, the highest 55 in the dimension of individual anxiety, and the lowest 5 and the highest 25 in socialization anxiety. The scale is in the form of a 5-point Likert type rating form. The overall Cronbach Alpha coefficient of the scale is 917, the Cronbach Alpha coefficient calculated for the "Individual Anxiety" sub-dimension is 904 and the Cronbach Alpha coefficient calculated for the "Socialization Anxiety" sub-dimension is 816.

**Statistical analysis:** The data obtained from the personal information form and the data related to the athlete's concerns about catching the new coronavirus (Covid-19) are entered into the SPSS25.0 package program and analyzed through the program. Personal information about the participants is given by specifying the frequency (f) and percentage (%) values. When the number of groups is greater than 50, the normal distribution curve, skewness-

kurtosis value, the normal distribution curve over the histogram and the Kolmogorov-Smirnov test value were checked. The "Chronbach Alpha Coefficient" was obtained.

The data do not show statistically normal distribution, Mann Whitney U, Kruskal Wallis-H analyzes were used to test the hypotheses created for research purposes.

Table 1. Demographic Characteristics of the Participants

Personal Information	Variables	f	%
Your Gender	Woman	96	49,5
	Man	99	50,5
Your Age	18-20	60	30,8
	21-23	57	29,8
	24-26	50	25,3
	27-29	28	14,1
Your Education Status	Highschool	39	20,2
	University	156	79,8
How many years have you been doing sports?	1-3 Years	18	9,2
	4-6 Years	40	20,5
	7-9 Years	53	26,6
	10-12 Years	37	19,1
	13 and above	47	24,6
Can you describe your family's financial situation?	Bad	8	4,1
	Middle	123	61,1
	Good	64	34,8
What is your sports branch?	Swimming	43	22,2
	Football	45	22,7
	Basketball	34	17,7
	Wrestling	36	18,2
	Boxing	37	19,2
Do you have any chronic disease?	Yes	10	5,1
	No	185	94,9
Are you training?	Yes	141	71,7
	No	54	28,3
If You Are Training How many days a week do you train?	1-2	90	46,0
	3-4	54	27,8
	5 and above	51	26,2
Have you ever had an Athlete friend caught in Covid-19?	Yes	138	65,7
	No	57	34,3
If you had an Athlete friend Caught Covid-19, Did this affect you and your training?	Yes	50	25,3
	No	145	74,7

Table 2. T-Test Analysis Results of Athletes' Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) by Gender Variable

Gender	N	X	Ss	t	P
Man	99	50,76	13,29	-2,059	,041*
Woman	96	54,27	10,20		

\*P<0.05

When Table.2 is examined, it has been observed that there is a significant difference between men and women with the anxiety of athletes catching the new type of corona virus (covid-19) according to the gender variable of the participants (p<0.05).

Table 3. T-Test Analysis Results of Female and Male Athletes' Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) According to Educational Status Variable

Education Status	N	X	Ss	t	P
Highschool	39	49,33	9,82	-1,853	,037*
University	156	53,28	12,35		

\*P<0.05

When Table.3 is examined, it has been observed that there is a significant difference between the anxiety of catching the new type of corona virus (covid-19) and high school and university education of male and female athletes according to the educational status variable of the participants (p<0.05).

Table 4. T-Test Analysis Results of Female and Male Athletes' Anxiety Levels of Conceiving a New Type of Corona Virus (Covid-19) According to the Variable of Having a Friend Who Got Covid 19 or Not

Have you ever had a friend caught in Covid-19?	N	X	Ss	T	P
Yes	128	53,85	11,49	2,185	,030*
No	57	49,85	12,52		

\*P<0.05

When Table.4 is examined, it has been observed that there is a significant difference between the anxiety of catching the new type of corona virus (covid-19) among male and female athletes, according to the variable of whether the participants have had a friend who caught Covid 19 (p<0.05).

Table 5. T-Test Analysis Results of Female and Male Athletes' Anxiety Levels of Conceiving a New Type of Corona Virus (Covid-19) According to the Variable of Chronic Disorder Status

Do You Have Chronic Disorder?	N	X	Ss	t	P
Yes	10	61,60	11,01	2,502	,013*
No	185	52,00	11,85		

\*P<0.05

When Table.5 is examined, it has been observed that there is a significant difference between the anxiety of catching the new type of corona virus (covid-19) among male and female athletes according to the variable of whether the participants have a chronic illness (p<0.05).

Table 6. T-Test Analysis Results of Female and Male Athletes' Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) According to the Variable of Training Status

Training Status	N	X	Ss	T	P
Yes	141	50,27	10,83	-4,252	,000*
No	54	58,00	12,95		

\*P<0.05

When Table 6 is examined, it has been observed that there is a significant difference between the anxiety of catching the new type of corona virus (covid-19) among male and female athletes according to the variable of training status of the participants (p<0.05).

Table 7. ANOVA Test Result Regarding the Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) of Female and Male Athletes by Age Variable

Dimension	Age Group	N	X	Ss	F	P	Significant Difference
Athletes' Anxiety of Catching Covid-19	18-20	60	1,601	2,183	2,315	,077	-
	21-23	57	5,261	2,274			
	24-26	50	3,660	2,706			
	27-29	28	2,421	2,183			

When Table 7 is examined, no significant difference was found between the anxiety of catching the new type of corona virus (Covid-19) and the age variable of male and female participants (p>0.05).

Table 8. ANOVA Test Result Regarding the Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) of Female and Male Athletes by Sports Branch Variable

Dimension	Sports Branch	N	X	Ss	F	P	Significant Difference
Athletes' Anxiety of Catching Covid-19	Swimming	43	4,966	2,537	1,585	,180	-
	Football	45	5,068	2,718			
	Basketball	34	4,966	2,675			
	Wrestling	36	4,585	2,655			
	Boxing	37	1,397	2,537			

When Table 8 is examined, no significant difference was found between the anxiety of catching the new type of corona virus (Covid-19) and the sport branch variable of male and female participants (p>0.05).

Table 9. ANOVA Test Result Regarding the Anxiety Levels of Conceiving New Type Corona Virus (Covid-19) of Female and Male Athletes by Year of Playing Sports Variable

Dimension	How many years have you been doing sports	N	X	Ss	F	P	Significant Difference
Athletes' Anxiety of Catching Covid-19	1-3 Years	18	1,722	3,422	,334	,855	-
	4-6 Years	40	3,388	3,305			
	7-9 Years	53	1,590	3,450			
	10-12 Years	37	2,701	3,332			
	13 and above	47	1,666	3,422			

When Table 9 is examined, no significant difference was found between the anxiety of catching the new type of corona virus (Covid-19) and the variable of years of doing sports (p>0.05).

In Table 1, it was observed that 50.5% of the athletes participating in the research were male and 49.5% were female athletes. When the data on the age variable is examined, it is seen that 30.8% of the athletes are 18-20 years old, 29.8% are 21-23 years old, 25.3% are 24-26 years old and 14.1% are 27-29 years old. When the data on the education status of the athletes are examined, it is seen that 20.2% of the athletes are high school graduates and 79.8% are university graduates. When the data on the variable of how many years have you been doing sports are examined, 26.6% of the athletes are 7-9 years, 24.6% are 13 and over, 20.5% are 4-6 years, 19.1% are 10-12 years, 9.2% are 1- It is seen that he has been doing sports for 3 years. According to the family financial situation variable, 61.1% of the athletes were found to be moderate, 34.8% good and 4% bad. According to the branch variable of the athletes, 22.7% were football, 22.2% swimming,

19.2% boxing, 18.2% wrestling and 17.7% basketball. When the athletes are examined according to the variable do you have any chronic disease, it is seen that 5.1% have a chronic disease and 94.9% do not have a chronic disease. When the variable do you train is examined, it is seen that 71.7% of the athletes do sports and 28.3% do not. According to the variable of how many days a week do you train, it was seen that 46.0% of the athletes train 1-2, 27.8% of them 3-4 and 26.2% of them train 5 or more weeks. According to the variable of whether the athletes have had an athlete friend who caught covid 19, it was seen that 65.7% of them were caught in covid 19 and 34.3% of them were not caught in covid 19. According to the variable if you have an athlete friend who caught Covid-19 and whether this affected you and your training, it was observed that 74.7% of them were not affected, and 25.3% were affected.

## DISCUSSION CONCLUSION

These days, when we face some restrictions in our social and business life due to the pandemic, there are also restrictions and even pauses in the fields of education and sports, which are a part of the lives of individuals. It can be said that these pauses affect sports, which has become a sector in the world and in our country, more than other sectors. The fact that people who watch sports as well as those who do sports are deprived of this pleasure deeply upsets the individuals. Due to the rapid spread of Covid-19, sports competitions and activities were suspended for a while, considering the health of the athletes. After a long break, the resumption of sports competitions brought about discussions. The fact that the pandemic period does not end causes uneasiness in the minds of those who do sports, watch sports and give their heart to sports.

Due to the reasons, we have mentioned above, it is aimed to examine and evaluate the anxiety levels of female and male athletes about catching the new type of corona virus in terms of various variables during the Covid-19 pandemic, which has affected the whole world.

According to the gender variable of the participants, it was observed that the anxiety levels of the athletes about catching the new type of corona virus (covid-19) were significantly different between men and women, and this difference was significant for women.

When the literature is examined, determined that there is no difference in the anxiety levels of catching Covid-19 by gender in her study on the anxiety of athletes catching covid.<sup>34</sup> In the study conducted by, on the anxiety status of healthcare workers during the pandemic process during the Covid-19 epidemic, it was stated that the anxiety levels of women differ significantly compared to men in the mean anxiety score according to gender.<sup>35</sup> In the study of, on the anxiety levels of football players, it was determined that anxiety differs between gender variables and this difference is higher in female athletes than in male athletes.<sup>36</sup> In the study of, in which he examined the anxiety levels of football referees, it was determined that male referees had higher anxiety levels than female referees.<sup>37</sup> In many studies on the anxiety levels of athletes in case of uncertainty, determined that there was no difference between the anxiety levels of men and women.<sup>38-39</sup>

It was found that there was a significant difference between the anxiety scores of the female and male participants according to the educational status variables, according to high school and university education status. It was found that the anxiety levels of the university graduates were significantly higher than the high school graduates. In the research, it is seen that the level of anxiety decreases as the level of education decreases.

As a result of the analysis made according to the variable of "Have you had a friend caught COVID-19" of male and female participants, it was observed that the environment of the athletes caught the new type of coronavirus and there was a significant difference. It is thought that the anxiety levels of the athletes are affected by hearing the coronavirus cases experienced by the family, close friends, teams, technical team and employees during the Covid-19 period.

A significant difference was observed according to the chronic disease variable of female and male participants. In

studies conducted to date, it has been determined that people with chronic diseases have a high level of anxiety. It has been observed that the level of individuals' lack of independence and perceived chronic disorders such as restriction in plans for their lives may cause an increase in anxiety levels found in their studies that individuals with chronic diseases have higher anxiety levels than those without chronic diseases.<sup>40-42</sup> Who reached the findings supporting the literature, determined that the chronic diseases experienced by the individuals increased their anxiety in the study they aimed to determine the death anxiety and quality of life of elderly individuals.

Considering the variable of training status of male and female participants, a difference was found between the anxiety levels of catching Covid-19 according to whether they did or not. It is seen that those who do not train have a higher level of anxiety than those who do. Due to the Covid-19 pandemic, extraordinary situations have arisen, such as the cancellation or postponement of large-scale organizations and tournaments. In this unusual situation, training sessions were canceled and many facilities were closed. Athletes have no idea when the pandemic period will end and normalization will begin. Despite this, they continued their necessary training mostly in open areas and in line with their own means.<sup>34</sup> Her study on the anxiety of athletes about catching covid, concluded that the anxiety levels of the athletes who train in the open air are lower than the athletes who train in indoor areas.

Considering the anxiety levels of catching Covid-19 according to the age variable of the female and male participants, there was no significant difference.<sup>43</sup> Also examined the ages of the athletes in a chronological order in their research on elite basketball players and did not find a significant difference in the result.<sup>44</sup> Stated in her study on elite wrestlers that age is not a factor in anxiety level.

When the anxiety levels of the female and male participants were examined according to the sports branch variable, there was no significant difference. It is a scientific fact that the anxiety levels of the athletes differ according to the sports branches they have done.<sup>34</sup> Her study on the anxiety of athletes catching covid, found that individuals who do team sports have higher levels of anxiety compared to individuals who do individual sports.<sup>45</sup> Their study on female athletes, concluded that individuals who do individual sports experience anxiety about losing their branch-specific abilities.

Considering the anxiety levels of catching Covid-19 according to the sports age variable of the female and male participants, there was no significant difference.<sup>46</sup> Did not find a relationship between the trait anxiety levels of the athletes and the years of doing sports, in the findings of a different anxiety level in her study.<sup>47,48,49</sup> On the other hand, did not reach a significant result in anxiety levels when she examined the state anxiety levels of the athletes in a similar study conducted on basketball players.

As a result, it is seen that there is a difference between the anxiety levels of catching Covid-19 according to the gender of the athletes, and that women have a higher level of anxiety than men. It is seen that there is a difference between the anxiety levels of catching Covid-19 according to the education levels of the athletes, and the athletes with high education levels have a higher level of

anxiety than the athletes with low education. It is seen that there is a difference between the anxiety levels of catching Covid-19 according to the level of whether or not the athletes have a friend who caught Covid-19, and those who have a friend with the disease have a higher level of anxiety than those who do not. It is seen that there is a difference between the anxiety levels of catching Covid-19 according to the chronic disease of the athletes, and those with chronic diseases have a higher level of anxiety than those who do not. It is seen that there is a difference between the anxiety levels of catching Covid-19 according to whether the athletes train or not, and those who do not train have a higher level of anxiety than those who do. There was no difference between the anxiety levels of catching Covid-19 according to the age, sports branch and years of doing sports of the athletes.

Examining the anxiety of female and male athletes about catching Covid-19 has become more important for both athletes and those who manage sports activities. It should be aimed to know the anxiety status of the athletes who have to stay at home during the pandemic period and to keep their anxiety under control. It should not be forgotten that the main purpose of sports is health. With the cooperation of the Ministry of Health and related Federations, athletes should be provided with psychological counseling support, increasing their quality of life to higher levels and enabling athletes to recover faster.

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