## ORIGINAL ARTICLE

# The effect of university students' perceptions of coronavirus anxiety on their level of socialization through sports

Ahmet Sahin<sup>1</sup>, Gokhan Acar<sup>2</sup>, Filiz Sahin<sup>1</sup>

<sup>1</sup>Faculty of Sports Sciences, Burdur Mehmet Akif Ersoy University, Burdur, Turkey; <sup>2</sup>Faculty of Sports Sciences, Usak University, Usak, Turkey

Abstract. Study Objectives: This study aimed to examine the effects of university students' perceptions of coronavirus anxiety on their level of socialization through sports. For this purpose, a total of 284 students, 205 male, 79 female, students studying at Mehmet Akif Ersoy University Faculty of Sports Sciences in the fall semester of the 2021-2022 academic year constitute the universe of the study. Among the students who constitute the population of the study, 114 students are studying in the Department of Physical Education and Sports Teaching, 8 in the Department of Sports Management, and 162 in the Department of Coaching Education. Methods: In the analysis of the study data, descriptive statistics such as mean, standard deviation, frequency, and percentage values were examined. Test of normality was examined first to determine whether parametric analyzes will be performed. Results: When the socialization levels of university students through sports were evaluated according to age groups, the level of socialization through sports of students in the 21-22 age group is significantly higher than the level of socialization through sports of the students in the 18-22 age group. It was determined that the levels of socialization through sports of the students studying in the coaching education department were significantly higher than the levels of socialization through sports of the students studying in the physical education and sports teaching department. Conclusion: In the correlation analysis, it was determined that there was a very weak negative correlation between the coronavirus anxiety and the sports and socialization.

**Keywords:** Coronavirus Anxiety Perception, Socialization, Sports.

#### Introduction

Socialization is the learning of the lifestyle of a particular group or society, but also a mutual interaction process. In this learning process, the stereotypical behaviors in the society are personalized by the individual and as a result, the individual develops an identity belonging to that society or group (1). In other words, socialization is the interaction process brought about by individuals, groups, social institutions, and cultural activities (2,3). The most significant socialization tools are family, play and friend groups, school and teacher, neighbor, workplace, clubs, associations, political groups, religious communities and places of worship, art activities, and mass media (4). Studies show that behavioral disorders

such as feeling lonely in social life, having difficulty in expressing oneself, showing aggression against existing rules and laws, and lacking a sense of social responsibility result from the individual's socialization problems, or in other words, the individual's inability to socialize (5). Socialization through sport examines the person or means that draws an individual into the sport, in other words, the way an individual participates in sport. Socialization through sport focuses on the consequences of participating in sport. Socialization through sports shows how individuals enable to participate in society through participation in sports. It is considered that sports are very essential in correcting behaviors such as teamwork, winning and losing (or competing), and being fair (6-8). The socialization process in sports is more

affected by demographic and social variables combined with the opportunity to be exposed to sports through factors such as proximity to sports activities and the opportunity to participate in different sports activities based on socio-economic status (9,10). The coronavirus, first detected in Wuhan, the capital of the Hubei region of China, spread rapidly around the world and was declared a pandemic by the World Health Organization (WHO). The coronavirus disease, called COVID-19, is a newly discovered type of infectious disease. It was reported on 31 December 2019 that an undiscovered coronavirus was encountered in China as a result of the examination of a group of viral pneumonia patients whose etiology is not fully known (11-13). The experience of past outbreaks suggests the possibility that some patients and healthcare professionals will be traumatized by the COVID-19 pandemic and will experience persistent psychiatric symptoms after the outbreak. Thus, the COVID-19 pandemic will become an extra socio-economic burden on current mental health care delivery for the entire world. It can also be stated that it will increase the burden of global mental disorders (14-16). In the current situation, it can be stated that, in addition to the social socialization provided by sports and the unifying feature of sports, physical activity will be a protective factor against mental diseases and a preventive factor for anxiety due to stress.

# Material and Methods

## Participants

A total of 284 students, 205 males, 79 females, studying at Mehmet Akif Ersoy University, Faculty of Sports Sciences in the fall semester of the 2021-2022 academic year, 114 from the Department of Physical Education and Sports Teaching, 8 from the Department of Sports Management, and 162 from the Department of Coaching Education, constitutes the universe of the study with the random method.

#### Materials

In the first part of the study, demographic questions consisting of 6 questions that define themselves

were asked to the participants. The "Coronavirus Anxiety Scale", developed by Lee (2000) (18), translated into Turkish by Biçer et al., (2020) (19), was used to measure perceptions of Coronavirus Anxiety. Turkish validity and reliability study of the scale was conducted by Biçer et al. (2020). In their validity and reliability study, it showed the same features as the original scale, which is one-dimensional and consists of five questions. The Cronbach Alpha reliability coefficient of the scale, which consists of 5 questions and one dimension, was calculated as 0.832. The factor loads of the scale, which consists of a single factor and 5 items, vary between 0.625 and 0.784. Another scale used to collect data in the study is the "Sports and Socialization Scale", which was developed by Sahan (2007) (20) and consists of 35 questions. In the validity and reliability study of the 5-point Likert type "Socialization in Sports Scale", the Cronbach Alpha reliability coefficient was calculated as 0.84.

## Statistical analysis

SPSS 21.0 software was used for the analysis of the study data. In the analysis of the study data, descriptive statistics such as mean, standard deviation, frequency, and percentage values were examined. Scale data distribution normality was examined first to determine whether parametric analyzes will be performed for this study. As a result of the analysis, kurtosis and skewness values of the data were calculated and the results are given in

As can be seen in Table 1, the skewness and kurtosis values obtained for the Coronavirus Anxiety Scale as a result of the distribution normality analysis are outside the range of -2 to +2. In the Sports and Socialization Scale, on the other hand, skewness and kurtosis values are between -2 and +2. Accordingly, non-parametric tests (Kruskal Wallis and Mann Whitney U) were used for intergroup comparisons for the Coronavirus Anxiety Scale that did not show normal distribution. In Sports and Socialization Scale,

Table 1. Skewness and kurtosis values of the scales.

Skewness Kurtosis

Coronavirus Anxiety Scale 2,554 6,999

Sports and Socialization Scale -0,800 0,293

**Table 2.** Five Likert type scale intervals for the Coronavirus anxiety scale.

Weight	Options	Limits
1	Never	1,00 - 1,80
2	Rarely	1,81 – 2,60
3	Sometimes	2,61 - 3,40
4	Often	3,41 - 4,20
5	Always	4,21 - 5,00

which shows the normal distribution, independent T-test for pairwise comparisons, One Way ANOVA test for multiple comparisons, and Tukey test as post hoc test were used for comparisons between groups.

The scale intervals to be used in the interpretation of the mean values in the 5-point Likert type scale used to determine the coronavirus anxiety levels of the university students participating in the study are given in Table 2.

## Results

Information on the research results is given below.

According to Table 3, where the demographic information of the sample group is given, 31.0% of the participants are in the 18-22 age group, and 38.4% are in the 21-22 age group. The majority of the participants, 72.2%, were male students. In the distribution by grade, 43.0% of the participants are 3rd-grade students and 24.6% are 4th-grade students. In terms of the department they study, 40.1% of the participants are studying at the Department of Physical Education and Sports Teaching, and 57.0% are studying at the Department of Coaching Education. When asked what they do in their spare time, 36.6% of the participants stated that they go to entertainment venues, 28.2% read a book, and 15.8% go to the cinema or theater. In their daily lives, 37.0% of the students describe themselves as social and extrovert, 34.9% as quiet and calm, 16.2% as active, 12.0% as nervous and hot-tempered.

The Coronavirus Anxiety Mean of the university students participating in the study was determined as  $x=1.47\pm0.82$ . According to this result, it can be stated that the anxiety levels of the university students participating in the study about the coronavirus are almost non-existent.

**Table 3.** Demographic information of the sample group. % 18-22 years old Age 88 31,0 21-22 years old 109 38,4 23-24 years old 21,5 25 years old and older 9,2 26 Male Gender 205 72,2 Female 79 27,8 Grade 1st Grade 51 18.0 2nd Grade 41 14,4 3rd Grade 122 43,0 4th Grade 70 24,6 Physical Education and Sports Department 114 40,1 Teaching Sports Management 8 2,8 Coaching Education 162 57,0 How do you I read a book 80 28,2 spend your I go to the cinema/theatre 45 15.8 spare time? I visit historical places 7,4 21 I go to entertainment venues 104 36,6 I do shopping 34 12.0 How would Quiet and calm 99 34,9 you describe Social and extrovert 105 37,0 yourself in Hyperactive 46 16,2 daily life? Nervous and hot-tempered 12,0 34

**Table 4.** Coronavirus Anxiety Scale mean scores and standard deviation values.

deviation variety.			
	N	mean	SD
1-I had trouble falling or staying asleep			
because I was thinking about the	284	1,45	0,90
coronavirus.			
2-I lost interest in eating when I thought			
about or was exposed to information	284	1,59	1,01
about the coronavirus.			
3-I felt nauseous or had stomach problems			
when I thought about or was exposed to	284	1,43	0,93
information about the coronavirus.			
4-I felt paralyzed or frozen when			
I thought about or was exposed to	284	1,41	0,88
information about the coronavirus.			
5 -I felt dizzy, lightheaded, or faint when			
I read or listened to news about the	284	1,48	1,04
coronavirus.			
Coronavirus Anxiety Mean	284	1,47	0,82

According to Table 5, the mean score of the answers given by the university students participating in the study to the sports and socialization scale was

determined as  $x=3.64\pm0.80$ . According to this result, it can be stated that the level of socialization through sports of the university students participating in the

Table 5. Sports and Socialization Scale mean scores and standard deviation values.			
	N	mean	SD
1. My interest and ability are decisive in choosing the sport I am interested in.	284	4,01	1,31
2. I find myself more successful in individual sports	284	3,44	1,25
3. If I decide to do something sports, I will not be affected by the opinions of others.	284	3,72	1,22
4. I enjoy doing sports with people of all age groups, genders, and income levels.	284	3,86	1,19
5. I do not act contrary to myself in order to please others in sports activities.	284	3,77	1,26
6. I don't have to be appreciated or loved by other people in sports activities.	284	3,35	1,28
7. The people may know me much better in sports activities.	284	3,63	1,22
8. One of the most favorite things in my life is doing sports with people I don't know.	284	3,32	1,26
9. I feel alone in sports activities where team sports are performed.	284	2,70	1,39
10. I don't like to keep my feelings under control during sports activities	284	3,16	1,28
11. I always take the role of team leader in team sports.	284	3,40	1,17
12. I am successful in directing the team in team sports.	284	3,62	1,21
13. Individuals who do sports are at peace with themselves.	284	3,90	1,21
14. I prefer solving rather than arguing in sports activities	284	3,81	1,19
15. I contribute to the organization of sports activities	284	3,76	1,13
16. I enjoy participating in all kinds of sports activities	284	3,81	1,21
17. I stand up for my rights and tell the truth even if other people reject me	284	3,98	1,20
18. I prefer team sports activities.	284	3,50	1,31
19. Sports establish the integration between the societies.	284	3,87	1,22
20. I express myself more freely in sports activities	284	3,80	1,24
21. Sports and sports activities provide social integration	284	3,77	1,25
22. Can behaviors that do not comply with the rules in sports activities (swearing and behaviors not complying with sportsmanship) be tolerated?	284	3,12	1,40
23. I would rather be an individual with a unique value structure than a member of a group.	284	3,42	1,25
24. Sports contributes positively to interpersonal communication.	284	3,81	1,22
25. I adapt easily to all kinds of sports activities and sports	284	3,80	1,17
26. I communicate more easily with others in sports activities	284	3,80	1,20
27. Sports education plays an important role in raising individuals who are beneficial to society.	284	3,88	1,21
28. Sport enables the exploration of individual skills.	284	3,84	1,25
29. Sports provide positive feelings towards people.	284	3,83	1,24
30. It's difficult for me to be apart from the people I love	284	3,54	1,26
31. I like to spend my spare time with other people.	284	3,67	1,26
32. I like to do sports with friends	284	3,81	1,26
33. The influence of my family and environment is decisive in choosing the branch of sport I am interested in.	284	3,32	1,36
34. I would rather help other people than have them help me	284	3,66	1,25
35. I prefer to do activities that will make you have a good time with other people rather than individual activities	284	3,74	1,23
Sports and Socialization Mean	284	3,64	0,80

study is at the level of "I agree". When the scale items were examined in general, it can be seen that the item "I feel alone in sports activities where team sports are performed" was obtained the lowest mean value, x=2.70 at the level of "Undecided". The item "I don't like to keep my feelings under control during sports activities" with a mean of x=3.16, and "Can behaviors that do not comply with the rules in sports activities (swearing and behaviors not complying with sportsmanship) be tolerated?" with a mean of x=3.12 were also at the level of "Undecided".

Opinions at the level of "undecided" were expressed for the items "It is not important for me to be appreciated or loved by other people in sports activities" with a mean of x=3.35, "One of the most favorite things in my life is doing sports with people I don't know" with a mean of x=3.32, and "The influence of my family and environment is decisive in choosing the branch of sport I am interested in" with a mean of x=3.32.

The results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students are evaluated according to age groups, are given in Table 6. According to the results obtained, the coronavirus anxiety levels of university students did not show a significant difference according to age groups (p>0.05).

The results of the One-Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to age groups, are given in Table 7. According to the results obtained, it was determined that the level of socialization through sports of university students in the 21-22 age group (x= $3.79\pm0.66$ ) was significantly higher than the level of socialization through sports of university students in the 18-22 age group (x= $3.45\pm0.86$ ) (p<0.05).

The results of the Mann-Whitney U test, which evaluates the coronavirus anxiety levels of university students according to their gender, are given in Table 8. According to the results obtained, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their gender (p>0,05).

The results of the T-test, in which the socialization levels of university students through sports were evaluated according to their gender, are given in Table 9. According to the results obtained, it was determined that the level of socialization of university students through sports did not show a significant difference according to their gender (p>0,05).

The results of the Kruskal Wallis test, in which

Table 6. Kruskal Wallis Test results comparing coronavirus anxiety levels by age variable.

	Age	N	mean	SD	Mean Square	Chi-Square	P
- -	18-22 years old	88	1,31	0,45	136,16		
	21-22 years old 109		1,54	0,89	150,26		0.504
Anxiety Mean Score	23-24 years old	61	1,53	1,04	135,70	2,344	0,504
	25 years old and above	26	1,58	0,85	147,37		

Table 7. One-Way ANOVA test results comparing the levels of socialization through sports according to the age variable.

	Age	N	mean	SD	F	P	Difference
Sports and Socialization Mean Score	18-22 years old	88	3,45	0,86	_	0,025**	2 > 1
	21-22 years old	109	3,79	0,66	2 152		
	23-24 years old	61	3,64	0,79	3,152		
	25 years old and above 26 3,66 1,01		_				

<sup>\*\*</sup> indicates a significant difference at the P<0.05 level.

Table 8. Mann-Whitney U Test results comparing coronavirus anxiety levels by gender variable.

	Gender	N	mean	SD	Mean Square	Sum of Squares	Mann-Whitney U	P
A	Male	205	1,50	0,85	143,32	29380,50	- 7929,500	0.770
Anxiety Mean Score	Female	79	1,40	0,72	140,37	11089,50	7929,300	0,770

Table 9	<ul> <li>T-Test resul</li> </ul>	ts comparing the	levels o	of socialization	through s	ports according	to the	gender variable.

1			0 1	0 0		
	Gender	N	mean	SD	t	P
Sports and Socialization	Male	205	3,65	0,80	0.466	0.641
Mean Score	Female	79	3,60	0,81	0,466	0,641

the coronavirus anxiety levels of university students are evaluated according to their grade levels, are given in Table 10. According to the results obtained, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their grade levels (p>0.05).

The results of the One Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to their grades, are given in Table 11. The level of socialization through sports of the 3rd-grade students ( $x=3.80\pm0.75$ ) was found to be significantly higher than the 1st-grade students ( $x=3.37\pm0.86$ ) (p<0.05).

The results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students are evaluated according to the departments they study, are given in Table 12. According to the results obtained, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their departments (p>0.05).

The results of the One-Way ANOVA test, in which the socialization levels of university students through sports are evaluated according to the departments they study, are given in Table 13. It was determined that the socialization levels of Department of Coaching Education students through sports (x=3.77±0.77) were significantly higher than those of Department of Physical Education and Sports Teaching students (x=3.46±0.80) (p<0.05).

The results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students are evaluated according to their spare time activities, are given in Table 14. According to the results obtained, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their spare time activities (p>0.05).

**Table 10.** Kruskal Wallis test results comparing coronavirus anxiety levels by grade variable.

		1 0	<i>J</i>	, 0			
	Grade	N	mean	SD	Mean Square	Chi-Square	P
Anxiety Mean Score	1st Grade	51	1,25	0,41	128,70		
	2 <sup>nd</sup> Grade	41	1,58	0,92	155,82	4.126	0,247
	3 <sup>rd</sup> Grade	122	1,52	0,93	141,86	4,136	
	4 <sup>th</sup> Grade	70	1,48	0,75	148,06		

Table 11. One-Way ANOVA test results comparing the levels of socialization through sports according to the grade variable

	Grade	N	mean	SD	F	P	Difference	
Sports and Socialization Mean	1st Grade	51	3,37	0,86			3 > 1	
	2 <sup>nd</sup> Grade	41	3,45	0,78	4.660	0,003**		
Score	3 <sup>rd</sup> Grade	122	3,80	0,75	- 4,669			
	4 <sup>th</sup> Grade	70	3,67	0,77	-			

<sup>\*\*</sup> indicates a significant difference at the P<0.05 level.

Table 12. Kruskal Wallis test results comparing coronavirus anxiety levels by department variable

	Department	N	mean	SD	Mean Square	Chi-Square	P
	Physical Education and Sports Teaching	114	1,42	0,61	148,27		
Anxiety Mean Score	Sports Management		2,20	1,49	171,44	2,661	0,264
	Coaching Education	162	1,47	0,89	137,01		

Table 13. One-Way ANOVA test results comparing the levels of socialization through sports according to the department variable.

	Department	N	mean	SD	F	P	Difference
Sports and Socialization Mean Score	Physical Education and Sports Teaching	114	3,46	0,80		,	
	Sports Management	8	3,56	0,93	5,525	0,004**	3 > 1
	Coaching Education	162	3,77	0,77	_		

<sup>\*\*</sup> indicates a significant difference at the P<0.05 level.

Table 14. Kruskal Wallis test results comparing coronavirus anxiety levels by spare time activity variable.

	Spare time activity	N	mean	SD	Mean Square	Chi-Square	P
Anxiety Mean Score	I read a book	80	1,45	0,76	145,89		0,514
	I go to the cinema/theatre	45	1,67	1,13	146,74		
	I visit historical places	21	1,61	0,89	161,29	3,271	
	I go to entertainment venues	104	1,38	0,68	133,05		
	I do shopping	34	1,44	0,79	146,19		

The results of the One-Way ANOVA test, in which the socialization levels of university students through sports are evaluated according to their spare time activities, are given in Table 15. According to the results obtained, it was determined that the socialization levels of university students through sports did not show a significant difference according to their spare time activities (p>0.05).

The results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students are evaluated according to the way they describe themselves, are given in Table 16. It was determined that the coronavirus anxiety levels ( $x=1.87\pm1.27$ ) of university students who describe themselves as nervous and hot-tempered were found to be higher with a significant difference compared to students in other groups (p<0.05).

The results of the One-Way ANOVA test, in which the socialization levels of university students through sports are evaluated according to the way they define themselves, are given in Table 17. According to the results obtained, it was determined that the level of

**Table 15.** One-Way ANOVA test results comparing the levels of socialization through sports according to the spare time activity variable.

	Spare time activity	N	mean	SD	F	P
	I read a book	80	3,49	0,86		
	I go to the cinema/theatre	45	3,54	0,74	-	
Sports and Socialization Mean Score	I visit historical places	21	3,82	0,72	1,681	0,154
	I go to entertainment venues	104	3,71	0,76	-	
	I do shopping	34	3,78	0,86	-	

Table 16. Kruskal Wallis test results comparing coronavirus anxiety levels according to self-assessment variable.

	Self-assessment	N	mean	SD	Mean Square	Chi-Square	P
Anxiety Mean Score	Quiet and calm	99	1,48	0,75	151,53		0,041**
	Social and extrovert	105	1,35	0,73	127,18	0.041	
	Hyperactive	46	1,41	0,63	142,60	8,241	
	Nervous and hot-tempered	34	1,87	1,27	163,41		
white 1	1.00 1 0 0 0 5 1 1				·		

<sup>\*\*</sup> indicates a significant difference at the P<0.05 level.

						C 1C	_		TA T		'T		
variable.													
Table 17.	. One-Way	ANOVA	test results	comparing	the l	levels of	socialization	through	sports	according	to th	e self-ass	sessment

	Self- assessment	N	mean	SD	$\mathbf{F}$	p
	Quiet and calm	99	3,48	0,76	- - 2,364 -	0,071
Constant I Contain Many Const	Social and extrovert	105	3,75	0,78		
Sports and Socialization Mean Score	Hyperactive	46	3,64	0,90		
	Nervous and hot-tempered	34	3,78	0,75		

socialization of university students through sports did not show a significant difference according to the way they define themselves (p>0,05).

The Spearman correlation coefficient was examined in the correlation analysis performed to determine the relationship between the coronavirus anxiety perceptions of the university students participating in the study and their socialization levels through sports, and the results are given in Table 18. A very weak negative correlation (r = -0.160 p=0.007) was determined between the mean score of coronavirus anxiety and the mean score of the sports and socialization scale. Accordingly, it can be stated that university student's anxiety levels regarding coronavirus have a very weak negative effect on their socialization levels through sports.

#### **Discussion and Conclusion**

According to the result obtained from the coronavirus anxiety scale, it can be stated that the anxiety levels of the university students participating in the study about the coronavirus are almost non-existent. According to the results obtained from the sports and socialization scale, it can be stated that the level of so-

**Table 18.** Correlation analysis of the relationship between perceptions of coronavirus anxiety and the level of socialization through sports.

	Spearman's rho	Anxiety Anxiety					
	Correlation Coefficient	1,000	-,160**				
Anxiety Mean Score	Sig. (2-tailed)		,007				
Score	N	284	284				
Sports and	Correlation Coefficient	-,160**	1,000				
Socialization	Sig. (2-tailed)	,007					
Mean Score	N	284	284				
* Camalation is significant at the 0.01 land (2 tailed)							

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

cialization through sports of the university students participating in the study is at the level of "I agree". When the scale items were examined in general, it was determined that the lowest value was obtained at the level of "undecided" for the item "I feel alone in sports activities where team sports are performed". Values at the level of "undecided" for the item "I don't like to keep my feelings under control during sports activities", and "Can behaviors that do not comply with the rules in sports activities (swearing and behaviors not complying with sportsmanship) be tolerated?" were obtained. Opinions at the level of "undecided" were expressed for the items "I don't have to be appreciated or loved by other people in sports activities", "One of the most favorite things in my life is doing sports with people I don't know", and "The influence of my family and environment is decisive in choosing the branch of sport I am interested in". The limitations of the study of Biçer et al, (2020) include the use of online sampling method due to the existence of an extraordinary situation and the subjectivity of tools measuring psychological impact, anxiety, depression, and stress levels, which are not always compatible with objective evaluation by mental health professionals. For these reasons, a study was conducted to reveal the validity and reliability of a short anxiety scale that can be used to reliably describe the epidemic-related dysfunctional anxiety and symptom severity cases that led to the public health crisis. As a result of the analysis, it was concluded that the Coronavirus Anxiety Scale is reliable and valid (21). According to the results obtained from the Kruskal Wallis test, in which the coronavirus anxiety levels of university students were evaluated according to age groups, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to age groups. According to the results obtained from the One-Way ANOVA test, in which the socialization levels of university students

through sports are evaluated according to age groups, the socialization levels of university students in the 21-22 age group through sports were found to be higher with a significant difference compared to the students in the 18-22 age group. According to the results obtained from the Mann-Whitney U test, in which the coronavirus anxiety levels of university students were evaluated according to their gender, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their gender. Filiz (2010) concluded that the socialization and sports levels of female university students and male university students are almost equal (22). According to the results obtained from the T-test, in which the socialization levels of university students through sports were evaluated according to gender, it was determined that the socialization levels of university students through sports did not show a significant difference according to their gender. According to the results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students were evaluated according to their grade levels, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their grade levels. According to the results of the One-Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to their grade level, it was determined that the socialization levels of the 3rd-grade students through sports were significantly higher than the 1st-grade students' socialization levels through sports. Küçük and Koç (2004) stated that thanks to sports, people come together in different environments and interact with people from many different thoughts and different cultures. In this regard, they concluded that one of the easiest ways that people can use for socialization and self-expression is sports (23). According to the results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students were evaluated according to the departments they studied, it was determined that the coronavirus anxiety levels of university students did not show a significant difference according to their departments. According to the results of the One-Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to the departments they studied, it

was determined that the level of socialization through sports of Department of Coaching Education students was higher with a significant difference compared to the levels of socialization through sports of Department of Physical Education and Sports Teaching students. According to the results of the Kruskal Wallis test, in which the coronavirus anxiety levels of university students are evaluated according to the spare time activities, it was determined that the coronavirus anxiety levels of the university students do not show a significant difference compared to their spare time activities. According to the results of the One-Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to their spare time activities, it was determined that the socialization levels of university students through sports did not show a significant difference according to their spare time activities. According to the results of the Kruskal Wallis test, in which university students' coronavirus anxiety levels were evaluated according to their self-assessments, it was determined that the coronavirus anxiety levels of university students who defined themselves as nervous and hot-blooded were higher with a significant difference compared to other students. According to the results of the One Way ANOVA test, in which the socialization levels of university students through sports were evaluated according to their self-assessment, it was determined that the socialization levels of university students through sports did not show a significant difference according to their self-assessment. In the correlation analysis performed to determine the relationship between the participants' perceptions of coronavirus anxiety and their level of socialization through sports, the Spearman correlation coefficient was examined, and it was determined that there was a very weak negative correlation between the coronavirus anxiety mean score and the sports and socialization scale mean score. Accordingly, it can be stated that university student's anxiety levels regarding coronavirus have a very weak negative effect on their socialization levels through sports.

**Conflicts of interest:** Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

## References

- 1. Demir N. Society, science: basic concepts of sociology. Ankara: Turhan Publishing 2004.
- Ozturk Akcalar S. The effect of sports on the socialization of the orthopedically disabled, Unpublished Master Thesis, Gazi University, Institute of Health Sciences, Ankara 2007.
- 3. Gozum P. A research on teachers in terms of job satisfaction and ethical climate. Journal of Mehmet Akif Ersoy University economics and administrative sciences faculty. 2019; 6(1): 230-245.
- Sahan H. The role of sports activities in the socialization process of university students. Journal of KMU IIBF. 2008; 10(15): 260-278.
- Yetim A. Sociology and sports. Ankara: Topkar Publishing 2000.
- Snyder E, Spreitzer E, Socialization into sport, in nj, smelser (ed), social aspects of sport, Englewood cliffs, Prentice Hall NJ: 1976.
- Kenyon G, McPherson B. Approach to the study of sport socialization, International review of sport sociology. 1974; 9(1): 127-129.
- Larson D. Youth sport programs. Sport sociology bulletin, 1975.
- Kenyon G, McPherson B. Approach to the study of sport socialization, International review of sport sociology. 1974; 9(1): 127-129.
- Araci H. Physical education in schools for teachers and students. Ankara: Bagirgan Press 1999.
- 11. WHO (2020) Coronavirus, recieved from: Eri im adresi: https://www.who.int/healthtopics/ coronavirus#tab=tab\_1.
- 12. Wilder-Smith A. Freedman D.O. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. Journal of travel medicine. 2020; 27(2): taaa020.
- 13. Gozum P. Determination of depression tendencies of public employees during the covid-19 pandemic (Ardahan province example). Premium e-journal of social sciences. 2021; 5(14): 234-242.
- Wu P, Fang Y, Guan Z, Fan B, Kong J, Yao Z, Hoven C.W. (2009). The psychological impact of the SARS epidemic on hospital employees in China: exposure, risk perception, and

- altruistic acceptance of risk. The Canadian Journal of Psychiatry. 2009; 54(5): 302-311.
- 15. Wheaton M.G, Abramowitz J.S, Berman N.C, Fabricant L.E, Olatunji B.O. Psychological predictors of anxiety in response to the H1N1 (swine flu) pandemic. Cognitive Therapy and Research. 2012; 36(3): 210-218.
- 16. Yip P S, Cheung Y.T, Chau P.H, Law Y.W. The impact of epidemic outbreak: the case of severe acute respiratory syndrome (SARS) and suicide among older adults in Hong Kong. Crisis: The journal of crisis intervention and suicide prevention, 2010; 31(2): 86-92.
- 17. Liu S, Yang L, Zhang C, Xiang Y.T, Liu Z, Hu, S, Zhang B. (2020). Online mental health services in China during the COVID-19 outbreak. The Lancet Psychiatry, 2020; 7(4): e17-e18.
- 18. Lee S A. Coronavirus anxiety scale: A brief mental health screener for COVID-19 related anxiety, Death Studies, 2020; 44 (7):1-9.
- Bicer I, Cakmak C, Demir H, Kurt ME. Coronavirus Anxiety Scale Short Form: Turkish Validity and Reliability Study. Anatol Clin, 2020; 25 (Sp.Ed.1): 216-225.
- Sahan H. The role of sports activities in the socialization process of university students. Unpublished Doctoral Thesis, Selcuk University, Institute of Social Sciences, Konya 2007.
- 21. Bicer I, Cakmak C, Demir H, Kurt ME. Coronavirus Anxiety Scale Short Form: Turkish Validity and Reliability Study. Anatol Clin, 2020; 25 (Sp.Ed.1): 216-225.
- 22. Filiz Z. Evaluation of participating to sports on the socialization of students of university. Nigde university journal of physical education and sport sciences. 2010; 4 (3): 192-203.
- 23. Kucuk V, Koc H. Relationship between human and sports in psychosocial development process. Dumlupinar University journal of social sciences. 2004; 9(1): 211-221.

## Correspondence

Ahmet Sahin

Faculty of Sport Sciences, Burdur Mehmet Akif Ersoy University, Burdur, Turkey

E-mail: hawkahmet@gmail.com