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## The Relationship of Covid-19 Phoby and Distance Education

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### Abstract

it was aimed to examine the relationship of COVID-19 phobias and distance education of Faculty of Sport Sciences students regarding COVID-19 on their views on distance education. The sample of the study consisted of 1046 students studying at the Faculty of Sport Sciences in the 2020-2021 academic year. The research data were collected by the scanning model, which was one of the quantitative research methods. The COVID-19 Phobia Scale and the Students Opinion on Distance Education Scale were used as data collection tools. Pearson's correlation analysis and linear regression analysis were applied in the analysis of the data obtained using the SPSS 25.0 software program. A significant and positive relationship was found between COVID-19 and distance education sub-dimensions variables. Besides, the distance education explanation variances of COVID-19 anxiety were found to be statistically significant. This result can be said that one unit of increase in COVID-19 phobia will have a positive effect on distance education.

### Introduction:

Coronaviruses are a large family of viruses that can cause disease in animals or humans. In humans, several coronaviruses are known to cause respiratory infections, ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome ([www.covid19.saglik.gov.tr](http://www.covid19.saglik.gov.tr)). However, the new coronavirus disease, which first appeared on January 13, 2020, in Wuhan Province, China, as a result of research conducted in a group of patients with respiratory symptoms at the end of December (fever, cough, shortness of breath) is a virus named COVID-19 (Liu *et al.*, 2020). Due to its ability to be transmitted from person to person, it has spread rapidly to many countries and regions around the world. The new type of COVID-19 is a virus that caused the death of 1,250,000 people who met 44.6 million people in the world as of September 25, 2020, and caused the death of 10,200 people in our country, infecting 370,400 people ([www.g.co.com](http://www.g.co.com)) and continues to spread. COVID-19 has caused the deaths of hundreds of thousands of people, millions of people suffering from a disease ([www.wikipedia.com](http://www.wikipedia.com)), economic distress, a decline in national and international tourism ([www.bbc.com](http://www.bbc.com)), unprecedented unemployment rates in the last 20-30 years

([www.haberturk.com](http://www.haberturk.com)), disruption of education, changes in working conditions and times, and a virus which continues to cause.

These problems in the world due to the New Type of COVID-19, by their nature, affect our country. In the process of fight against the pandemic carried out by The Presidency of The Republic of Turkey and ministries, decisions are taken quickly, effectively and continuously. Measures are taken to eliminate the possibilities for environments where citizens will be found collectively and the risk of contamination will increase. In this context, planned educational activities, sports programs, all kinds of scientific activities and artistic activities are frozen, postponed or cancelled (TÜBA, 2020).

Within the framework of the measures taken regarding educational activities in our country, educational institutions were primarily suspended for two weeks from Monday, March 16, 2020, to Monday, March 30, 2020 ([www.meb.gov.tr](http://www.meb.gov.tr)), but it has been revealed that education activities cannot be done face to face due to the continuation of New Type COVID-19 and the increased risk of transmission. As of 23 March 2020, education institutions have started the distance education process with both TRT EBA TV channels and Education

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Information Network (EBA) live course applications.

In Turkish, Education's (egitim) lexical meaning is derived from the word to educate (egitmek), which means "to develop and educate someone in a certain direction according to predetermined goals by instilling various behavioural tendencies, knowledge and manners by influencing the rational, physical and moral development of a person" (www.wikipedia.com). According to Basaran (1978), "The system of effects carried out in order to provide certain developments in terms of ability, aptitude, character and knowledge in human behaviour", and according to Ertürk (1994) "is the process of deliberately bringing about a change in an individual's behaviour through his own life".

Distance education, on the other hand, according to Moore (2005), is an arrangement made to ensure learning, where students and teachers are independent in terms of time and place within the framework of a planned curriculum using written and electronic communication tools (Moore & Kearsley, 2005). According to the explanation of the Ministry of Education, in Turkey, there are total 18 million 241 thousand 806 thousand 881 students (9 million 435 thousand males, 8 million 806 thousand 881 females) at the pre-school, elementary and secondary levels, and one and over a million teachers are involved in education activities (www.hurriyet.com). With the start of the distance education process as of March 2020, millions of people, including students, teachers and parents, who were affected by the distance education process, have stayed in closed environments for months due to online applications or quarantine processes, and this has limited the ability of people to be a social entity.

The fact that face-to-face education cannot be implemented in our country due to the New Type of COVID-19 has caused the distance education process to take place in all education levels. In this context, this study aims to reveal the effect of the New type of COVID-19 on the educational processes of the students studying at the School of Sport Sciences and Physical Education and Sports as distance education.

## Methodology:

As per the general screening model (Karasar, 2005), the universe of this study consisted of 1611 Sports Sciences Faculty students studying at Aydin Adnan Menderes University. The data were sent to the participants through Google Forms during the pandemic process and their voluntary participation in the research was based on. A total of 1120 people were reached, and the forms after missing or erroneous scales were removed, were not included in the evaluation, so the number of scales included in the analysis was 1046.

The questionnaire used to collect relevant data in the study consisted of three parts. In the first part demographic information in the second part students opinions on Distance Education Scale and in the third part COVID 19

Phobia Scale were used. The COVID 19 Phobia Scale developed by Arpacı *et al* 2020 was used as the data collection tool (Yildirim *et al* 2005). The scale was a 5 point Likert type self assessment scale developed to measure the phobia that can develop against the virus. Scale items were evaluated with a 5 point rating between 1 Strongly Disagree and 5 Strongly Agree. Psychological Sub Dimension of the 1st 5th 9th 13th 17th and 20th items in the scale 2 6 10 14 and 18 Items Somatic Sub Dimension 3 7 11 15 and 19 Items Social Sub Dimension 4 Items 8th 12th and 16th measured the Economic Sub Dimension. While it was obtained by the sum of the answers given to the items in the sub dimension. The total COVID 19 Phobia score was obtained by the sum of the subscale scores and ranges from 20 to 100 point.

In determining students' opinions on distance education, Students' Opinions on Distance Education Scale developed by Yildirim *et al.* (2016) was used. A 5-point Likert type scale was used to evaluate the scale items. The scale was formed as 1 "Strongly Disagree" and 5 "Strongly Agree". The scale consisted of 18 items and 4 sub-dimensions. 6 items were personal fitness sub-dimensions, 5 items were Effectiveness, 4 items were instructional and 3 items were disposition sub-dimensions.

Statistical analysis was performed using the SPSS 25.0 software program. The extreme values in the data set and whether the assumption of multivariate normality was met was examined with the help of Mahalanobis distance values and the data showing extreme values were removed from the data set. Cronbach alpha coefficients were calculated to determine the reliability of the data. Pearson correlation analysis and linear regression analysis were applied to determine the effect of COVID-19 Phobia on Distance Education. Significance was set at  $p < 0.05$ .

## Results:

In the reliability analysis carried out to determine the internal consistency of the COVID-19 Phobia scale, it was determined that the personal suitability sub-dimension of Cronbach's Alpha value was 0.90; Effectiveness sub-dimension was 0.92; the Instructiveness sub-dimension was 0.92 and the Familiarity sub-dimension was 0.87. The psychological sub-dimension of the Students' Opinions About Distance Education was 0.97; Psycho-somatic subscale was 0.97; the social subscale was 0.91, and the economic subscale was 0.81. According to these results, it was determined that our scales have a high degree of reliability for the research group (Table-1).

As per Table-2, there was a significant and positive relationship between personal suitability in distance education and psychological anxiety ( $r = .874$ ) somatic anxiety ( $r = .884$ ) social anxiety ( $r = .897$ ) economic anxiety ( $r = .852$ ) at  $p < 0.01$  level. According to this result, it was shown that a one-unit increase in psychological anxiety may increase personal suitability in distance education.

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There was a significant and positive relationship at the 0.01 level between effectiveness in distance education and psychological anxiety ( $r = .865$ ) somatic anxiety ( $r = .858$ ) social anxiety ( $r = .932$ ) economic anxiety ( $r = .881$ ). There was a significant and positive relationship between Instructiveness in distance education and psychological anxiety ( $r = .843$ ), somatic anxiety ( $r = .860$ ), social anxiety ( $r = .881$ ) and economic anxiety ( $r = .880$ )  $p < 0.01$ . Finally, a significant and positive relationship was found between  $p < 0.01$  between Familiarity in distance education and psychological anxiety ( $r = .856$ ), somatic anxiety ( $r = .867$ ), social anxiety ( $r = .879$ ) and economic anxiety ( $r = .872$ ).

**Table-1: Reliability Analysis Results**

Scales	Sub-Dimension;	Cronbach $\alpha$ Coefficient
<b>Students' Opinions About Distance Education</b>	Personal Suitability	.904
	Effectiveness	.924
<b>COVID-19 Phobia Scale</b>	Instructiveness	.920
	Familiarity	.872
<b>COVID-19 Phobia Scale</b>	Psychological	.971
	Psycho-somatic	.972
	Social	.911
	Economic	.818

**Table-2: Results of Correlation Analysis Between Variables**

Parameter	1	2	3	4	5	6	7	8
Psychological	1							
Psycho-somatic	.726	1						
Social	.881	.812	1					
Economic	.748	.848	.822	1				
Per. Suitability	.874	.884	.897	.852	1			
Effectiveness	.865	.858	.932	.881	.884	1		
Instructiveness	.843	.860	.881	.880	.836	.866	1	
Familiarity	.856	.867	.879	.872	.850	.863	.888	1

**Table 3. Effect of Participants' Coronavirus Anxiety (phobia) Points which Received on Personal Distance Education Points**

Dependent Variable: Personal						
Independent Variable	$\beta$	St. Er.	Beta	t	p	
Stable	.121	.034	-	3.533	.001	
Psychological	.055	.003	.344	17.050	.001	
Psycho-somatic	.073	.004	.385	19.844	.001	
Social	.033	.004	.188	7.632	.001	
Economic	.028	.005	.113	5.643	.001	

(F=2502.928; Model (p)= .001\*; R<sup>2</sup>=.905)

As per the results of the regression analysis made in Table-3, when the significance level corresponding to the F value was examined, it was seen that the established model was statistically significant ( $F = 2502.928$ ;  $p < 0.05$ ). Considering the beta coefficient value t value and significance level of independent variables; it was seen that there was a statically significant effect on psychological anxiety ( $t = 17.050$   $p < 0.05$ ), somatic anxiety ( $t = 19.844$   $p < 0.05$ ), social anxiety ( $t = 7.632$   $p < 0.05$ ) and economic anxiety ( $t = 5.632$   $p < 0.05$ ). It was seen that 90.5% of the change in personal suitability was explained (Revised =0.905). One unit increase in the psychology variable corresponded to the 0.055 increase on personal suitability ( $\beta = 0.077$ ); One unit increase on somatic anxiety led to an increase of 0.073 in personal suitability ( $\beta = 0.073$ ); one unit increase on social anxiety caused 0.033 ( $\beta = 0.033$ ) increase on personal suitability and one unit increase on economic anxiety caused 0.028 ( $\beta = 0.028$ ) increase on personal suitability.

**Table-4: The Effect of the Participants' Coronavirus Anxiety (phobia) Scores on Effectiveness in Personal**

Dependent Variable: Effectiveness					
Independent Variable	$\beta$	St. Er.	Beta	t	p
Stable	.031	.033	-	.955	.340
Psychological	.027	.003	.159	8.600	.001
Psycho-somatic	.031	.004	.157	8.813	.001
Social	.084	.004	.455	20.160	.001
Economic	.065	.005	.255	13.891	.001

(F= 3023.011; Model= 0.001\*(p) R<sup>2</sup>=0.920)

As per the results of the regression analysis made in Table 4, when the significance level corresponding to the F value was examined, it was seen that the model established was statistically significant ( $F = 3023.011$ ;  $p < 0.05$ ). Considering the beta coefficient value, t value and a significance level of independent variables; it was seen that there was a statistically significant effect on psychological anxiety ( $t = 8.600$   $p < 0.05$ ), somatic anxiety ( $t = 8.813$   $p < 0.05$ ), social anxiety ( $t = 20.160$   $p < 0.05$ ) and economic anxiety ( $t = 13.891$   $p < 0.05$ ) on personal distance education appeared to have an effect. It was seen that the sub-dimension of distance education explained 92% of the change on Effectiveness (Revised =0.920). One unit increase in the psychology variable corresponds to the 0.027 increase on the effectiveness in distance education ( $\beta = 0.027$ ); One unit increase on somatic anxiety increased the effectiveness in distance education 0.031 ( $\beta = 0.031$ ); One unit increase on social anxiety caused 0.084 ( $\beta = 0.084$ ) increase on effectiveness in distance education and One unit increase on economic anxiety caused 0.065 ( $\beta = 0.065$ ) increase on effectiveness in distance education.

**Table-5: The Participants' Scores of Corona virus Anxiety (Phobia) on Instructiveness in Personal Distance Education**

Dependent Variable: Instructiveness					
Independent Variable	$\beta$	St. Er.	Beta	t	P
Stable	.016	.039	-	.414	.679
Psychological	.040	.004	.251	10.983	.001
Psycho-somatic	.046	.004	.245	11.153	.001
Social	.034	.005	.194	6.948	.001
Economic	.079	.006	.325	14.338	.001

(F= 1892.618; Model= 0.001\*(p) R<sup>2</sup>=0.879)

According to the results of the regression analysis made in Table 5, when the significance level corresponding to the F value was examined, it was seen that the model established was statistically significant ( $F = 1892.618$ ;  $p < 0.05$ ). Considering the beta coefficient value, t value and significance level of independent variables; it was seen that there was a statistically significant differences in psychological anxiety ( $t = 10.983$   $p < 0.05$ ), somatic anxiety ( $t = 11.153$   $p < 0.05$ ), social anxiety ( $t = 6.948$   $p < 0.05$ ) and economic anxiety ( $t = 14.338$   $p < 0.05$ ) on personal distance education. It was seen that 87.9% of the change in the duration of diabetes was explained (Revised =0.879). One



unit increase in the psychology variable corresponded to the 0.016 increase in distance education Instructiveness ( $\beta=0.016$ ); one unit increase on somatic anxiety increased 0.046 on Instructiveness in distance education ( $\beta=0.046$ ); one unit increase on social anxiety caused 0.034 ( $\beta=0.034$ ) increase on Instructiveness in distance education and one unit increase on economic anxiety caused 0.079 ( $\beta=0.079$ ) increase on Instructiveness in distance education (Table-5).

When the significance level corresponding to the F value was examined in Table-6, it was seen that the established model was statistically significant ( $F=1993,149$ ;  $p<0.05$ ). Considering the beta coefficient value, t value and a significance level of independent variables; it was seen that there were statistically significant differences in psychological anxiety ( $t=14.288$   $p<0.05$ ), somatic anxiety ( $t=13.581$   $p<0.05$ ), social anxiety ( $t=4.889$   $p<0.05$ ) and economic anxiety ( $t=12.482$   $p<0.05$ ) on personal distance education. One unit increase in the psychology variable corresponded to the 0.059 increase ( $\beta=0.059$ ) on the Familiarity in distance education; one unit increase on somatic anxiety led to an increase of 0.063 on the Familiarity in distance education ( $\beta=0.063$ ); one unit increase on social anxiety caused 0.027 ( $\beta=0.027$ ) increase on Familiarity in distance education and a one unit increase on economic anxiety caused 0.077 ( $\beta=0.077$ ) increase on Familiarity in distance education.

**Table-5: The Effect of the Participants' Scores of Coronavirus Anxiety (Phobia) on Familiarity in Personal Distance Education**

Independent Variable	$\beta$	St. Er.	Beta	t	P
Stable	-.265	.043	-	-6.141	.001
Psychological	.059	.004	.320	14.288	.001
Psycho-somatic	.063	.005	.292	13.581	.001
Social	.027	.006	.133	4.889	.001
Economic	.077	.006	.276	12.482	.001

( $F=1993.149$ ;  $Model=0.001^*(p)$   $R^2=0.885$ )

## Discussion:

The COVID-19 epidemic had created a crisis all over the world, and with this crisis, open and distance education practices had become an indispensable element in solving the problems encountered in education (Can, 2020). As a result of the negative reflection of anxiety in individuals during the COVID-19 pandemic, online education had started. It was examined that the effect of anxiety that occurred during the COVID-19 pandemic process on distance education in the study.

According to the data of YÖK (council of higher education) for 2020, approximately 400 thousand students, an average of 50 thousand per day, used online education between March 23, 2020, and March 31, 2020. It was stated that 68% of the users log into the system with mobile phones, 31% with desktop computers, and 1% with tablet computers (www.yok.gov.tr).

As per the results of the regression analysis made in Table 3 Considering the beta coefficient value t value and significance level of independent variables; it was seen that there was a statically significant effect on psychological anxiety, somatic anxiety, social anxiety and economic anxiety. It was seen that 90.5% of the change in personal suitability was explained ( $Revise=0.905$ ). One unit increase in the psychology variable corresponded to the 0.055 increase on personal suitability; One unit increase on somatic anxiety led to an increase of 0.073 in personal suitability; One unit increase on social anxiety caused 0.033 increase on personal suitability and One unit increase on economic anxiety caused 0.028 increase on personal suitability.

As per the results of the regression analysis made in Table-4, Considering the beta coefficient value, t value and a significance level of independent variables; it was seen that there was a statistically significant effect on psychological anxiety, somatic anxiety, social anxiety and economic anxiety on personal distance education appeared to have an effect. It was seen that the sub-dimension of distance education explained 92% of the change on Effectiveness ( $Revised=0.920$ ). One unit increase in the psychology variable caused an increase of 0.027 on effectiveness in distance education; one unit increase in somatic anxiety caused an increase of 0.031 on effectiveness in distance education; one unit increase in social anxiety caused an increase of 0.084 on effectiveness in distance education and one unit increase in economic anxiety caused an increase of 0.065 on effectiveness in distance education.

As per the results of the regression analysis made in Table 5, Considering the beta coefficient value, t value and significance level of independent variables; it was seen that there was a statistically significant differences in psychological anxiety, somatic anxiety, social anxiety and economic anxiety on personal distance education. It was seen that 87.9% of the change in the duration of diabetes was explained ( $Revised=0.879$ ). One unit increase in the psychology variable caused an increase of 0.016 on instructiveness in distance education; one unit increase in somatic anxiety caused an increase of 0.046 on instructiveness in distance education; one unit increase in social anxiety caused an increase of 0.034 on instructiveness in distance education and one unit increase in economic anxiety caused an increase of 0.079 on instructiveness in distance education.

When the significance level corresponding to the F value was examined in Table 6 Considering the beta coefficient value, t value and a significance level of independent variables; it was seen that there were statistically significant differences in psychological anxiety, somatic anxiety, social anxiety and economic anxiety on personal distance education. One unit increase in the

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psychology variable corresponded to the 0.059 increase on the Familiarity in distance education; one unit increase on somatic anxiety led to an increase of 0.063 on the Familiarity in distance education; one unit increase on social anxiety caused 0.027 increase on Familiarity in distance education and a one-unit increase on economic anxiety caused 0.077 increase on Familiarity in distance education.

When the literature related to our study examined, it was seen that the studies on the effect of the COVID-19 pandemic process on distance education were limited. It was seen that distance education had advantages and disadvantages during the COVID-19. In this process, it was crucial to consider the opinions of students and employees working in educational institutions by solving the problems of both students and teachers in educational institutions and realizing change and development (Eraslan & Özmaden, 2016). Because of the problems, we feel about our future had a crucial place in our personal productivity (Kirimoglu, 2010). Especially individuals who did not have online education experience may have a little difficulty at first, but this process would be quite simple, especially when we were isolated at home and open to all kinds of information. Another problem was the lack of motivation for online education. Solutions such as keeping the working environment clean, sitting at a table, taking notes, and silence provide support in solving this problem (www.hotcourses-turkey.com). Teaching and learning methods in formal education were limited, but in distance education/e-learning systems, there were tens, hundreds of different teaching and learning methods were possible with digital tools. Also, factors such as flexibility in distance education, access to more than one person at the same time, elimination of geographical restrictions, many learning methods, low cost, and time flexibility were the advantageous aspects of distance education. The benefits of distance education were that it enabled more accessible education in the digital field. The disadvantages of distance education were the difficulties in follow-up education, the lack of discipline for managing their own education, the hardness of developing a high-quality distance education learning system, technical inadequacy, and security (www.binbiriz.com).

In conclusion, it can be examined the needs in distance education and whether or not there were any deficiencies, in the COVID-19 pandemic process examined within the scope of the study. Permanent learning should be progress in individuals' in distance education lessons by increasing the elements appealing to the eyes, especially presentations and videos. Two traits of relationships can be examined following different parameters measured by different psychometric tests. The results of the study show that the need for distance education has increased during the COVID-19 process. For this reason, it can be said that the studies should carry out to develop the distance education

substructure, and in order to minimize the deficiencies in the departments especially giving sports education and had intensive applied courses.

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