

## RESEARCH

# Determination of Social Anxiety Levels of Distance Education University Students

## Uzaktan Eğitim Alan Üniversite Öğrencilerinin Sosyal Kaygı Düzeylerinin Belirlenmesi

Reyhan Eskiuyurt , Erdiñç Alaca 

### Abstract

The rapid spread of the Covid-19 pandemic worldwide has affected all areas of life. Social media platforms create a new kind of social situation in terms of the presence of nonverbal cues. Emotions associated with social anxiety can be affected during the pandemic, due to possible changes in social interaction and isolation. This study was conducted to determine the social anxiety levels of university students receiving distance education. 670 university students who receiving distance education in the 2020-2021 academic year participated in the study. Study data were collected using the Liebowitz Social Anxiety Inventory (LSAS) and The Brief Fear of Negative Evaluation Scale (BFNE). The total score of the students' LSAS was  $94.10 \pm 9.95$ , and the total score of BFNE was  $30.38 \pm 9.07$ . The social situations in which the students experienced the most anxiety were speaking up at a meeting without prior preparation, acting, performing, or speaking in front of an audience, being the center of attention, giving a prepared oral talk to a group. It was concluded that the students considered online education as a safe environment to cope with the fear of negative evaluation. This situation can lead to an increase in the anxiety level of the socially anxious individual and to experience difficulties in real social situations that may occur in the classroom environment when face-to-face education is started. It is recommended to increase the exposure of students with social anxiety to online social situations during the pandemic process.

**Keywords:** Social anxiety, distance education, university students, pandemic

### Öz

Covid-19 pandemisinin dünya çapında hızlı bir şekilde yayılması sonucunda yaşamın tüm alanları etkilenmiş olup sosyal medya platformları, sözsüz ipuçlarının varlığı açısından yeni bir tür sosyal durum yaratmaktadır. Sosyal etkileşim ve izolasyondaki olası değişiklikler göz önüne alındığında, sosyal kaygı ile ilişkili duygular pandemi sırasında etkilenebilmektedir. Bu çalışma uzaktan eğitim alan üniversite öğrencilerinin sosyal kaygı düzeylerini belirlemek amacıyla yürütülmüştür. Çalışmaya 2020-2021 eğitim öğretim yılında uzaktan eğitim alan 670 üniversite öğrencisi katılmıştır. Çalışma verileri Liebowitz Sosyal Kaygı Ölçeği (LSKÖ) ve Olumsuz Değerlendirilme Korkusu Ölçeği (ODKÖ) kullanılarak toplanmıştır. Öğrencilerin LSKÖ toplam puanı  $94.10 \pm 9.95$ , ODKÖ toplam puanı ise  $30.38 \pm 9.07$  bulunmuştur. Öğrencilerin en çok kaygı yaşadığı sosyal durumlar: önceden hazırlanmaksızın bir toplantıda kalkıp konuşmak, seyirci önünde hareket, gösteri ya da konuşma yapmak, dikkatleri üzerinde toplamak, bir gruba önceden hazırlanmış sözlü bilgi sunmak olarak bulunmuştur. Öğrencilerin çevrim içi eğitimi olumsuz değerlendirme korkusuyla baş etmek için güvenlik sağlayıcı bir ortam olarak değerlendirdikleri sonucuna ulaşılmıştır. Bu durum sosyal kaygılı bireyin kaygı düzeyinin artmasına ve yüz yüze eğitime geçildiğinde sınıf ortamında meydana gelebilecek olan gerçek sosyal durumlarda zorlukların yaşanmasına yol açabilir. Sosyal kaygısı olan öğrencilerin pandemi sürecinde çevrim içi sosyal durumlara maruziyetlerinin artırılması önerilmektedir.

**Anahtar sözcükler:** Sosyal kaygı, uzaktan eğitim, üniversite öğrencileri, pandemi

<sup>1</sup> Ankara Yıldırım Beyazıt University, Ankara, Turkey

✉ Reyhan Eskiuyurt, Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Department of Nursing, Ankara, Turkey  
reyhan.ryhn.reyhan@gmail.com | 0000-0003-0421-4914

Received: 20.08.2021 | Accepted: 15.09.2021 | Published online: 26.12.2021

**AS A CONSEQUENCE** of the fast spread of the COVID-19 (SARS-CoV-2) pandemic worldwide, all domains of life have been influenced, and online communication has become an inseparable part of social life (Khalil et al. 2020). Monitor-based social media platforms have created a new social situation in terms of nonverbal cues (Walther 2011, Valkenburg et al. 2016). In view of the potential changes in social interaction and isolation due to the COVID-19, it is stated that emotions related to social anxiety may be affected during the pandemic (Thompson et al. 2021). Social anxiety is defined as a persistent fear of one or more social situations in which embarrassment may occur, and fear or anxiety is not proportional to the actual threat (Clark and Beck 2010, Hofmann and DiBartolo 2010). The anxiety arises from the fear of shame, humiliation, and embarrassment due to the scrutiny and negative evaluation (Türkçapar 2018).

Epidemics are found to be linked to high levels of anxiety. For instance, the severe acute respiratory syndrome (SARS) epidemic caused social problems and anxiety in many countries (Rubin et al. 2009, Zheng et al. 2020). A study has shown that people with depression before the COVID-19 pandemic have experienced more severe symptoms after the pandemic onset (Groarke et al. 2020). Various studies have examined social anxiety caused by pandemics (Lieberman and Trope 2014, Kim 2019, Zheng et al. 2020). Studies examining online social situations and social anxiety suggest that social anxiety is related to negative interpretations of uncertain online social situations (Kingsbury and Coplan 2016, Carruthers et al. 2019), social pressure decreases during online situations, and individuals with social anxiety feel more comfortable (Weidman et al. 2012).

It was found after the COVID-19 pandemic onset, symptoms of social anxiety have increased, feeling of loneliness has worsened, and the communication between individuals and their family and friends has decreased (Thompson et al. 2021). With the closure of schools and transition to distance education, students' communication with their peers and instructors has been limited (Courtney et al. 2020). It is stated that a temporary decrease in problems related to social anxiety can be observed, for there is no exposure to anxiety-provoking factors by the students when schools are closed (Loades et al. 2020). Due to the measures taken during the pandemic, individuals with social anxiety receive positive reinforcement avoiding most situations where psychological treatment would encourage exposure (Morris and Ale 2011). In addition, it is stated that acute imbalance may occur in individuals with social anxiety when schools reopened since avoidance leads to more avoidance through negative reinforcement (Morrissette 2021).

When the studies conducted with university students receiving distance education during the pandemic are examined, results supporting social anxiety symptoms have been reached (Pop et al. 2011, Adnan and Kainat 2020, Karakus et al. 2020, Sindiani et al. 2020, Wang and Zhao 2020). Wang and Zhao's study (2020) examined university students' anxiety about online education. It was found that university students had higher anxiety levels than the general population and that medical students and female students' anxiety levels were much higher (Wang and Zhao 2020). In Sindiani et al. study (2020), it was found that students did not attend online classes because they did not feel comfortable. In another study evaluating the opinions of university students (n=126) regarding the effectiveness of online education, 11.1 % of the students stated that they did not feel comfortable while communicating in the electronic environment. However, 8.7% of the students disagreed with the proposition that "face-to-face

communication with the instructor is necessary in order to learn.” (Adnan and Kainat 2020). In Karakus et al. study (2020), students felt more comfortable during distance education since interviews were not conducted face-to-face as in the classroom environment. In the study of Pop et al. (2011), it was found that communicating with asynchronous audio tools decreased students' anxiety about speaking in front of an audience. Individuals with social anxiety either avoid such anxiety-provoking situations or experience these situations by enduring a certain amount of distress (Hofmann et al. 2010). Results of the study show that online education platforms enable a safe environment for university students who have social anxiety. As the number of social interactions decreases, the individual's avoidance behaviors to cope with anxiety will be reinforced. It is suggested that such a recovery will be ephemeral, and individuals with social anxiety will face significant difficulties when schools are reopened (Morrissette 2021). Following this viewpoint, determining the social anxiety levels of university students is thought to become more of an issue.

The fact that university students cannot attend the social environments face-to-face due to the COVID-19 pandemic may affect their social anxiety levels. This study has been conducted as online descriptive research to determine the social anxiety levels of university students having distance education. The hypotheses of the study have been determined as follows. Social anxiety levels of university students receiving distance education are high. The anxiety levels show similarity according to their grade levels. There is a significant positive relationship between the social anxiety of university students receiving distance education and their fear of negative evaluation. There is a difference between the social anxiety levels of the students who do not actively participate in the classes verbally during online education and those who actively participate in the classes. There is a difference between the social anxiety levels of those who state that they feel "more anxious than the classroom environment" and those who say they feel "more comfortable in comparison to the classroom environment" while expressing themselves verbally in the course of distance education.

## Method

The research was carried out with 1st grade, 2nd grade, 3rd, and 4th grade students studying at the Faculty of Humanities and Social Sciences, Faculty of Political Sciences, Faculty of Business Administration, Faculty of Islamic Sciences, and at the Faculty of Health Sciences of a university in Ankara. While determining these faculties, the condition that they had 1st, 2nd, 3rd, and 4th grade students and that they received synchronous education were taken into account.

## Sample

The research population included university students (n=6430) studying during the spring semester of the 2020-2021 academic year. In determining the research sample, a sample calculation program with a specific population was used, and as a result, the estimated sample size was 363 (alpha= .05, confidence interval= 95% (45%-55%). The criteria for inclusion in the research were that the participant agreed to participate in the study, was over the age of 18, had active course registration in the spring semester of 2020-2021 academic year, and attended the undergraduate courses through distance education platforms. On the other hand, the exclusion criterion of the research was spec-

ified as the participant's refusal to participate in the research. 670 of the students who met these criteria participated in the research. The performance of the retrospectively calculated study was found to be 100%. (Type-1 error=0.05, d=0.35), (G\*Power 3.1.9.2 package program), (Lenhard and Lenhard 2016).

## Procedure

Ethics committee approval was obtained from Ankara Yıldırım Beyazıt University Social Sciences and Humanities Ethics Committee (Date:16.02.2021, No:2021-17) to conduct this research. All the students participating in the study read and approved the online informed consent form. Sociodemographic data form, (LSAS) and (BFNE) were applied to 2020-2021 spring, academic year students. The researchers sent these forms through "Google forms" to the students' corporate mail addresses with the extension of "@XXX.edu.tr" by turning them into an applicable online design.

In order to reach all participants, the university students working as faculty representatives were contacted and informed about the aim of the research. The link related to the study were shared with the student social media groups (WhatsApp). The informed consent form was added to the first page of the online forms, and the participants were given the information that they have a right not to participate in the study or to leave any time after participating in it. Before starting the data collection process, the applicability of the online questionnaire was controlled by the researchers and two domain experts who were not included in this study. In the link sharing, "response configuration" and "1 response limitation" were set on the system. In order to avoid data loss, a single option for each question was required. All the forms together cover 47 items and 4 web pages in total, including online data collection tool Informed Consent Form (1 item), Sociodemographic data form (11 items), Liebowitz Social Anxiety Scale (24 items), and The Brief Fear of Negative Evaluation Scale (11) items. Our research carried out by fulfilling the principles of "Privacy and the Protection of Privacy" and "Respect for Autonomy" was based on voluntariness, and no course credit or payment was granted to the participants.

## Measures

Study data were collected using the sociodemographic data form, Liebowitz Social Anxiety Scale (LSAS) and The Brief Fear of Negative Evaluation Scale (BFNE).

### Sociodemographic data form

The sociodemographic data form was created by the researchers by reviewing the literature in order to obtain data about variables such as age, grade level, department, gender, daily study time, camera opening and the speaking status during online classes, the evaluation of face-to-face education conditions in the classroom and virtual environment conditions. The form consists of 11 items in total and includes 4 open-ended and 7 closed-ended questions. By asking such questions, it was aimed to investigate the reasons for the answers given by the participants to the closed-ended questions.

### Liebowitz Social Anxiety Scale (LSAS)

The Turkish adaptation studies of the scale developed by Liebowitz et al. (1987) to

determine the severity of anxiety and avoidance related to social situations were carried out by Soykan, Özgüven, and Gençöz (2003). The scale consists of 24 items and has two dimensions involving anxiety and avoidance. The total score of the scale ranges between 48 and 192. An increase in the score indicates that the level of social anxiety and avoidance behavior is intensified. The cut-off score has been found to be 25 for the sub-dimensions of the scale and 50 for the scale's total score (Soykan et al. 2003). Anxiety score comprises the severity of fear or anxiety felt during situations that require social interaction and performance. On the other hand, the avoidance score covers the frequency of avoidance due to the fear or anxiety felt due to staying in situations that include social interaction and require performance. The test-retest reliability coefficient of the scale is  $r = .97$ . The Cronbach Alpha Value of the social anxiety subscale is  $r = .96$ , and the Cronbach Alpha Value of the social avoidance subscale is  $r = .95$ . The Cronbach Alpha Value of the entire scale is  $.98$ . The Cronbach Alpha Value of the scale ranges from  $.92$  to  $.81$  (Soykan et al. 2003). In this study, the Cronbach Alpha coefficient is  $0.95$ .

### **The Brief Fear of Negative Evaluation Scale (BFNE)**

The Brief Fear of Negative Evaluation Scale (BFNE) is a self-report style scale developed by Leary (1983) to measure an individual's tolerance to negative or hostile evaluation by others. The BFNE consists of 11 items covering fear and anxiety expressions, and these items have a five-point Likert-type rating. The Turkish adaptation of BFNE was conducted by Cetin, Dogan and Sapmaz (2010), and reliability and criterion-related validity studies were carried out on a single-factor structure. The psychometric properties of the scale have been based on the data gathered from 325 university students. The internal consistency coefficient of the scale has been found to be  $.84$ . While low scores from the fear of negative evaluation show that individuals do not fear or are less fearful of negative evaluation, higher scores of the scale show that individuals fear more of negative evaluation (Cetin et al. 2010). Bu çalışmada cronbach alfa katsayısı  $0.91$  olarak saptanmıştır. In this study, the Cronbach Alpha coefficient is  $0.91$ .

### **Statistical analysis**

The IBM SPSS Statistics 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) program was used for statistical analyses and calculations. The statistical significance level for statistical analyses and calculations was accepted as  $p < 0.05$ . In calculating 95 percent confidence intervals, the accelerated percentage confidence interval method (BCa) was used by correcting deviations. The data were analyzed by being transferred to a computer program, and descriptive statistics (number, percentage, average, standard deviation), correlation test, t-test, and one-way analysis of variance test (one-way Anova) were used as the statistical methods. The Liebowitz Social Anxiety Scale and The Brief Fear of Negative Evaluation Scale (BFNE) constituted the dependent variable, while age, gender, grade level, active participation in online classes, and anxiety felt during online classes were the study's independent variables. A correlation test was used to determine the relationship between LSAS and BFNE scores, a one-way variance analysis test (one-way Anova) was applied to detect the difference between LSAS and BFNE scores according to grade

levels, and t-test analyses were used in order to examine the difference between LSAS and BFNE scores in independent dual samples. The researchers examined the answers given by the students to the open-ended questions. In order to increase the validity of authenticity, some statements of the individuals participating in the study and experiencing anxiety in the course of distance education were included directly and presented as research findings.

## Results

In our study, 670 university students, including 553 females (82.5%) and 117 males (17.5%) with an age average of  $20.77 \pm 2.77$ , participated in the research. It was observed that 37.3 % of the students (n=250) were 9th graders, and 40.0% of them (n=268) studied between 1 and 2 hours daily. The university departments where students study are given in Table 1, and it was determined that 50.1 % of the students (n=336) participating in the research were studying in the Faculty of Health Sciences. 14.6% of the students (n=98) stated that they had received psychiatric treatment before (Table 1).

**Table 1. Distribution of students' descriptive characteristics (n=670)**

Descriptive Characteristics	n	%
Faculty of Health Sciences	336	50.1
Nursing	152	22.7
Nutrition and Dietetics	86	12.8
Social Work	59	8.8
Language and Speech Therapy	19	2.8
Audiology	10	1.5
Child Development	7	1.0
Physiotherapy and Rehabilitation	3	0.4
Faculty of Humanities and Social Sciences	305	45.5
Information and Documentation Management	99	14.8
Psychology	78	11.6
Turkish Language and Literature	32	4.8
Sociology	29	4.3
Translation and Interpretation	29	4.3
History	24	3.6
Philosophy	14	2.1
Business School	13	1.9
International Trade and Business	9	1.3
Management Information Systems	4	0.6
Faculty of Political Sciences	8	1.2
Political Science and Public Administration	5	0.7
International Relations	2	0.3
Finance	1	0.1
Faculty of Islamic Sciences	8	1.2
Islamic Sciences	8	1.2
Education Level		
Preparatory class	37	5.5
1st Grade	250	37.3
2nd Grade	169	25.2
3rd Grade	126	18.8
4th Grade	88	13.1

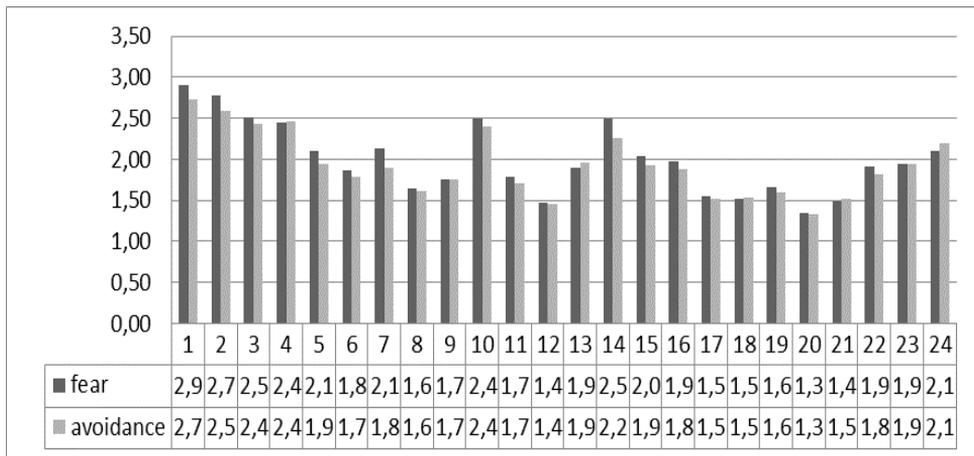
Course study time		
less than 1 hour	173	25.8
1-2 hours	268	40.0
3-4 hours	180	26.9
5-6 hours	39	5.8
7 hours or more	10	1.5
Psychiatric treatment history		
Yes	98	14.6
No	572	85.4
Active participation in course in distance education		
Yes	435	64.9
No	235	35.1

The students' total LSAS score was  $94.10 \pm 9.95$ , their LSAS anxiety subscore was  $47.84 \pm 12.49$ , and their avoidance sub-dimension was  $46.26 \pm 12.48$ . BFNE total score, on the other hand, was found to be  $30.38 \pm 9.07$  (Table 2).

**Table 2. Distribution of the scores of the LSAS and BFNE (n=670)**

Scale	Mean±SD	Min-Max
BFNE	30.38±9.07	11.0-55.0
LSAS fear	47.84±12.89	24.0-96.0
LSAS avoidance	46.26±12.55	24.0-93.0
LSAS total	94.10±24.71	48.0-186.0

SD: standard deviation, LSAS: Liebowitz Social Anxiety Scale, BFNE: The Brief Fear of Negative Evaluation Scale



**Figure 1. Average fear and avoidance level per question in the LSAS**

\*LSAS: Liebowitz Social Anxiety Scale items (1-24)

The social situations in which students experience the most anxiety were observed to be as follow: speaking at a meeting without any prior preparation (M= 2.90, SD= .90), acting, performing or speaking in front of an audience (M= 2.77, SD= .91), gathering others's attention on him/herself (M= 2.51, SD= .92), trying to meet someone for the purpose of establishing a romantic or sexual relationship (M= 2.44, SD= 1.00), delivering a prepared speech to a group (M= 2.10, SD= .88), talking to someone who is more authoritative than himself (M= 2.14, SD= .87), studying while being observed (M= 2.49, SD= .96), being tested with ability, skill or knowledge (M= 2.50, SD= .92), writing

while being observed ( $M= 2.04$ ,  $SD= .95$ ), and urinating in a public toilet ( $M= 2.10$ ,  $SD= 1.10$ ) (Figure 1). There is no statistically significant correlation between the students' LSAS and BFNE scores ( $r = 0.04$ ,  $p > 0.05$ , 95% BCa [-0.03, 0.12]).

According to grade levels, the students' LSAS and BFNE average scores are similar ( $F(4, 665) = 0.923$ ,  $p=0.45$ , 95% BCa [92.32, 95.85];  $F(4, 665) = 1.92$ ,  $p=0.10$ , 95% BCa [29.68, 31.12]). It was observed that 64.9 % of the students ( $n= 435$ ) actively participated in classes during distance education term. It was found that the students who did not actively participate in classes had higher LSAS and BFNE scores than those who actively participated in classes, though this difference has no statistical significance ( $t(668) = -1.03$ ,  $p= 0.30$ , 95% BCa [-6.13, 1.79];  $t(668) = -0.56$ ,  $p= 0.57$ , 95% BCa [-1.78, 0.98]), (Table 3).

While 31.6 % of the students ( $n= 212$ ) stated that they felt "more anxious compared to the classroom environment" when they spoke during online education term, 27.9% of them ( $n= 187$ ) said they felt "more comfortable compared to classroom environment." According to the anxiety levels experienced by the students during distance education term, the difference between LSAS and BFNE scores was observed to be statistically similar ( $F(3, 666) = 0.819$ ,  $p=0.48$ , 95% BCa [92.18, 95.95];  $F(3, 666) = 1.88$ ,  $p=0.13$ , 95% BCa [29.75, 31.04]), (Table 3).

**Table 3. Distribution of LSAS and BFNE according to certain variables (n=670)**

Variable	BFNE	LSAS fear	LSAS avoidance	LSAS total
	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Education Level				
Preparatory class	27.83±8.77	44.57±11.22	43.35±10.36	87.92±20.99
1st Grade	30.49±8.51	47.64±12.09	46.17±12.05	93.81±23.62
2nd Grade	31.56±10.04	48.14±13.61	47.01±13.45	95.15±26.45
3rd Grade	30.26±8.27	47.93±13.67	45.38±13.04	93.31±25.41
4th Grade	29.07±8.90	49.05±13.20	47.57±12.27	96.61±24.72
F	1.929	.827	1.044	.923
p <sup>a</sup>	.104	.508	.384	.450
Anxiety Status				
I felt anxious like in a classroom setting	31.02±8.59	46.73±13.83	45.28±14.09	92.01±27.59
I felt more anxious compared to the classroom setting	29.23±9.83	48.51±11.87	47.47±12.07	95.98±23.34
I felt more comfortable compared to the classroom setting	31.25±8.86	48.17±13.68	46.14±12.85	94.30±25.42
No change in my mood	30.50±8.48	47.28±12.70	45.47±11.86	92.76±23.83
F	1.888	.581	1.090	.819
p <sup>a</sup>	.130	.627	.353	.484
Active participation in course				
Yes	30.24±9.10	47.51±12.97	45.86±12.65	93.37±24.79
No	30.65±9.01	48.43±12.74	47.01±12.37	95.44±24.55
t	-.560	-.876	-.1130	-.1.031
p <sup>b</sup>	.576	.381	.259	.303

<sup>a</sup>One-way Anova, <sup>b</sup>t test,  $p < .05$ , LSAS: Liebowitz Social Anxiety Scale, BFNE: The Brief Fear of Negative Evaluation Scale

When the reasons for students to prefer distance education were examined, such answers were collected in various categories as "having more time for personal development," "being safe from the pandemic," "having a more comfortable environment

while studying,” “having the opportunity to watch the lessons repeatedly.” It can be said that only those with social anxiety considered the virtual classroom environment as a safe domain.

*K1: “Online (Virtual) environment is more comfortable than the classroom environment. There is no feeling of excitement because there is no one by our side.”*

*K2: “I prefer the virtual environment. I felt more comfortable since no one didn’t see me.”*

*K3: “I prefer the virtual environment because the instructor’s awareness of the anxiety I experience in the classroom environment affects me negatively. However, when I have anxiety in the virtual environment, I can control my anxiety without the instructor noticing me.”*

*K4: “I prefer the virtual environment because you do not see others in the virtual environment while speaking or making a presentation, and it feels more comfortable, frankly.”*

*K5: “I prefer the virtual environment. I feel more stressed in the school environment.”*

*K6: “I prefer the virtual environment because I feel safer.”*

*K7: “I would like to be in the classroom environment in terms of communication, but I can be more anxious in the classroom. I feel better while typing for a chat when it is online.”*

*K8: “The virtual environment is better. I felt better while making a presentation and participating in the classes.”*

*K9: “The virtual environment is more worry-free.”*

*K10: “I prefer the virtual environment because we don’t need to make eye contact or use facial expressions while speaking, which allows us to express ourselves more easily.”*

*K11: “You can express yourself more easily in the virtual environment.”*

*K12: “Since I couldn’t open the camera during online classes, I felt more comfortable while talking. So I answered the questions more easily.”*

*K13: “I prefer the virtual environment. Not being seen makes me feel more comfortable.”*

*K14: “I prefer the virtual environment because it is nice to know that no one is around and they won’t be seeing you.”*

*K15: “I prefer the virtual environment; I feel less pressured, and I don’t have difficulty while expressing my thoughts.”*

*K16: “I prefer the virtual environment. As long as it is not mandatory to open the camera, our identity is not revealed, which makes us feel less stressed.”*

## Discussion

In our study, which was carried out to determine the social anxiety level of the university students who receive distance education due to the Covid-19 (SARS-CoV-2) pandemic, it was concluded that the students’ social anxiety and fear of negative evaluation levels were high, and they considered distance education a positive environment for coping with anxiety. Situations experienced in the natural flow of life functioned as safety-providing behavior.

It is indicated that (17,6%) university students preferred online education instead of traditional face-to-face education due to their psychological problems (Drange and Wyk 2019). This result shows that it is worth investigating the relationship between psychological problems and online education. It is stated that the pandemic poses a threat to individuals with social anxiety, and it has been found that social anxiety anticipates the increase in fear of negative evaluation during the pandemic (Ho and Moscovitch 2021). Fear of negative evaluation may include negative feelings, thoughts, fear, and anxiety concerning the possibility of students’ being misunderstood and judged during their interaction with others in the online learning environment. Wang and Zhao’s study (2020) examined university students’ anxiety about online learning. Accordingly, it was found that university students had higher anxiety levels than the general population (Wang and Zhao 2020). It was found that more than 70% of 264 university students who participated in the study of Drange and Wyk (2019) had social anxiety scores above the cut-off score of LSAS. It is stated that the Covid-19 pandemic

makes the university students feel more anxious, and in the study of Ma (2021), a negative and significant relationship was found between social anxiety and resilience levels of university students. In the Thompson et al. (2021) study, it was observed that anxiety symptoms increased after the Covid-19 pandemic onset.

Our study found that the social anxiety levels of university students were similar at all grade levels. In the Ghezelbash et al. (2015) study, no significant difference was observed between university students' social anxiety average scores and their grade levels. In the study of Sharma and Sharma (2015), no difference was detected between anxiety levels and grade levels. In the study of Gultekin and Dereboy (2011), no statistically significant difference was found between the students' departments, grade levels and frequency of social anxiety. This research shows that the students' anxiety level does not change by such factors as education and training process, education method, theoretical knowledge, and clinical experience. Therefore, social anxiety should be addressed explicitly in the context of online learning with its own different dynamics. Students should be noticed in the educational environment on time and prepared for their academic and social lives through necessary interventions.

The social situations that most frequently worry university students with social anxiety are: gathering others' attention on him/herself, being tested with ability, skill or knowledge, acting, performing or speaking in front of an audience, trying to meet someone to establish a romantic or sexual relationship, studying under observation, speaking at a meeting without any prior preparation, expressing disagreement, and entering a crowded room (Bella and Omigbodun 2009, Gultekin and Dereboy 2011, Russell and Topham 2012). The situations in which university students experience social anxiety show similarity to the findings of the studies conducted during the pandemic term. Karakus et al. (2020) study examined university students' views on distance education. Students revealed they experience anxiety in such situations as speaking in front of a group in the classroom and being exposed to negative evaluations by their instructor and peers (Karakus et al. 2020). In the Drange and Wyk (2019) study, it was emphasized that the most anxiety-provoking situation for university students is performing or speaking in front of an audience. In the study of Uzunboylu and Tuncay (2010), the most worrying situations for students receiving distant education are speaking in front of an audience and gathering others' attention on him/herself. The social situations obtained from the study results that cause anxiety in students show similar characteristics to our research findings.

Individuals with social anxiety tend to avoid social opportunities to interact with others (Heeren and McNally 2018). Accordingly, pandemic conditions provide positive reinforcement for people with social anxiety to avoid situations where psychological treatment would encourage exposure (Morrissette 2020). Also, the nature of social interactions during the pandemic may naturally present more opportunities in terms of self-concealment. That may result from the decrease in opportunities for real social interaction during the pandemic and the confrontation with new socially threatening situations that arise as a result of the pandemic. In the study of Miers et al. (2020), it was observed that social anxiety anticipated online avoidance behaviors. In the study of Karakus et al. (2020), university students expressed their views as "People who are shy of talking in front of the class can speak more comfortably during online classes" (Karakus et al. 2020). In another study, the students' doodling and drawing pictures on their textbooks and hiding from the instructor during online classes were defined as avoidance

behaviors (Uzunboylu and Tuncay 2010). In the study of Zheng et al. (2020), the other hand, it was found that there is a negative relationship between psychological distance and anxiety. It was proven that the pandemic-related psychological distance has a mediating effect on the relationship between pandemic severity and social anxiety. It is noted that quarantine protects those with social anxiety against the harmful effects of the pandemic (Zheng et al. 2020). However, in the studies where students evaluate distance education, the students' explanations that they interact better with their peers during online education and that there is no need for face-to-face communication to learn may be an avoidance behavior they display in coping with social anxiety (Adnan and Kainat 2020, Sindiani et al. 2020). In our study, students' expressing that they feel more comfortable during online education, preferring online education rather than face-to-face education, not turning on their cameras, and writing their questions in the chatbox can be cited as examples of avoidance. Avoidance behaviors prevent the individual from discovering that the feared outcome is unlikely to occur and cause anxiety symptoms to continue.

The fact that the research was carried out only with students studying in specific departments of a university, the application of data collection forms in the electronic environment, and the inability to communicate with students face-to-face constitute the essential limitations of this research.

## Conclusion

Our study examined the level of anxiety and fear of negative evaluation of university students during the pandemic term. Students' social anxiety levels and fear of negative evaluation were observed to be high, and it was concluded that the students with a high level of anxiety considered online education a positive environment for coping with anxiety. This situation is not an effective method of reducing anxiety. It can lead to an increase in the anxiety level of the individual with social anxiety and to experiencing difficulties in real situations that may occur in the classroom environment when face-to-face education starts again. Yen et al. (2012) compared the severity of social anxiety in real life and online interactions and underlined that social anxiety decreased in the course of online interactions. It is recommended to determine the social anxiety levels of students before and after the pandemic and to increase their exposure to online social situations such as their actively participating in online meetings and activities with peer groups to cope with their social anxiety and encouraging the use of camera and microphone for their active participation in live classes on education and training platforms.

## References

- Adnan M, Anwar K (2020) Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2:45-51.
- Bella TT, Omigbodun OO (2009) Social phobia in Nigerian university students: Prevalence, correlates and co-morbidity. *Soc Psychiatry Psychiatr Epidemiol*, 44:458-463.
- Carruthers SE, Warnock-Parkes EL, Clark DM (2019) Accessing social media: Help or hindrance for people with social anxiety? *J Exp Psychopathol*, 10:1-11.
- Cetin B, Doğan T, Sapmaz F (2010) Olumsuz Değerlendirilme Korkusu Ölçeği Kısa Formu'nun Türkçe uyarlaması: Geçerlik ve güvenilirlik çalışması. *Education in Science*, 35:206-216.

- Clark DA, Beck AT (2010) *Cognitive Therapy of Anxiety Disorders: Science And Practice*. New York, Guilford Press.
- Courtney D, Watson P, Battaglia M, Mulsant BH, Szatmari P (2020) COVID-19 impacts on child and youth anxiety and depression: Challenges and opportunities. *Can J Psychiatry*, 65:688-691.
- Drange T, Van Wyk N (2019) Social anxiety-an increasing challenge for educators. *EDULEARN19 Proceedings*, 6045-6051.
- Ghezlbash S, Rahmani F, Peyrovi H, Imamloo M (2015) Social anxiety in nursing students of tehran universities of medical sciences. *Res Dev Med Educ*, 4:85-90,
- Groarke JM, Berry E, Graham-Wisener L, McKenna-Plumley PE, McGlinchey E, Armour C (2020) Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 psychological wellbeing study. *PLoS One*, 15:e0239698.
- Gultekin BK, Dereboy İF (2011) The prevalence of social phobia, and its impact on quality of life, academic achievement, and identity formation in university students. *Turk Psikiyatri Derg*, 22:150-158.
- Heeren A, McNally RJ (2018) Social anxiety disorder as a densely interconnected network of fear and avoidance for social situations. *Cogn Ther Res*, 42:103-113.
- Ho J, Moscovitch DA (2021) The moderating effects of reported pre-pandemic social anxiety, symptom impairment, and current stressors on mental health and affiliative adjustment during the first wave of the COVID-19 pandemic. *Anxiety Stress Coping*, doi:10.1080/10615806.2021.1946518.
- Hofmann SG, DiBartolo PM (2010) *Social Anxiety: Clinical, Developmental, and Social Perspectives*, 2nd ed. London, Academic Press.
- Karakuş N, Ucuşatar N, Karacaoğlu MÖ, Esendemir N, Bayraktar D (2020) Türkçe öğretmeni adaylarının uzaktan eğitime yönelik görüşleri. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 19:220-241.
- Khalil R, Mansour AE, Fadda WA, Almisnid K, Aldamegh M, Al-Nafeesah A et al. (2020) The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives. *BMC Med Educ*, 20:285.
- Kim DH (2018) 'How do you feel about a disease?' The effect of psychological distance towards a disease on health communication. *Int J Advert*, 38:1-15.
- Kingsbury M, Coplan RJ (2016) RU mad @ me? Social anxiety and interpretation of ambiguous text messages. *Comput Hum Behav*, 54:368-379.
- Lenhard W, Lenhard A (2016) Calculation of Effect Sizes. [https://www.psychometrica.de/effect\\_size.html](https://www.psychometrica.de/effect_size.html). Dettelbach (Germany): Psychometrica. doi: 10.13140/RG.2.2.17823.92329 (Retrieved October 01, 2021).
- Lieberman N, Trope Y (2014) Traversing psychological distance. *Trends Cogn Sci*, 18:364-369.
- Loades ME, Chatburn E, Higson-Sweeney N, Reynolds S, Shafran R, Brigden A et al. (2020) Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *J Am Acad Child Adolesc Psychiatry*, 59:1218-1239.e3.
- Ma A (2021) Coping with social anxiety and maintaining resilience in university of minnesota students during the COVID-19 pandemic a correlational approach. *Psychology Sociology & Education*, 4:1-17.
- Miers AC, Sumter SR, Clark DM, Leigh E (2020) Interpretation bias in online and offline social environments and associations with social anxiety, peer victimization, and avoidance behavior. *Cogn Ther Res*, 44:820-833.
- Morris TL, Ale CM (2011) Social anxiety. In *Handbook of Child and Adolescent Anxiety Disorders* (Eds D McKay, EA Storch):289-303. New York, Springer.
- Morrisette M (2021) School closures and social anxiety during the COVID-19 Pandemic. *J Am Acad Child Adolesc Psychiatry*, 60:6-7.
- Pop A, Tomuletiu EA, David D (2011) EFL speaking communication with asynchronous voice tools for adult students. *Procedia Soc Behav Sci*, 15:1199-1203.
- Rubin GJ, Amlôt R, Page LA, Wessely S (2009) Public perceptions, anxiety, and behaviour change in relation to the swine flu outbreak: Cross sectional telephone survey. *BMJ*, 339:b2651.
- Russell G, Topham P (2012) The impact of social anxiety on student learning and well-being in higher education. *J Ment Health*, 21:375-385.
- Sharma R, Sharma P (2015) A correlational study to assess the relation of anxiety and social phobia with academic performance of students in a selected nursing college Ludhiana, Punjab. *Int. J. Nurs. Educ*, 7:26.

- Sindiani AM, Obeidat N, Alshdaifat E, Elsalem L, Alwani MM, Rawashdeh H et al. (2020) Distance education during the COVID-19 outbreak: A cross-sectional study among medical students in North of Jordan. *Ann Med Surg (Lond)*, 59:186-194.
- Soykan C, Ozguven HD, Gencoz T (2003) Liebowitz social anxiety scale: The Turkish version. *Psychol Rep*, 93:1059-69.
- Thompson C, Mancebo MC, Moitra E (2021) Changes in social anxiety symptoms and loneliness after increased isolation during the COVID-19 pandemic. *Psychiatry Res*, 298:113834.
- Türkçapar MH (2018) *Bilişsel Terapi: Temel ilkeler ve uygulama*, 11. Baskı. Ankara, HYB Basım Yayın.
- Uzunboylu H, Tuncay N (2010) Anxiety and resistancen in distance learning. *Cypriot Journal Of Educational Sciences*, 5:142-150.
- Valkenburg PM, Peter J, Walther JB (2016) Media effects: Theory and research. *Annu Rev Psychol*, 67:315-338.
- Walther JB (2011) Theories of computer-mediated communication and interpersonal relations. *The Handbook of Interpersonal Communication*, 4:443-479.
- Wang C, Zhao H (2020) The impact of COVID-19 on anxiety in chinese university students. *Front Psychol*, 11:1168.
- Weidman AC, Fernandez KC, Levinson CA, Augustine AA, Larsen RJ, Rodebaugh TL (2012) Compensatory internet use among individuals higher in social anxiety and its implications for well-being. *Pers Individ Dif*, 53:191-195,
- Yen JY, Yen CF, Chen CS, Wang PW, Chang YH, Ko CH (2012) Social anxiety in online and real-life interaction and their associated factors. *Cyberpsychol Behav Soc Netw*, 15:7-12.
- Zheng L, Miao M, Lim J, Li M, Nie S, Zhang X (2020) Is lockdown bad for social anxiety in COVID-19 regions?: A national study in the SOR perspective. *Int J Environ Res Public Health*, 17:4561.

**Authors Contributions.** Authors attest that they have made an important scientific contribution to the study and have assisted with the drafting or revising of the manuscript.

**Peer-review:** Externally peer-reviewed.

**Ethical Approval:** Ethical approval was obtained from Ankara Yıldırım Beyazıt University Social and Human Sciences Studies Ethics Committee for the study. All participants gave informed consent.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.