

## The (in)dependence of students' anxiety levels on socio-demographic factors during distance learning

**Blerina Hamzallari\***, University of Tirana, Faculty of Social Sciences, Department of Sociology, Tirana 1001, Albania  
<https://orcid.org/0000-0001-5523-3141>

**Ortenca Kotherja**, University of Tirana, Faculty of Social Sciences, Department of Pedagogy and Psychology, Tirana 1001, Albania  
<https://orcid.org/0000-0002-0669-1995>

**Entela Kostrista**, Logos University College, Faculty of Applied Sciences, Department of Applied Informatics and Statistics, Tirana 1001, Albania  
<https://orcid.org/0000-0002-9352-9522>

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### Abstract

The main purpose of this study is to describe and identify the general anxiety level and the influence of socio-demographic characteristics on anxiety among students during online learning because of the COVID-19 Pandemic. This is a quantitative non-experimental study. The instrument used in the study is the questionnaire *Beck Anxiety Inventory*. The results showed that during remote learning students experienced moderate anxiety levels. In addition, the results indicated that the variables of gender and educational profile had a significant impact on the anxiety levels experienced by students. In the light of study findings, we recommend the following: the need to conduct further systematic research on factors that influence the preparedness and performance of students during online learning; develop pilot studies on online learning that are not related to the pandemic context, structures of specialised training with regard to anxiety management techniques and the factors that encourage it.

**Keywords:** Anxiety, distance learning, pandemic, socio-demographic variables, student.

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\* ADDRESS FOR CORRESPONDENCE: Blerina, Hamzallari, University of Tirana, Faculty of Social Sciences, Department of Sociology, Tirana 1001, Albania  
E-mail address: [bhamzallari@gmail.com](mailto:bhamzallari@gmail.com) / Tel.: +355-695-888-444

## 1. Introduction

Policies and strategies in the development of education increasingly aim at the adaptation of the educational system in response to global priorities (Scott, 2000). During major economic and technological transformations, education becomes one of the main factors of integration into society and provides individuals with the ability to be competitive in the job market not only in his/her own country but also in the global job market (Abrahão & Lucchesi, 2009; Akgün & Alpaydın, 2022). Institutions of higher education can be considered open and nonlinear socio-economic systems, and their management changes over time (Linde & Petrova, 2018). Even before the COVID-19 pandemic, the goal of the development agendas of higher education institutions was to address the challenges of integrating technology and digital achievements in educational processes, moving from traditional classrooms to virtual classrooms, creating hybrid forms of teaching (Garrison & Vaughan, 2007; Gleason, 2018; Miller et al., 2014).

Even in the Republic of Albania, one of the main objectives of the Strategy on Pre-University Education Development 2014–2020 (Ministry of Education and Sports, 2014) was the digitalisation of teaching, development of the material basis of online remote teaching that included digital books, the establishment of the material basis for equipment of uninterrupted internet, computers/laptops and the creation of the digital system of management of teaching. The COVID-19 pandemic and its policy responses in education accelerated the need for digitalisation in the teaching process, making remote online learning the only alternative to continue teaching process in educational institutions. In March 2020, all educational system in the Republic of Albania went from the traditional form of face-to-face learning toward an imposed online remote learning. According to Albania's Institute of Statistics (INSTAT), there were 123,797 registered students in higher education during the 2020–2021 academic year (INSTAT, 2021). Due to medical emergency situations during COVID-19 pandemic, the students of Republic of Albania completed their first academic year (2020–2021) all online.

In the Albanian context, there is a gap in knowledge with regard to research on the way socio-economic variables impact psycho-social variables during online learning. Interdisciplinary studies take into consideration the importance of psycho-social variables on the quality of student interaction in the education process. This study, therefore, renders a contribution to the field of education. The empirical findings of this research can be used as a basis for strategies for the digitalisation of institutions of higher education. In their models on e-learning, the Higher Education Institutions need to take into consideration the importance of students' demographic characteristics on the psycho-social characteristics and their impact on the probability of success in learning and on the quality of interpersonal relationships.

### 1.1. Conceptual and theoretical framework

Modern society is perceived as an environment in which individuals are 'projects' that reflect society (Giddens, 2008). Wilkinson (2001) considers the society of late modernity a risk society where the indicators of anxiety are high because social actors are more risk conscious. According to Giddens (1991) abstract systems of modernity increasingly make us aware to accept that our life course is unpredictable and is under accidental influences. The COVID-19 pandemic is an example of the risks of modern society, their causality, lack of preparedness to deal with the risk and the anxiety that is a result of awareness towards risks. According to Rebughini (2021), COVID-19 pandemic and the way we dealt with it made us aware of the fact that we live in an 'ignorance-based society', and that this is seen in the insecurity and the danger to manage the unknown, the emotional situation of the confusion and disorientation caused by a lack of trust in science causing the most massive global state of anxiety since World War II.

The global educational system almost collapsed under the conditions of imposed distance learning during COVID-19 pandemic (Mseleku, 2020). In the context of structural chaos and disorganised functionalism, all actors involved in the educational system were involved in situations that caused anxiety (Al-Kumaim et al., 2021; Gillis & Krull, 2020; Qazi et al., 2020). Some of the earliest studies identified the relationship between social factors that cause anxiety and the results of learning, the latter are negatively influenced by anxiety experiences (Murphy, 1960; Rosenfeld, 1978). Anxiety is an emotional and physiological reaction that is influenced by individual characteristics, but also situational factors, which, in turn, influences the response of its subjects towards anxiety, either fighting it or 'escape' from it (Moss, 2002).

The scholars make difference between fear and anxiety, in that fear is an adaptive response toward realist threat, while anxiety is widespread emotion, sometimes an unreasonable or excessive reaction towards a threat perceived as real or hypothetical (Foa et al., 2017). Theories of differential emotions suggest that the situation of common feeling for every anxiety is fear, but that anxiety is also related to other emotions during different periods of time and in different circumstances, for example, interest, excitement, sadness, shame and guilt (Izard, 1977, 1991). Through the theory of differential emotions, Izard suggests that even though anxiety is a unique experience in the case of insecurity, other discrete emotions related to it, need to be analysed in spite of subjective experience.

With regard to sociological approaches, social conditions, dramatic events during life, stressful situations, demands of social roles, social support and cultural system influence the level of mental health of the population (Brossard & Chandler, 2022; Horwitz, 2010). The COVID-19 pandemic and restructuring of the teaching process in the form of e-learning provide the situational framework where society serves as a stressor creating the necessary premise to anxiety among students involved in distance learning (Brossard & Chandler, 2022). The move from the complex, diverse, and social experience of the classroom to distance learning, deepened the gap between the teacher and the student, so the factors that affect the potential of students to cope with online learning should be considered and addressed (Sadeghi, 2019).

### *1.2. Related research*

Imposed experience of remote learning during the pandemic makes teaching through digital platforms even more challenging because of additional psycho-social factors that are created during pandemic situations. Policy makers and people who work in education during the pandemic and post pandemic period are increasingly becoming more interested in researching strategies for digitalisation of teaching. An increasing number of studies conducted during the peak of the COVID-19 pandemic, and during the decline of the pandemic curve focused on psychosocial situations of students, in particular, their anxiety situations during this period, its impact on learning outcomes and how students faced the challenges of learning. Comparative studies that focused on face-to-face learning before the pandemic and e-learning during the pandemic revealed a dramatic rise in symptoms of anxiety and depression during the first online teaching semester that took place under conditions imposed by the pandemic. Such indicators are influenced by considering the situation as unknown, by technical conditions, administrative issues of university life, feedback quality, issues related to opportunities and quality of e-learning (Ajmal & Ahmad, 2019; Haikalis et al., 2022; Ming Moy & Han Ng, 2021).

Costado Dios and Piñero Charlo (2021) undertook a comparative study where they compared face-to-face learning and online learning. The study showed that students reported a lack of motivation, fatigue, which are characteristics of their anxiety. About 11% of students, described their situation as being continuously anxious and stressful during online learning as a result of the pandemic. These

results are in line with results conducted by other scholars. For example, Al-Kumain et al. (2021), in their study of the impact of COVID-19 on learning life among students during the pandemic showed the negative impact of anxiety on students. Only 27% of students in the study said that they were able to manage anxiety during online learning.

For another group of scholars of interdisciplinary research orientation, who focus on perspectives of the development of digitalisation of teaching and learning, the pandemic context serves as an experience of capacities test. The scholars in this line of research argue that the consideration of the sociodemographic indicators helps to evaluate the factors that affect the psycho-emotional state of the students during online learning. Systematic studies on the topic contribute to the sustainable development of digitisation processes in the post-pandemic context.

In this line, there are studies that highlight the various relationships between gender and experiences of anxiety during online learning. Women and girls are that category of students that demonstrate increase in anxiety during online learning in the context of pandemic. This has to do with a lack of space for online learning during the pandemic, ongoing worries about their family members' health problems, and worries about family's financial situation (Haikalis et al., 2022; Gillis & Krull, 2020; Sazakli et al., 2021). On the other hand, the findings of Ajmal and Ahmad (2019), showed that men are more affected by anxiety during online learning as they show greater concern than women about academic performance.

Anxiety level during online learning is a result of the university experience as well. First year students express higher anxiety levels, which in turn, has to do with worries about homework, their academic performance, progress in their studies, and the fulfilment of financial obligations (Cofini et al., 2022; Costado Dios & Piñero Charlo, 2021). Students who were more experienced, demonstrated emotional stability, lower levels of anxiety, and experienced the pandemic situation in a more rational and optimistic way compared to newer students (Cofini et al., 2022; Ming Moy & Han Ng, 2021).

According to Qazi et al. (2020) students' residence is another socio-demographic factor to consider that has an impact on anxiety level among students. Students who live in urban areas demonstrate lower level of anxiety and dissatisfaction towards online learning, compared to residents who live in rural areas. On the other hand, other studies suggests that students' residence is not an important and significant factor in its impact on anxiety experiences during online distance learning (Quynh et al., 2020).

A group of scholars revealed in their studies that the level of satisfaction and emotional experiences during online learning are related to the students' education profile, or certain characteristics of courses they are taking. Cofini et al. (2022) conducted a study with 447 students at the University of Aquilas. Findings revealed that students who studied medicine had greater satisfaction during online learning. According to the study, this was related to their computer skills and the ability of online systems to visually illustrate theoretical material.

Sazakli et al. (2021) in their research with students of a Greek University, found out that students who studied medicine had lower anxiety level. According to the authors, this was a result of the knowledge students had about the diseases, and the ways to deal with them. The same study also showed that students who studied hard sciences, in particular, the engineering students displayed lower level of anxiety and depression, compared to students who studied arts and humanities. The authors attributed these differences to the fact that professions based on objective sciences attract people who are more stable emotionally, compared to those professions who are based more on subjectivity and intuition.

### 1.3. Purpose of the study

The purpose of this study is to describe the relationship between socio-demographic characteristics and the level of anxiety experienced during online learning in the context of COVID-19 pandemic among students of the University of Tirana. The main objective of the research study is to identify the influence of demographic characteristics (gender, year of study, residence rural/urban, education) on the level of anxiety experienced during e- learning.

The study's objectives and corresponding research questions are as follows:

*Research question 1:* Are there significant differences with regard to anxiety experiences according to students' gender?

*Research question 2:* Does students' year of study (first year/second year) impact anxiety experiences?

*Research question 3:* Does students' residence have an impact on anxiety experiences during online learning?

*Research question 4:* Are there any differences among students in terms of the level of anxiety experiences with regard to students' education profile?

*Research question 5:* What is the level of anxiety experiences among students of Tirana University during online learning?

## 2. Method and materials

### 2.1. Research model

This study uses quantitative method. Data are collected using a standardised questionnaire. The purpose of this method is to collect empirical data and to create a data base using variables that focus on the aim of the study (Stockemer, 2019).

### 2.2. Participants

Participants in this study are students of the first cycle of studies of Bachelor in Tirana University, which is the biggest public university in the Republic of Albania. The student population is highly heterogeneous and consists of students who come from all regions of the Republic of Albania. According to the statistics office of the University of Tirana, for the academic year 2021–2022, 16,378 students attended the first cycle of studies at this HEI. The sample used in the study is a purposive sample, as participants must have studied online during the pandemic and have information to answer the research questions and the purpose of the study. Students who participated in the sample attended the first and the second year of the Bachelor studies during 2020–2021 academic year (pandemic year). The sample size was based on the formula by the author Yamane (1967), that ensures the confidence level 95% and  $p = 0.5$ . 
$$n = \frac{N}{1 + N(e^2)}$$

Participants consisted of 446 students who were randomly selected. The condition was that they were students in the 2020–2021 academic year, were the first year and second year of Bachelor degree (second and third year bachelor students in the 2021–2022 academic year). The sample is well represented by gender and age. The distribution of the sample based on faculties at the University of Tirana is as follows: Faculty of Social Sciences: has 75 students or 16.82% of the total sample; Faculty of Law has 73 students or 16.37% of the sample; Faculty of History and Philology has 77 students or 17.26% of the sample; Faculty of Economics has 74 students or 16.59% of the sample; Faculty of Natural Sciences has 72 students or 16.14% of the sample; Faculty of Foreign Languages has 75 students or 16.82% of

the total sample of participants in the study. With regard to gender, 83.41% of the sample are women ( $n = 372$ ), and 16.59% ( $n = 74$ ) are men. This gender imbalance of the sample is justified given gender statistics in the institutions of higher education in the Republic of Albania. Based on publication of Ministry of Education and Sports (2022) on the education statistics in Albania in the academic year 2020–2021, out of 26,309 registered students in the University of Tirana, 20,796 are women.

The minimum age of study participants for both women and men is 18 years old. On the other hand, the maximum age for female participants was 30 years old, while for males was 36 years old. With regards to age, there were 110 participants in the age group 18–19 years old or 24.7% of the sample, 320 students in the age interval 20–22 years old or 71.1% of the sample, 11 participants or 2.5% in the age group 23–25, and 5 participants or 1.1% of the sample in the age group 26–36. With regards to the year of study, during the academic year 2020–2021, 205 students, or 46% of the sample were in the first year and 241 students or 54% of the participants were in the second year of study during online learning. Additionally, 39% of participants in the study ( $n = 174$ ) lived in rural areas, and 60.9% of the participants ( $n = 272$ ) lived in urban areas during online learning.

### 2.3. Data collection tools

Data for this study were collected using a standardised questionnaire. The questionnaire consists of two sections: *Demographic and Beck Anxiety Inventory (BAI)*.

**Section I – Demographic data** includes general information on the study participants as well as the residence during online learning: urban/rural, gender, age, year of study, faculty where they study and so on.

**Section II – BAI** (Beck et al., 1988) is consists of 21 self-reported multiple-choice questions that is used in measuring anxiety levels among adolescents and young people of age 17 and above. The responses look at common anxiety symptoms that the participant subject had during online learning (numbness, sweating not as a result of heat, fear that the worst will happen, and others).

BAI scores on anxiety level that one experiences according to BAI, focuses on the following intervals: 0–21 points: minimal anxiety; 22–35 points: moderate anxiety; 36 points and above: severe anxiety.

Highest scores demonstrate more severe anxiety symptoms.

### 2.4. Data collection process

This study applies the quantitative approach and the data collection instrument was a standardised questionnaire. The collection of data was done during the period April–June 2022 through the distribution of questionnaires in each Faculty of the University of Tirana. The data collection process was supervised by the authors of the study. Before distributing the questionnaires to the respondents, it was explained how the collected data would be used and how the anonymity of the respondents would be protected. The questionnaire was completed by the students after the voluntary agreement of each student to participate in the study.

### 2.5. Data analysis

Data analysis was done using Statistical Package for the Social Sciences program. For this study, descriptive and inferential analysis was used to analyse data. Analysis done at this stage showed that Cronbach's alpha was acceptable. The validity of the instrument on Anxiety, Cronbach's alpha was 0.947. This high score of validity provides us with a high possibility of application in the study. Reliability of the measuring scale, standard deviation, minimal and maximum values are presented in Table 1, which gives a clear picture of the data:

**Table 1**

*Reliability of the Measuring Scale*

Scale	Subscales	No. responses	Cronbach's Alpha	Mean	St. deviation	Min.	Max.
Anxiety	4 (0-3)	21	0.947	21.60	14.035	0	63

**3. Results**

**Research question 1:** Are there significant differences with regard to anxiety experiences according to students' gender?

The results on the relationship between gender and students' anxiety experiences using crosstabulation show that 54% of female students and 67% of male students had minimal anxiety, 24% of female students and 22% of male students had moderate anxiety, while 22% of female students and 11% of male students had severe anxiety.

**Table 2**

*Anxiety Classification \* Gender Crosstabulation*

		Gender		
		Female	Male	Total
Anxiety classification	Minimal anxiety	54%	67%	57%
	Moderate anxiety	24%	22%	23%
	Severe anxiety	22%	11%	20%
Total		100%	100%	100%

In addition, as *T*-test in Table 3 shows, differences are statistically significant with regard to level of anxiety experiences with regard to gender.

**Table 3**

*T-Test of Mean Differences in Anxiety Level Based on Gender*

Anxiety		N	Mean	Std. deviation	T	P
Gender	Female	372	22.51	14.088	3.354	0.001
	Male	74	16.95	12.799		

The application of *T*-test reveals that there is a significant difference of the level of anxiety experience among groups of students based on gender (male-female) ( $t = 3.354, p \leq 0.05$ ). That is, males and females experience different levels of anxiety during online teaching and learning, and that, according to scores level of the instrument, females experience moderate anxiety levels (22-35), while males experience minimal anxiety levels (0-21).

**Research question 2:** Does the year of study (first year/second year) of students impact anxiety experiences?

Using the technique of Crosstabulation, the findings in Table 4 show that 53% of students of first year Bachelor and 60% of students of second year Bachelor have level of minimal anxiety, 22% of first year Bachelor students and 24% of second year Bachelor students had moderate anxiety levels, while 25% of first year Bachelor students and 16% of second year Bachelor students had severe anxiety levels.

**Table 4**  
*Anxiety Classification \* Year of Study Crosstabulation*

		Year of study		Total
		First year Bachelor	Second year Bachelor	
Anxiety classification	Minimal anxiety	53%	60%	57%
	Moderate anxiety	22%	24%	23%
	Severe anxiety	25%	16%	20%
Total		100%	100%	100%

Moreover, as Table 5 shows, *T*-test reveals that there are no significant statistical differences of the level of anxiety experience among groups of students based on year of study during online remote learning (year I/year II Bachelor) ( $t = 1.905, p > 0.05$ ).

**Table 5**  
*T-Test of Mean Differences in Anxiety Level Based on Year of Study*

Anxiety		N	Mean	Std. deviation	T	P
Year of study	First year Bachelor	205	22.96	14.684	1.905	0.057
	Second year Bachelor	241	20.41	13.353		

**Research question 3:** Does the student's residence have an impact on anxiety experiences during online learning?

Empirical data show that of all participants in the study, 39% of students live in rural areas, while 61% of students live in urban areas during pandemic online learning. In order to analyse the relationship between students' residence and the level of anxiety experiences, we use the technique of Crosstabulation. As Table 6 shows, 52% of students in rural areas and 59% of students in urban areas have a level of minimal anxiety; 28% of students in rural areas and 20% of students in urban areas have a moderate level of anxiety; 20% of students in rural areas and 21% of students in urban areas experience severe level of anxiety.

**Table 6**  
*Anxiety Classification \* Residence Crosstabulation*

		Residence		Total
		Rural area	Urban area	
Anxiety classification	Minimal anxiety	52%	59%	57%
	Moderate anxiety	28%	20%	23%
	Severe anxiety	20%	21%	20%
Total		100%	100%	100%

*T*-Test in Table 7 shows that there are no significant statistical differences in the level of anxiety experiences among groups of students based on their residence (rural/urban areas) during online learning ( $t = 1.976, p > 0.05$ ).

**Table 7**  
*T-Test of Mean Differences in Anxiety Level Based on Residence*



ANXIETY		N	Mean	Std. deviation	t	P
Residence	Rural area	174	22.40	14.194	1.976	0.330
	Urban area	272	21.06	13.912		

**Research question 4:** Are there any differences among students in terms of the level of anxiety experiences with regard to their education profile?

Based on Crosstabulation, Table 8 shows the relationships between anxiety levels and students' educational profile based on six faculties of University of Tirana. Table 8 shows that 42% of students of economic faculty, 71% of students of faculty of history and philology, 50% of students of foreign language faculty, 56% of students of law faculty, 61% of students of faculty of natural sciences and 57% of students of faculty of social sciences report that they have experienced minimal level of anxiety. On the other hand, 31% of students of the economic faculty, 16% of students of faculty of history and philology, 27% of students of faculty of foreign languages, 22% of students of faculty of law, 17% of students of natural sciences, and 27% of students of faculty of social sciences report moderate anxiety. About 27% of students of faculty of economics, 13% of students of faculty of history and philology, 23% of students of foreign language faculty, 22% of students of law faculty, 22% of students of faculty of natural sciences, and 16% of students of faculty of social sciences report severe anxiety levels.

**Table 8**  
*Anxiety Classification \* Education Crosstabulation*

		Education						Total
		Economics	History and philology	Foreign languages	Law	Natural sciences	Social sciences	
Anxiety classification	Minimal anxiety	42%	71%	50%	56%	61%	57%	57%
	Moderate anxiety	31%	16%	27%	22%	17%	27%	23%
	Severe anxiety	27%	13%	23%	22%	22%	16%	20%
Total		100%	100%	100%	100%	100%	100%	100%

In order to see if there is a difference in the level of anxiety experiences during online learning, based on education profile, we apply the analysis of variance (one-way ANOVA) given that the independent variable (education profile) consists of more than two groups and given that the basic assumption of homogeneity of variable is met as Table 9 shows:

**Table 9**  
*Test of Homogeneity of Variance*

Anxiety	Levene statistic	df1	df2	Sig.
	0.941	5	440	0.454

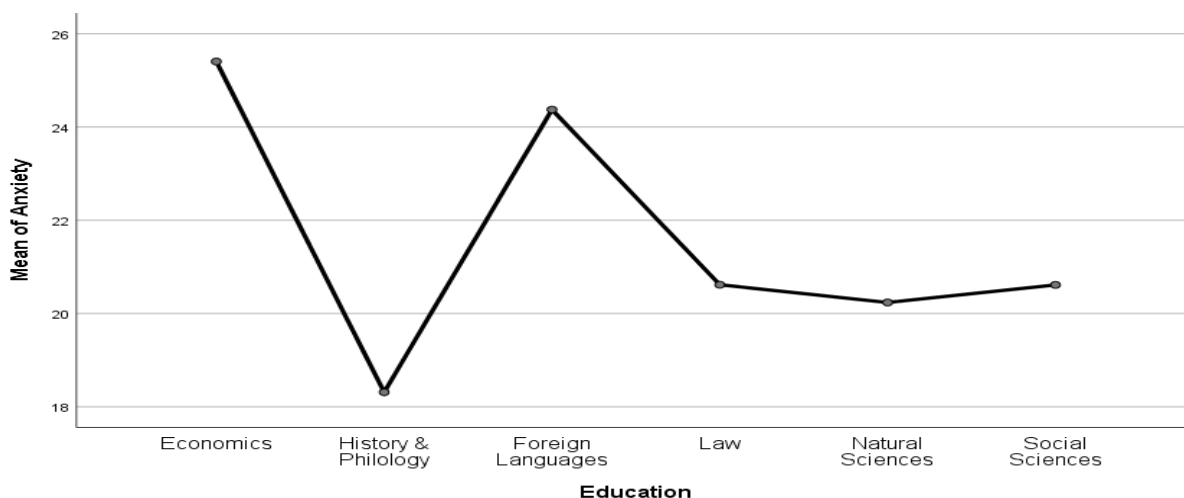
Given that the significant level is  $p > 0.05$ , it could be said that variances are homogenous.

**Table 10**  
*Test ANOVA of Mean Differences of the Level of Anxiety Based on Education Profile*

Anxiety
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	Sum of squares	Df	Mean square	F	Sig.
Between groups	2,758.493	5	551.699	2.865	0.015
Within groups	84,737.937	440	192.586		
Total	87,496.430	445			

Application of ANOVA test (table e10) show that there is a statistically significant difference among groups based on education profile and level of anxiety experiences during online learning ( $F = 2.865, p \leq 0.05$ ). In order to see the difference among groups, we run a Post Hoc tests that indicated that there is a difference in the level of significance 0.05 only among the mean of level of anxiety experiences between groups of students who study economics and those who study history and philology. Results show that students of economic faculty have experienced the highest level of anxiety during online learning, compared to students of faculty of history and philology. Their difference is 7,094, and this is seen in the significance level of 0.05. In the meantime, there is no significant difference among other groups of students based on education profile with regard to the level of anxiety experiences. The graph below (Figure 1) presents in a visual way the differences in means of the level of anxiety experiences in six faculties of Tirana University.



**Figure 1**

*Relationship Between Education and Anxiety Variable*

**Research question 5:** What is the level of anxiety experiences among students of Tirana University during online learning?

The research findings among students of Tirana University who participated in the study on anxiety level during online teaching, revealed that 56.5% of students experienced minimal anxiety levels, 23.1% of students experienced moderate level of anxiety and 20.4% of students experienced severe levels of anxiety.

**Table 11**

*Descriptive Statistics on Level of Anxiety Experiences*

	N	Mean	Median	Std. Deviation	Percentiles	
Anxiety	446	21.58	19.00	14.022	25	10.00
					50	19.00
					75	34.00

Table 11 shows that the mean level of anxiety experiences among students of Tirana University during online learning is about 22. Based on the degree of the study instrument, this corresponds to the level of moderate anxiety. The median indicates that 50% values of anxiety experiences are smaller than value 19, which corresponds to level of minimal anxiety, and 50% of values of anxiety levels are smaller than this value. A standard deviation of 14 shows that results are distributed more around the mean value. Results of the first quartile (Q1) demonstrate that 25% of values of anxiety levels are smaller than value 10 which corresponds to the minimal anxiety levels and 75% of values of anxiety level are greater than this value. While results of the third quartile (Q3) show that 75% of values of anxiety level are smaller than value 34 that corresponds to the level of moderate anxiety and 25% of values of anxiety level are greater than this value.

#### 4. Discussion

The purpose of this study was to examine the impact of socio-demographic variables on the levels of anxiety experiences among students of Tirana University during online learning in the context of the COVID-19 pandemic. The research study was based on Inventory BAI. Levels of anxiety experiences were compared along dimensions of gender, residence, year of study (years I/II), educational profile. While there have been many attempts in the Republic of Albania to explore how the context of online distance learning impacted actors involved in it, an examination of secondary sources demonstrates that this research study is one of the first that provides a picture of the potential the sociodemographic variables have on the impact of the levels of anxiety experiences in the context of teaching and learning through electronic platforms.

The study's findings demonstrate that of all socio-demographic variables used in the research, gender and education profile had the most impact that was statistically significant on the levels of anxiety experiences during online learning among students of Tirana University. Statistical analysis of the *T*-test on the relationship between anxiety level and gender ( $t = 3.354, p \leq 0.05$ ) is an important difference in the level of anxiety experiences among students along gender lines. This analysis shows that female students have experienced moderate anxiety (22–35), while male students have experienced minimal anxiety levels (0–21). These findings are in line with research results of other scholars (Gillis & Krull, 2020; Haikalis et al., 2022). On the other hand, they contradict results of other researchers, such as Ajmal and Ahmad (2019), whose research demonstrated that male students experienced higher levels of anxiety than female students, because they were more worried about their academic performance compared to female students.

The impact of educational profile on levels of anxiety experiences was tested through ANOVA ( $F = 2.865, p \leq 0.05$ ), according to which there is a statistically significant difference. Post Hoc tests indicated that there is a difference in the significance level 0.05 among students who study economics and those who study history and philology. The test demonstrated that students of faculty of economics have experienced a higher level of anxiety during online learning, compared to students of history and philology. The difference between these two groups is 7,094. Among other groups, based on educational profile, there is no difference that is statistically significant in terms of levels of anxiety experiences. The findings of this research are not in line with the findings of other researchers (Cofini et al., 2022; Sazakli et al., 2021). According to their studies, students of medicine and those of exact sciences, who are equipped with more logical reasoning and technological knowledge experience lower levels of anxiety compared to students of humanities, or students of social science, who are more subjective and emotive.

These different results could be explained in the context of a lack of adequate technological means to conduct remote online learning, as well as a lack of textbooks and digital literature. Lack of access to adequate technological means, textbooks and digital literature has made remote learning harder for students of exact sciences. As a result of this, students of exact science have experienced an increase in anxiety levels, unlike, students of humanities and social studies who use independent alternative methods and facilities of study.

Residence during the period of online learning through digital platform during the COVID-19 pandemic and the year of study (year I/year II) were variables that were not meaningful statistically in their impact on the levels of anxiety experiences among students of University of Tirana. These results contradict the findings of Qazi et al. (2020) that showed that residence was an important socio-economic variable, in that students in rural areas demonstrated a higher level of anxiety and lack of satisfaction towards online learning compared to students in urban areas. The findings of this research on the lack of impact of residence on anxiety levels are in line with the results of the study by Quynh et al. (2020), which indicated that residence was not an important and meaningful factor in influencing levels of anxiety experiences during remote online learning.

The results of this research study with students of University of Tirana are not in line with findings of other researchers, such as Costado Dios and Piñero Charlo (2021) and Ming Moy and Han Ng (2021). According to these authors, levels of anxiety experiences were also affected by experiences of university life, in which students who had been in university for shorter period of time experienced higher anxiety levels compared to students who had been to the university for longer period of time. Based on the results of this study, the level of anxiety experiences among students of University of Tirana was of middle level, about 22, which, based on the study instrument and standard deviation of 14, correspond to moderate anxiety levels and that final data are more distributed around mean value.

## **5. Conclusion**

The findings presented in this article revealed that gender and educational profile are two important socio-demographic variables that influence the levels of anxiety experiences among students of the University of Tirana. Variables such as the area of residence during online learning and the years of experience in student life turned out not to be influencing variables on the psycho-social indicators of students. The results of the research contradicted some of the most common narratives of analysis on online learning in universities, according to which, residence and university life experiences were key variables in emotional stability and their success in this type of learning.

Such studies are necessary in order to build systematic knowledge on the factors that influence the psychological state of students during the process of digitalisation of education and the way these processes affect social and professional interaction in the system of higher learning and the actors involved in it. Based on the premise that no research study is exhaustive, these findings must be taken into consideration in the future, when developing strategies of integration of technologies in the education process and the use of e-learning, with the purpose of mitigating the negative psychosocial effect of these variables and improve the opportunities for constructive education environment.

## **6. Recommendations**

Based on the findings of this study, but also on the secondary resources consulted during the study, it is important that policymakers and other actors who influence strategies of development of higher education, encourage further systematic studies on the factors that influence students' preparedness in education through learning system management, and take into consideration their findings so that

they should not repeat past mistakes. It is necessary to develop pilot project that take into careful consideration the testing of strategies of integration of online education based on research, so that they do not fall prey of amateurism of management of unforeseen social situations, as was the case of COVID-19 pandemic. This study takes into consideration some demographic factors identified as meaningful characteristics in secondary sources. Further studies need to be done to analyse the social and individual factors that impact the level of adaptation to online learning without harming the psychosocial equilibrium of students. In order to mitigate the variables that influence the levels of anxiety experiences in the process of online learning, it is necessary to organise training sessions with students on anxiety management techniques, individual and social factors that cause anxiety, guaranteeing ongoing access to psychosocial services.

## References

- Abrahão, M., & Lucchesi, S. (2009). Higher education policies for the XXI century: The future of emerging countries. *Problems of Education in the 21st Century*, 15. [http://www.scientiasocialis.it/pec/files/pdf/90-98.Lucchesi\\_Vol.15.pdf](http://www.scientiasocialis.it/pec/files/pdf/90-98.Lucchesi_Vol.15.pdf)
- Ajmal, M., & Ahmad, S. (2019). Exploration of anxiety factors among students of distance learning: A case study of Allama Iqbal Open University. *Bulletin of Education and Research*, 41(2), 67–78. <https://files.eric.ed.gov/fulltext/EJ1229454.pdf>
- Akgün, B., & Alpaydın, Y. (Ed.). (2022). *Education policies in the 21st century comparative perspectives*. Maarif Global Education Series. <https://doi.org/10.1007/978-981-19-1604-5>
- Al-Kumaim, N. H., Alhazmi, A. K., Mohammed, F., Gazem, N. A., Shabbir, M. S., & Fazea, Y. (2021). Exploring the impact of the COVID-19 pandemic on university students' learning life: An integrated conceptual motivational model for sustainable and healthy online learning. *Sustainability*, 13, 2546. <https://doi.org/10.3390/su13052546>
- Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56, 893–897. <https://psycnet.apa.org/doi/10.1037/0022-006X.56.6.893>
- Brossard, B., & Chandler, A. (2022). *Explaining mental illness: Sociological perspectives*. Bristol University Press.
- Cofini, V., Perilli, E., Moretti, A., Bianchini, V., Perazzini, M., Muselli, M., Lanzi, S., Tobia, L., Fabiani, L., & Necozone, S. (2022). E-learning satisfaction, stress, quality of life, and coping: A cross-sectional study in Italian university students a year after the COVID-19 pandemic Began. *International Journal of Environmental Research and Public Health*, 19, 8214. <https://doi.org/10.3390/ijerph19138214>
- Costado Dios, M. T., & Piñero Charlo, J. C. (2021). Face-to-face vs. e-learning models in the COVID-19 era: Survey research in a Spanish university. *Education Sciences*, 11, 293. <https://doi.org/10.3390/educsci11060293>
- Foa, E. B., Franklin, M., McLean, C., McNally, R., Pine, D., Costello, E. J., Kagan, J., Kendall, P., Klein, R., Leonard, H., Liebowitz, M., March, J., Ollendick, T., Silverman, W., & Spear, L. (2017). Defining anxiety disorders. In D. L. Evans, E. B. Foa, R. E. Gur, H. Hendin, C. P. O'Brien, M. E. P. Seligman, & B. T. Walsh (Eds.), *Treating and preventing adolescent mental health disorders: What we know*

- and what we don't know* (2nd ed.). Adolescent Mental Health Initiative, Oxford Academic. <https://doi.org/10.1093/med-psych/9780199928163.003.0009>
- Garrison, D. R., & Vaughan, N. D. (2007). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.
- Giddens, A. (2008). Modernity and self-identity: Self and society in the late modern age. In S. Seidman & J. C. Alexander (Eds.), *The new social theory reader* (2nd ed.). Routledge. <https://doi.org/10.4324/9781003060963>
- Gillis, A., & Krull, L. M. (2020). COVID-19 remote learning transition in spring 2020: Class structures, student perceptions, and inequality in college courses. *Teaching Sociology*, 48(4), 283–299. <https://doi.org/10.1177/0092055X20954263>
- Gleason, N. W. (Ed.). (2018). *Higher education in the era of the fourth industrial revolution*. <https://doi.org/10.1007/978-981-13-0194-0>
- Haikalis, M., Doucette, H., Meisel, M. K., Birch, K., & Barnett, N. P. (2022). Changes in college student anxiety and depression from pre- to during-COVID-19: Perceived stress, academic challenges, loneliness, and positive perceptions. *Emerging Adulthood*, 10(2), 534–545. <https://doi.org/10.1177/21676968211058516>
- Horwitz, A. V. (2010). An overview of sociological perspectives on the definitions, causes, and responses to mental health and illness. In T. Scheid, & T. N. Brown, T. N. (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (2nd ed.). Cambridge University Press.
- INSTAT. (2021). *Students in higher education by fields of study*. <http://www.instat.gov.al/al/temat/tregu-i-pun%C3%ABs-dhe-arsimi/arsimi/#tab3>
- Izard, C. E. (1977). *Human emotions*. Plenum Press.
- Izard, C. E. (1991). *The psychology of emotions*. Plenum Press.
- Linde, I., & Petrova, M. (2018, March 21–23). The challenges of formalization and modeling of higher education institutions in the 21st century. *CBU International Conference on Innovations in Science and Education*. <http://dx.doi.org/10.12955/cbup.v6.1173>
- Ministry of Education and Sports. (2014). *Strategy on pre-university education development 2014-2020*. [https://planipolis.iiep.unesco.org/sites/default/files/ressources/albania\\_strategy\\_on\\_pre-university\\_education\\_dev.pdf](https://planipolis.iiep.unesco.org/sites/default/files/ressources/albania_strategy_on_pre-university_education_dev.pdf)
- Ministry of Education and Sports. (2022). *Statistical yearbook on education and sports 2020-2021 and timely series*. <https://arsimi.gov.al/wp-content/uploads/2022/10/STATISTICAL-YEARBOOK-ON-EDUCATION-AND-SPORTS-2020-2021-ENG-FINAL.pdf>
- Miller, G. E., Benke, M., Chaloux, B., Ragan L. C., Schroeder, R., Smutz, W., & Swan, K. (2014). *Leading the e-learning transformation of higher education: Meeting the challenges of technology and distance education*. Stylus Publishing.
- Ming Moy, F., & Han Ng, Y. (2021). Perception towards e-learning and COVID-19 on the mental health status of university students in Malaysia. *Science Progress*, 104(3), 1–18. <https://doi.org/10.1177/00368504211029812>

Hamzallari, B., Kotherja, O. & Kostrista, E. (2023). The (in)dependence of students' anxiety levels on socio-demographic factors during distance learning. *Cypriot Journal of Educational Science*, 18(1), 131-145. <https://doi.org/10.18844/cjes.v18i1.8332>

Moss, D. (2002). *Psychological perspectives: Anxiety disorders: Identification and intervention*. Singular/Thomson Learning.

[https://www.researchgate.net/publication/259560188\\_Psychological\\_perspectives\\_Anxiety\\_disorders\\_Identification\\_and\\_intervention](https://www.researchgate.net/publication/259560188_Psychological_perspectives_Anxiety_disorders_Identification_and_intervention)

Mseleku, Z. (2020). A literature review of e-learning and e-teaching in the era of COVID-19 pandemic. *International Journal of Innovative Science and Research Technology*, 5(10), 588–597. [IJISRT20OCT430.pdf](https://www.ijisrt.com/papers/2020/Oct/2020100430.pdf)

Murphy, V. M. (1960). Anxiety: Common ground for psychology and sociology. *The American Catholic Sociological Review*, 21(3), 213–220. <https://doi.org/10.2307/3708598>

Qazi, A., Naseerb, K., Qazib, J., AlSalman, A., Naseemd, U., Yange, S., Hardakera, G., & Gumaeic, A. (2020). Conventional to online education during COVID-19 pandemic: Do develop and underdeveloped nations cope alike. *Children and Youth Services Review*, 119. <https://doi.org/10.1016/j.childyouth.2020.105582>

Quynh, LHT., Tien, LN., & Van, HN. (2020). Validation of depression, anxiety and stress scales (DASS-21): Immediate psychological responses of students in the e-learning environment. *International Journal of Higher Education*, 9(5). <https://doi.org/10.5430/ijhe.v9n5p125>

Rebughini, P. (2021). A sociology of anxiety: Western modern legacy and the COVID-19 outbreak. *International Sociology*, 36(4), 554–568. <https://doi.org/10.1177/0268580921993325>

Rosenfeld, R. A. (1978). Anxiety and learning. *Teaching Sociology*, 5(2), 151–166. <https://doi.org/10.2307/1317061>

Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. *International Journal of Research in English Education*, 4(1). <http://dx.doi.org/10.29252/ijree.4.1.80>

Sazakli, E., Leotsinidis, M., Bakola, M., Kitsou, K. S., Katsifara, A., Konstantopoulou, A., & Jelastopulu, E. (2021). Prevalence and associated factors of anxiety and depression in students at a Greek university during COVID-19 lockdown. *Journal of Public Health Research*, 10, 2089. <https://doi.org/10.4081/jphr.2021.2089>

Scott, P. (2000). Globalisation and higher education: Challenges for the 21st century. *Journal of Studies in International Education*, 4(1), 3–10. <https://doi.org/10.1177/102831530000400102>

Stockemer, D. (2019). *A short introduction to survey research. Quantitative methods for the social sciences*. Springer. [https://doi.org/10.1007/978-3-319-99118-4\\_3](https://doi.org/10.1007/978-3-319-99118-4_3)

Wilkinson, I. (2001). *Anxiety in a 'Risk' society* (1st ed.). Routledge. <https://doi.org/10.4324/9780203465462>

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.