SEM Modelling of Coronavirus Burnout and Psychological Resilience Affecting the Attitudes of University Students towards Distance Education

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ABSTRACT

This study aimed to make a comparison between the levels of attitudes towards Distance Education, Coronavirus Burnout and Psychological Resilience levels of university students in Turkey with the Structural Equation Modelling (SEM) and to determine the level of relationship among them during the pandemic period, which was defined as COVID-19 by the World Health Organization and declared as a global pandemic. In order to collect data from the sample, the Attitudes towards Distance Education Scale, the Coronavirus Burnout Scale and the Psychological Resilience Scale were implemented together. In the study, a structural model was tested by analysing the data obtained from the scales in order to determine whether the level of attitudes towards Distance Education is affected by the level of Coronavirus Burnout and Psychological Resilience. The findings of the analysis indicates that the level of Coronavirus Burnout negatively affects the level of Attitudes towards Distance Education, the level of Psychological Resilience positively affects the level of Attitudes towards Distance Education, and the level of Psychological Resilience negatively affects the level of Coronavirus Burnout. It is clear that there is a need for further measurement and evaluation in order to minimise the impact of global crisis periods on education and to produce effective and correct policies in the field of education. We believe that the findings of our study will help in the planning of national education systems in a more effective way after the COVID-19 pandemic.

Keywords: *Attitudes towards, distance education, psychological resilience, burnout, structural equation modelling*

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INTRODUCTION

COVID-19 viral respiratory infection, which started in China in November 2019 and spread rapidly, causing more than 630 million people to get infected and more than 6.5 million people to suffer deaths by the end of 2022 (Worldometers, 2022), was declared as a pandemic by the World Health Organization (World Health Organization, 2020). Studies conducted during the pandemic period revealed that COVID-19, which was defined as an important stress factor threatening the mental health of individuals (Brooks et al., 2020; Bhuiyan et al., 2020), caused individuals to suffer from serious psychosocial problems such as fear, social

dysfunction (Tanhan, 2020), depression, anxiety and stress disorders (Bao et al., 2020; Çiçek et al., 2021; Wang et al., 2020), loneliness (Tanhan et al., 2020) and burnout (Chen et al., 2020; Yıldırım & Solmaz, 2020). As a consequence of these, reactions such as exhaustion, depersonalisation and decrease in achievement can be seen in individuals (Maslach & Leiter, 2016).

Especially when it is considered that urgent transition and less structured distance education environments may reduce the learning motivation of students and hinder their success (Bingöl et al., 2022), it is clear that there is a need for further measurement and evaluation in order to produce effective and correct policies in the field of education. Our study aims to investigate the role of psychological resilience and burnout levels of university students on their attitudes towards distance education and to examine the relationship among them.

Distance Education during the Pandemic Period

The measures taken by the world governments to prevent the spread of the COVID-19 pandemic had negative effects on the education sector as in many sectors. Due to the measures taken in this process, compulsory closure measures were implemented in schools and universities in 192 countries, and educational activities were disrupted for 91.4% of the registered students (approximately 1.58 billion students) (ILO, 2020). With the decision of many governments to discontinue face-to-face education, there was an urgent transition to online learning in educational institutions at all levels. This was by far the biggest challenge facing national education systems, which had achieved significant development at all levels around the world over the last 50 years (Daniel, 2020).

Distance education (Gökmen et al., 2016), which is generally preferred as a practical interdisciplinary education method in which teaching activities are carried out at any time by eliminating the boundaries and time constraints between the teacher and the learner, has become a necessity for almost all countries and all levels of education (Elçiçek, 2021). During the pandemic period in Turkey, with the decision taken by the Council of Higher Education (YÖK), it was announced that there would be no formal education in universities as of the end of April 2020 and a transition to compulsory distance education was made, and with a decision taken afterwards, universities were asked to resume their activities with distance education during the 2020-2021 academic year (Haktanır et al., 2022).

During the COVID-19 pandemic period, when distance education practices became widespread rapidly thanks to the educational environment created through various software and hardware such as the internet, computers and mobile devices, there was a significant increase in the number of studies conducted regarding the effectiveness of distance education. The opinion that distance education received under abnormal conditions such as the COVID-19 pandemic, which negatively affects the quality of life of individuals, and that the distance education received under normal conditions may have different levels of effects on students (Orçanlı & Bekmezci, 2020) can be cited as a reason for the increase in the number of these studies.

In addition to studies that emphasised that the distance education experience carried out during the pandemic process provided students with positive benefits such as saving time, being able to attend classes once again independently of space and time; there were also various study results that revealed that students experienced problems affecting their psychological health such as stress, difficulty in concentrating on lessons (Armstrong-Mensah et al., 2020), feeling insecure due to having to study at home and alone all the time (Pelikan et al., 2021), intrinsic motivation disorder, learning behaviour disorder (Papouli et al., 2020), time management difficulties and burnout (Morley & Clarke, 2020; Flynn, 2020).

In order to prevent such problems now and in the future, it is critical to understand the underlying mechanism between the psychological resilience levels and burnout experiences of students participating in distance education courses during the COVID-19 pandemic and the mitigating factors associated with this mechanism in order to develop measures and intervention strategies.

Psychological Resilience

Individuals may be exposed to many negative situations that affect their mental health throughout

their lives. The ability of individuals to remain resilient in the face of these negative circumstances, to recover themselves and to quickly return to their normal lives is explained by the concept of psychological resilience in the positive psychology approach (Doğan, 2015). In the literature, there are studies explaining that psychological resilience represents personal characteristics that determine the attitude or behaviour of an individual in the face of a problem (Connor & Davidson, 2003) and can be seen as a personality factor that includes flexibility and adaptability by protecting the individual against negative emotions and life events (Roth & Von Collani, 2007). It was reported that university students in Turkey were also exposed to negative psychosocial and psychological effects of the COVID-19 pandemic, because they were away from social activities and used maladaptive coping strategies with stress (Tanhan, 2020).

In the literature, there are various scales developed in relation to psychological resilience; Wagnild and Young (1993) aimed to evaluate the equality, perseverance, self-confidence, meaningfulness and existential loneliness of individuals with the concept of psychological resilience, and Connor and Davidson (2003) aimed to evaluate the characteristics of individuals such as self-efficacy, patience, faith and optimism with the concept of psychological resilience. In this study, the Short Form of the Connor-Davidson Psychological Resilience Scale, developed by Connor and Davidson (2003) and adapted to the short form by Campbell-Sills and Stein (2007), was used to determine the psychological resilience levels of university students. The adaptation of the scale into Turkish was carried out by Kaya and Odacı (2020).

Covid-19 and Burnout

Restrictions imposed by countries during the COVID-19 pandemic, such as staying at home for extended periods, keeping physical distance even with family members, and the use of facial protection masks, increased the potential to affect the stress, anxiety, burnout and fear levels of individuals (Arslan et al., 2020; Talaee et al., 2020). The long-term exposure of individuals to these negative factors constitutes the basic structure of burnout (Maslach & Leiter, 2016). A study by Qiu et al. (2020) demonstrated that the rate of psychological distress such as stress, anxiety and burnout caused by the COVID-19 pandemic on individuals was higher than 25%. Despite the harmful effects of psychological distress on human health, differences in individual psychological strengths may reduce the negative effects of stress on health (Ryan & Deci, 2001). Based on this evidence, it may be thought that determining the relationship between two important forces such as psychological resilience and burnout, which have a decisive role in the basis of problems such as exhaustion, depersonalisation and decreased productivity, has an important role in preventing such psychological problems experienced by individuals, reducing their burnout and increasing individual productivity.

In the literature, there are scales developed in relation to burnout for educators, health professionals and students; Burnout Measure (Maslach et al., 1997), Oldenburg Burnout Inventory (Demerouti et al., 2003), Copenhagen Burnout Inventory (Kristensen et al., 2005), Shirom-Melamed Burnout Measure (Shirom & Melamed, 2006), Bergen Burnout Indicator (Salmela-Aro et al., 2011), Granada Burnout Questionnaire (De la Fuente et al., 2013). However, reliable and valid assessment tools specific to the COVID-19 pandemic were limited. In this study, the COVID-19 Burnout Scale (COVID-19-BS), which was adapted into Turkish by Yıldırım and Solmaz (2020) from the Short Version of the Burnout Scale developed by Malach-Pines (2005), was used.

Purpose and Hypotheses

Although there are studies on the relationship between various factors affecting the attitudes of university students towards distance education during the pandemic period in the literature, there have been no studies examining the relationship between distance education attitudes, psychological resilience levels, and coronavirus burnout levels. It is thought that determining the psychosocial factors affecting the attitudes of university students towards distance education and the relationships between these factors in accordance with the rules applied for the pandemic period, which will be the next crisis period, will contribute to the prediction of the factors affecting the distance education practices in higher education and the determination of education strategies.

For these reasons, it is important to determine the psychological resilience, burnout levels that affect the attitudes of university students towards distance education and their relationship with distance education. This study aimed to examine the role of psychological resilience and Coronavirus burnout levels of university students on their attitudes towards distance education by comparing them with the Structural Equation Modelling (SEM).

Hypotheses in the structural equation modelling:

H_1: Coronavirus burnout level negatively affects the level of the attitudes towards distance education.

H_2: Psychological resilience level positively affects the level of the attitudes towards distance education.

H_3: The level of psychological resilience negatively affects the level of Coronavirus burnout.

RESEARCH METHOD

Research Model

In this study, a mixed approach explanatory sequential design was adopted in which qualitative and quantitative approaches were used concurrently. The mixed-approach study is a type of study in which researchers combine the components of qualitative and quantitative study approaches (qualitative and quantitative perspectives, use of data collection, analysis and inference techniques). This research design was chosen because it can more confidently assess cause-effect relationships, collect data relatively quickly using some quantitative methods, and generalize the findings of a repeated study across different populations. (Johnson & onwuegbize, 2004).

Participants

The population of this individual study consists of university students who continue their education in a higher education institution in Turkey in the 2020-2021 academic year, when the COVID-19 pandemic process continues. The sample of the study consisted of students studying at Fırat University using convenience sampling method. Convenience sampling; It can also be called easily accessible or convenient sampling (Patton, 2005), it is based on collecting data from the members of the population that are suitable for the study. In convenience sampling, the researcher determines a sufficient number of items from the existing items as a sample (Baltacı, 2018).

732 students participated in the study, and the data obtained from the forms filled in by 664 students, 248 male and 416 female, were arranged for analysis after the forms that were filled out incorrectly and outside the purpose of the study were eliminated.

Data Collection Tool

The responsible authors of the scale studies used were contacted via e-mail and necessary permissions were obtained for the use of the scales. Then, the questionnaires were digitized to digital media with the "Google Forms" application and the students were asked to participate by sending a link through applications such as WhatsApp, e-mail, and SMS. In order to collect data from the sample, the 4-item "Demographic Information Form" prepared by the researchers and the "Attitudes towards Distance Education Scale (ATDES)", the "Short Form of Connor-Davidson Psychological Resilience Scale (SFCDPRS)" and "COVID-19 Burnout Scale (COVID-19-BS)" were implemented concurrently for the purpose of obtaining information regarding the gender of the participants, the type of device they attended distance education courses, their status of being infected with COVID-19, and the COVID-19-related mortality in their families.

The Attitudes towards Distance Education Scale:

It was developed by Çelik and Uzunboylu (2020) to assess the attitudes of university students towards distance education. The scale consisted of 16 items in 5-point Likert type, all of which had factor load values between 0.45 and 0.94. The scale, which contained no reverse coded items and had four factors, assessed

positive and negative attitudes. Among the sub-factors, "Usefulness" and "Preference for Distance Education" showed positive attitudes, while "Social Presence" and "Preference for Face-to-Face Education" showed negative attitudes. The coefficients of internal consistence of the scale were between 0.67 and 0.82. Among the four factors, the internal consistence of the dimension of Usefulness (M1, M3, M5, M7, M9, M11, M16) was calculated as 0.81, Social Presence (M4, M8, M13, M15) as 0.73, Preference for Distance Education (M2, M12, M14) as 0.67 and Preference for Face-to-Face Education (M6, M10) as 0.82.

The Short Form of Connor-Davidson Psychological Resilience Scale:

The short form of the scale, whose original form was developed by Connor and Davidson (2003) to assess the psychological resilience levels of individuals, was developed by Campbell-Sills and Stein (2007) and adapted into Turkish by Kaya and Odacı (2020). The scale, which consisted of 10 items in 5-point Likert type, had a single-factor structure. The coefficient of internal consistence of the scale was calculated as 0.81 and the two-half test correlation was calculated as 0.78.

COVID-19 Burnout Scale (COVID-19-BS):

The short version of the Burnout Scale developed by Malach-Pines (2005) was adapted into Turkish by Yıldırım and Solmaz (2020) as specific to the pandemic. The scale aimed to evaluate the effect of COVID-19 on the burnout levels of individuals during the pandemic period. The scores obtained from the scale consisting of 5-point Likert type and 10 items ranged from 10 to 50. A higher score indicated a higher level of burnout related to COVID-19. The Cronbach's alpha coefficient of the scale consisting of a single factor structure was .92.

Analysis of the Data

SEM is a multivariate statistical technique and is widely used by social scientists. The biggest difference of SEM from classical statistical comparison methods is that by analysing a large number of variables as a whole, it minimises the margin of error that increases depending on the number of the steps used in other analysis methods (Ayyıldız & Cengiz, 2006). SEM analyses the relationship patterns between the variables studied on the basis of the theoretical foundations (Şimşek, 2007). It is a comprehensive statistical method that analyses the relationships between observed (measurable) and latent (unmeasurable) variables, used to determine the linear relationships between independent and dependent variables and to estimate the effects of all variables on one another (MacCallum & Austin, 2000).

In this study, SEM was used to determine whether the levels of participants' Attitudes towards Distance Education were affected by the levels of the Coronavirus Burnout and the levels of Psychological Resilience. In line with the purpose, firstly, the measurement model was tested to determine the significant relationship between the items in the three scales, and secondly, a structural model was tested to determine the Coronavirus Burnout Scale and the Psychological Resilience Scale as factors affecting the attitude towards the distance education. Two-stage SEM was used in which the measurement model was first tested by the confirmatory factor analysis method and then the cause-effect relationships between the variables were tested by path analysis. While the measurement model and structural model are analysed concurrently in one-stage SEM, the measurement model and structural model are analysed separately in two-stage SEM approach (Şimşek, 2007). In Table 1, the values required for the goodness of fit indices used in measuring the suitability of SEM models are indicated.

Table 1. *Values Required for Goodness of Fit Indices*

χ^2	$\boldsymbol{\chi^2/\mathrm{df} \leq 3}$	Good Fit
GFI	GFI ≥0.90	Good Fit
CFI	CFI ≥ 0.90	Good Fit
RMSEA	RMSEA ≤ 0.06	Good Fit

The most commonly employed goodness of fit indices used in measuring the fit of SEM models are chi-square value, RMSEA (Root Mean Square Error Approximation), NFI (The Normed Fit Index), CFI (Comparative

Fit Index), GFI (Goodness of Fit Index), and TLI (Tucker-Lewis Index). As a result, according to the covariance matrix, as the sample size increases, the chi-square value becomes considerably higher and therefore the probability of rejection of the model increases. CFI, NFI and TLI have values between 0 and 1 and the closer the values are to 1, the better the fit of the model. For RMSEA, a value equal to or less than 0.05 indicates perfect fit, and values between 0.08 and 0.10 indicate acceptable fit (Cheng, 2001; Hayduk, 1987).

FINDINGS

Data analyses were performed using IBM AMOS programme. Firstly, although the measurement models of the dimensions were evaluated and the fit values were calculated within the desired limits, the modification indices were examined because the standardised path coefficients of the 5th, 6th, 7th, 10th, 11th, 16th items of the Attitudes towards Distance Education Scale and the 3rd item of the Psychological Resilience scale were below 0.5, and these items were removed from the analysis and the analysis was performed once again. The fit index values of the measurement model were obtained as (Chi-Square=1154.239, df=364, RMSEA=.057, CFI=.934) and all path coefficients were statistically significant (Table 2). The analysis results of the obtained path coefficients are given in Table 2 and Figure 1.

Table 2. *Measurement Model*

Measurement Model			β_1	β_2	S.E	C.R	p
DE1	<---	DE	0,751	1			
DE2	<---	DE	0,601	0,849	0,047	17,942	**<0.001**
DE3	<---	DE	0,795	1,066	0,051	20,907	**<0.001**
DE4	<---	DE	-0,734	-1,047	0,055	-19,193	**<0.001**
DE8	<---	DE	-0,548	-0,684	0,049	-13,929	**<0.001**
DE9	<---	DE	0,686	0,943	0,053	17,826	**<0.001**
DE12	<---	DE	0,761	1,023	0,051	19,997	**<0.001**
DE13	<---	DE	-0,771	-1,019	0,05	-20,267	**<0.001**
DE14	<---	DE	0,859	1,163	0,051	22,912	**<0.001**
DE15	<---	DE	-0,579	-0,763	0,052	-14,701	**<0.001**
CB10	<---	CB	0,687	1			
CB9	<---	CB	0,656	0,988	0,062	16,055	**<0.001**
CB8	<---	CB	0,726	0,987	0,056	17,663	**<0.001**
CB7	<---	CB	0,792	1,111	0,058	19,171	**<0.001**
CB6	<---	CB	0,91	1,361	0,063	21,756	**<0.001**
CB5	<---	CB	0,914	1,319	0,06	21,836	**<0.001**
CB4	<---	CB	0,864	1,211	0,058	20,761	**<0.001**
CB3	<---	CB	0,859	1,144	0,055	20,652	**<0.001**
CB2	<---	CB	0,777	1,087	0,058	18,814	**<0.001**
CB1	<---	CB	0,695	0,947	0,056	16,957	**<0.001**
PR10	<---	PR	0,694	1			
PR9	<---	PR	0,825	1,171	0,062	18,809	**<0.001**
PR8	<---	PR	0,724	1,085	0,064	16,976	**<0.001**
PR7	<---	PR	0,581	0,874	0,065	13,439	**<0.001**
PR6	<---	PR	0,672	0,953	0,06	15,819	**<0.001**
PR5	<---	PR	0,565	0,863	0,064	13,482	**<0.001**
PR4	<---	PR	0,674	1,085	0,068	15,925	**<0.001**
PR2	<---	PR	0,698	0,91	0,055	16,44	**<0.001**
PR1	<---	PR	0,488	0,64	0,055	11,638	**<0.001**

β_1: Standard coefficient β_2: Non-standardised coefficients

DE: Distance Education, PR: Psychological Resilience, CB: Coronavirus Burnout

Table 3. *Structural Equation Modelling*

	SEM		β_1	β_2	S.E	C.R	p
Distance Education	<---	Coronavirus Burnout	-0,151	-0,163	0,046	-3,531	**<0.001**
Distance Education	<---	Psychological Resilience	0,204	0,28	0,061	4,567	**<0.001**
Psychological Resilience	<---	Coronavirus Burnout	-0,282	-0,341	0,053	-6,448	**<0.001**

According to the results obtained in the structural model in Table 3, it was observed that the model was compatible and the model index values were obtained within the desired limits as Chi-square/df=3.171, RMSEA=.057, GFI=.892, CFI=.934. The standardised and non-standardised analysis results of the obtained model are presented in Figure 2-3. In the structural equation modelling, the path coefficient between Distance Education and Coronavirus Burnout was determined to be statistically significant (β=-0.163, p<0.001) and hypothesis H1 was confirmed. The path coefficient between Distance Education and Psychological Resilience was determined to be statistically significant (β=0.28, p<0.001), hypothesis H2 was confirmed. The path coefficient between Psychological Resilience and Coronavirus Burnout was determined to be statistically significant (β=-0.341, p<0.001), and hypothesis H3 was confirmed.

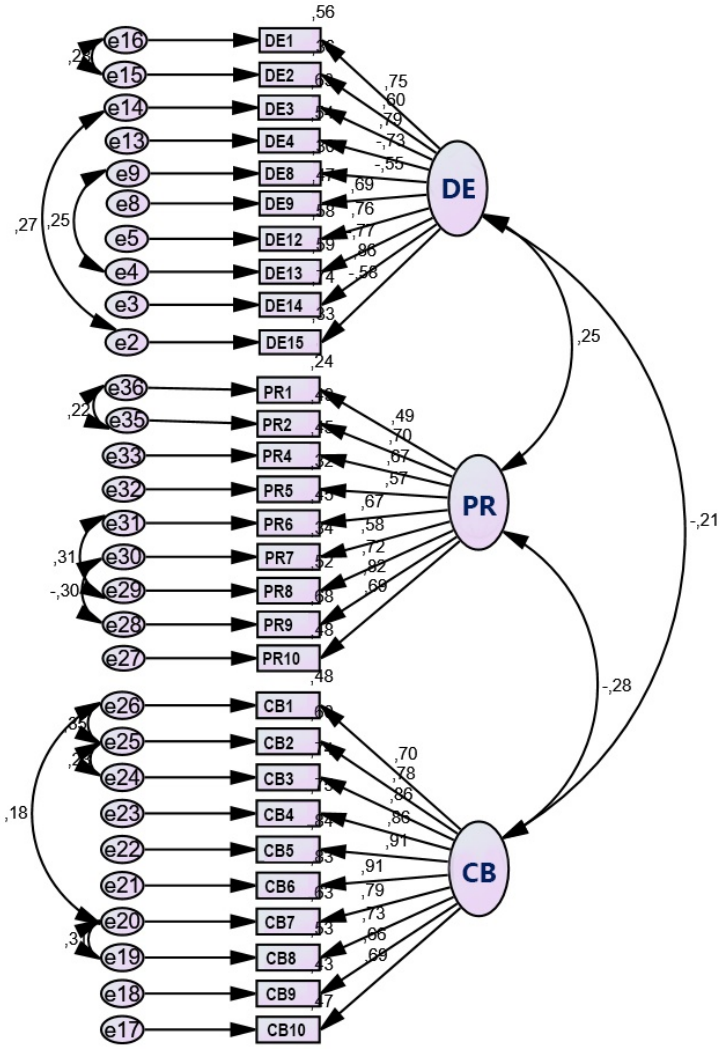

Figure 1. *Standardised Coefficient measurement Model*

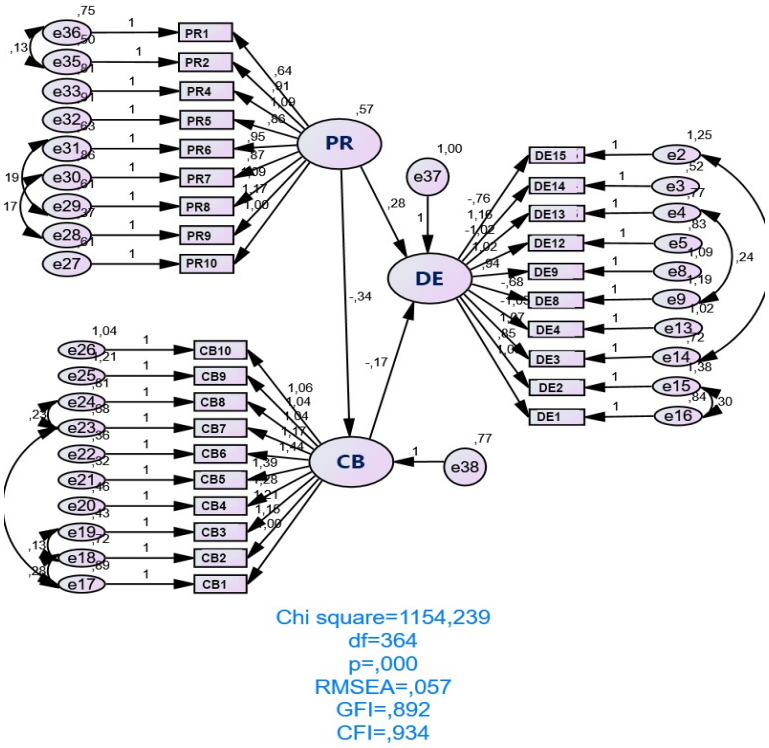

Figure 2. *Structural Equation Modelling (Non-standardised Coefficients)*

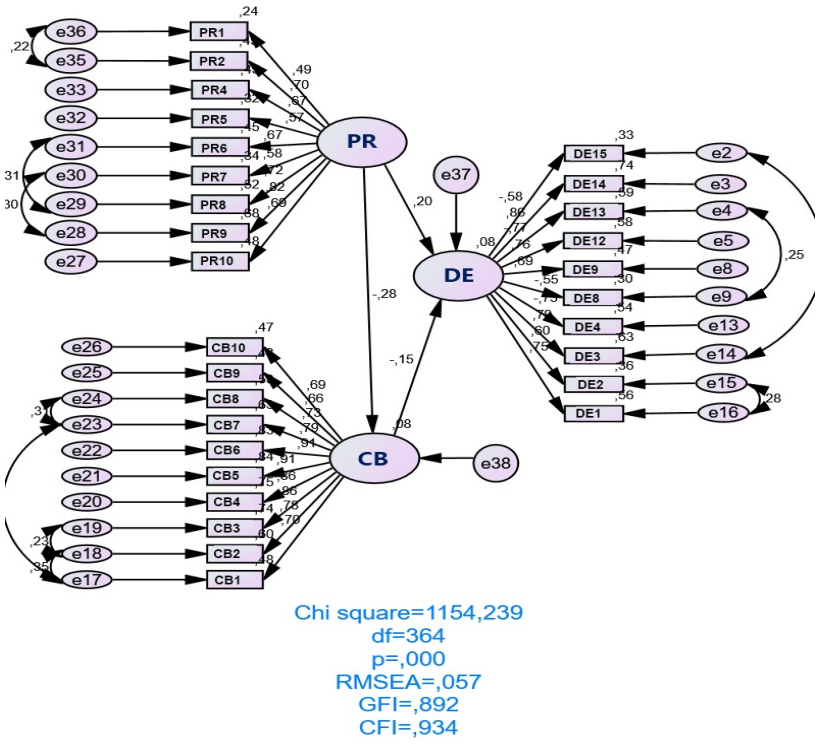

Figure 3. *Structural Equation Modelling (Standardised Coefficients)*

Demographic Analyses

In the analyses, the mean of the participants' Attitudes towards Distance Education levels was found as $\overline{X}$=3.2698, the mean of their Psychological Resilience levels was found as $\overline{X}$=2.3928, and the mean of their Coronavirus Burnout levels was found as $\overline{X}$=2.8801.

The findings obtained as a result of examining the relationship between the gender of the participants and Distance Education, Psychological Resilience and Coronavirus Burnout levels with t test are presented in Table 4.

Table 4. *T-test of the relationship among gender and Distance Education, Psychological Resilience and Coronavirus Burnout levels*

	Gender	N	$\overline{X}$	SD (σ)	F	P
Distance Education	Male	248	3,3317	,46833	12,555	**,000**
	Female	416	3,2329	,39617		
Psychological Resilience	Male	248	3,5540	,75933	11,239	,002
	Female	416	3,2966	,72160		
Coronavirus Burnout	Male	248	2,5581	1,08804	,103	,748
	Female	416	3,0721	1,09333		
Distance Education Usefulness	Male	248	3,5242	,96330	9,681	**,002**
	Female	416	3,2473	,80793		
Distance Education Preference	Male	248	2,7285	1,33964	32,162	**,000**
	Female	416	2,3526	1,06980		
Distance Education Social Presence	Male	248	3,2056	1,16592	11,208	**,001**
	Female	416	3,4892	1,01711		
Distance Education Face-to-Face Education Preference	Male	248	3,8145	,94691	20,632	**,000**
	Female	416	3,9904	,80654		

Significant differences were observed between the gender of the participants and the overall mean of Psychological Resilience, Attitudes towards Distance Education and the sub-dimensions of Usefulness, Social Presence, Distance Education Preference and Face-to-Face Education Preference. Female students had the mean that caused differences in the sub-dimensions of Social Presence and Face-to-Face education, and the male students had the mean that caused differences in the sub-dimensions of Usefulness and Distance Education Preference.

The findings obtained as a result of examining the relationship between the type of device used by the participants to participate in distance education courses and Distance Education, Psychological Resilience and Coronavirus Burnout levels with t test are presented in Table 5.

Table 5. *T-test of the relationship among the device type and Distance Education, Psychological Resilience and Coronavirus Burnout levels*

	Device Type	N	$\overline{X}$	SD (σ)	F	P
Distance Education	Computer	467	3,4944	,44238	12,578	**,009**
	Telephone	197	3,3113	,38248		
Psychological Resilience	Computer	467	2,4133	,75427	,693	,406
	Telephone	197	2,3442	,72501		
Coronavirus Burnout	Computer	467	2,9062	1,12010	,126	,723
	Telephone	197	2,8183	1,11533		
Distance Education Usefulness	Computer	467	3,4081	,90992	11,619	**,008**
	Telephone	197	3,2146	,78573		
Distance Education Preference	Computer	467	2,5517	1,25061	13,217	**,000**
	Telephone	197	2,3536	1,02499		
Distance Education Social Presence	Computer	467	3,3014	1,13920	19,400	**,000**
	Telephone	197	3,5774	,90986		
Distance Education Face-to-Face Education Preference	Computer	467	3,9968	,83157	1,238	,266
	Telephone	197	3,7538	,91976		

Significant differences were observed among the type of device used by the participants to participate in distance education courses and the overall mean of their Attitudes towards Distance Education and the sub-dimensions of Usefulness, Distance Education Preference and Social Presence. In the Usefulness and Distance Education Preference sub-dimensions of the Attitudes towards Distance Education Scale, the mean of those who used computers caused a difference, and the mean of those who used telephones caused a difference in the Social Presence sub-dimension.

As a result of the t-test examination of the relationship among the participants' COVID-19 status and Attitudes towards Distance Education, Psychological Resilience and COVID-19 Burnout levels, no significant relationship was determined.

The findings obtained as a result of the t-test examination of the relationship among the COVID-19 related mortality of family relatives and the levels of Distance Education, Psychological Resilience and Coronavirus Burnout are presented in Table 6.

Table 6. *T-test of the relationship among the COVID-19 related mortality status of family relatives and the levels of Distance Education, Psychological Resilience and Coronavirus Burnout*

	COVID-19 related death	N	$\overline{X}$	SD (σ)	F	P
Distance Education	No	492	3,2495	,41916	,096	,756
	Yes	172	3,3278	,44446		
Psychological Resilience	No	492	2,4207	,75296	,138	,711
	Yes	172	2,3128	,72124		
Coronavirus Burnout	No	492	2,7638	1,06492	6,828	**,004**
	Yes	172	3,2128	1,20193		
Distance Education Usefulness	No	492	3,3258	,88968	,605	,437
	Yes	172	3,4219	,84534		
Distance Education Preference	No	492	2,4715	1,14559	8,372	**,004**
	Yes	172	2,5543	1,31331		
Distance Education Social Presence	No	492	3,3679	1,05395	2,774	,096
	Yes	172	3,4273	1,16407		
Distance Education Face-to-Face Education Preference	No	492	3,9593	,75011	7,398	**,003**
	Yes	172	3,9126	,90230		

While there was no significant relationship among the participants' family relatives' mortality due to COVID-19 and their Psychological Resilience levels, a significant relationship was found between the level of Coronavirus Burnout, Distance Education Preference and Face-to-Face Education Preference, which were the sub-dimensions of the Attitudes towards Distance Education Scale.

DISCUSSION AND CONCLUSION

Although distance education applications provided significant contributions to learning by offering students advantages such as sharing course materials, video communication and replaying the lessons, it also increased the stress and pressure on students who were required to continue their education life during the pandemic period (Özok, 2020). These pressures experienced by students could potentially emerge as syndromes such as burnout, impaired perception, and learning difficulties that would subsequently affect their activities. For this reason, it was very important to examine the stress on the students and consequently their burnout levels during the pandemic period. In this direction, it will be a guide for researchers and educators to examine how two important factors such as resilience and burnout affect distance education.

Selçuk, Gencer, and Karataş (2021) stated in their study that the psychological resilience levels of the university students were above average and that there was a significant positive relationship between

psychological resilience and the sufficiency of their distance education tools. In this study, it was sought to determine the psychosocial factors affecting the attitudes of the students towards distance education during the COVID-19 pandemic. The direction in which Psychological Resilience and Coronavirus Burnout levels affected the attitudes of the students towards distance education was tested via SEM. In accordance with the purpose, firstly, the measurement model was constructed and then the SEM model was constructed. When the findings were examined, it was observed that there was a positive relationship between Distance Education and Psychological Resilience (β=0.28, $p<0.001$), a negative relationship between Distance Education and Coronavirus Burnout (β=-0.163, $p<0.001$), and a negative relationship between Psychological Resilience and Coronavirus Burnout (β=-0.341, $p<0.001$) in the structural equation modelling (Table 3). Based on these findings, it may be concluded that psychological resilience was an important factor affecting the success of distance education during the COVID-19 pandemic, considering that there was a relationship in the same direction with Distance Education, although there was an inverse relationship between Psychological Resilience and Coronavirus Burnout.

Pullu and Gomleksiz (2020) revealed that students generally prefer the computer and then the smartphone to attend distance education courses. In our study, the mean attitudes towards distance education of the students who attended distance education courses on computers was higher than the students who attended distance education courses on mobile phones. It can be said that factors such as the phone screens being small compared to computer screens, the small details in the broadcast cannot be seen, the distraction of instant notifications from social media and similar mobile applications during the lesson affect the attitudes of the students who attend the lessons by phone towards distance education.

In the literature, there were studies indicating that young individuals had lower burnout tolerance than older individuals due to social isolation or quarantine during the pandemic period (Oliveira et al., 2021; Zadok-Gurman et al., 2021). In addition, in studies analysing the relationship between burnout level and gender during the pandemic period (Khan et al., 2019; Taşdemir et al., 2022), it was determined that women's burnout levels turned out to be higher than men and women's psychological resilience levels were lower than men (Çelebi, 2020). In our study, no significant difference was observed between coronavirus burnout levels and gender. However, according to the results of our study, the general attitude mean of male students towards distance education ($\overline{X}$=3.332) was higher than that of female students ($\overline{X}$=3.233). A significant difference was detected between the psychological resilience levels of the participants and gender, and it was observed that the psychological resilience levels of males ($\overline{X}$=3.554) were higher than those of females ($\overline{X}$=3.297). As a result of this; it can be said that factors such as working or student women undertaking a large part of the housework and family burden, as well as trying to carry out school or work responsibilities together, negatively affect their psychological resilience and therefore their attitudes towards distance education.

In Erdem's (2022) study, a significant relationship was found between continuing the courses with distance education during the pandemic period, contracting COVID-19 or experiencing losses due to COVID-19 among family relatives and burnout levels, and it was emphasised that these students had high burnout levels. In parallel with this, in our study, it was observed that students who reported mortality among their family relatives due to COVID-19 had higher levels of Coronavirus Burnout and preferred distance education, while they did not prefer face-to-face education. It can be said that the fear of losing relatives due to COVID-19 increases the effect of factors such as stress, anxiety and fear, which constitute the basic structure of burnout in individuals, and therefore affects their attitudes towards distance education.

As a result, the findings obtained from our study indicated that the level of Coronavirus Burnout negatively affected the level of Attitudes towards Distance Education, the level of Psychological Resilience

positively affected the level of Attitudes towards Distance Education, and the level of Psychological Resilience negatively affected the level of Coronavirus Burnout.

The hypotheses of our study are listed below, and all of them were confirmed;

H1: Coronavirus burnout level negatively affects the level of distance education.

H2: Psychological resilience level positively affects the level of distance education.

H3: The level of psychological resilience negatively affects the level of Coronavirus burnout.

Suggestions

Distance education, which has been used at all levels of education for many years and has been implemented on a compulsory basis for about two years during the COVID-19 pandemic, is likely to continue for a while after the pandemic period. Considering that there may be a compulsory and sudden transition to distance education once again for students who cannot receive face-to-face education in schools due to reasons such as outbreaks, floods and earthquakes that may occur in the future, we can recommend conducting studies in which different factors affecting the attitudes of students towards distance education will be analysed with different levels of education. In addition, it can be suggested that educational institutions add guidance practices to their curriculum in order to increase the psychological resilience of students in times of mass crisis, and educators offer motivating content that will increase the effectiveness of distance education in courses.

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