



## ARAŞTIRMA / RESEARCH

# Effects of new coronavirus pandemic in the framework of posttraumatic transformation: development of Coronavirus Effect Scale

Travma sonrası dönüşüm çerçevesinde yeni koronavirüs pandemisinin etkileri: Koronavirüs Etkisi Ölçeğinin geliştirilmesi

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### Abstract

**Purpose:** This study was designed to determine the transformations that occur during the Covid-19 pandemic trauma process experienced by individuals. In this context, it is aimed to determine the awareness level of the Turkish community about Covid-19, to obtain information about the ways individuals deal with the process, and to reveal the psychological, social and economic effects of the pandemic process on individuals.

**Materials and Methods:** Within this study, the "Coronavirus Effect Scale" was developed and the scale, which was developed during the pandemic period, was applied to 2115 participants, who were selected to equally represent each region in Turkey.

**Results:** It was revealed that, during this coronavirus pandemic process that was discussed as a trauma, the participants had a high level of awareness about coronavirus, experienced difficulties in economic and psychological terms, attempted to cope with the process through positive thoughts and spiritual means, and improved their philosophies of life with an awareness on themselves.

**Conclusion:** Within the framework of the research, "Coronavirus Effect Scale" was developed. As a result of the application of the developed scale, it was observed that the pandemic process, which is being experienced, affects the individuals forming the Turkish society in psychological, social and economic dimensions. People experience changes and transformations with the traumatic process.

**Keywords:** Covid-19, posttraumatic transformation, Turkey, coronavirus effect scale

### Öz

**Amaç:** Bu araştırma Covid-19 pandemi sürecinde bulunan bireylerin yaşadıkları travma süreciyle gerçekleşen dönüşümleri tespit etmek amacıyla kurgulanmıştır. Bu bağlamda çalışmada Türk toplumunun Covid-19'a ilişkin farkındalık seviyesinin belirlenmesi, bireylerin süreçle başa çıkma yollarına ilişkin bilgiler elde edilmesi ve pandemi sürecinin bireylerdeki psikolojik ve sosyal etkilerinin ortaya konulması amaçlanmaktadır.

**Gereç ve Yöntem:** Araştırma kapsamında "Koronavirüs Etkisi Ölçeği" geliştirilmiş ve pandemi süreci devam ederken geliştirilen ölçeğin çevrimiçi ortamda Türkiye'de bulunun her bölgeyi temsil eder nitelikte 2115 katılımcıya uygulaması yapılmıştır.

**Bulgular:** Bir travma olarak ele alınan koronavirüs pandemisi süreci ile birlikte katılımcıların koronavirüse ilişkin farkındalık düzeylerinin yüksek seviyede bulunduğu, ekonomik ve psikolojik anlamda zorluklar yaşadıkları, pozitif düşünceler ve manevi yollarla süreçle başa çıkma yoluna gittikleri ve kendilerine ilişkin farkındalıklarıyla birlikte, yaşam felsefelerinde gelişim yaşadıkları ortaya konulmuştur.

**Sonuç:** Araştırma çerçevesinde "Coronavirus Etki Ölçeği" geliştirilmiştir. Geliştirilen ölçeğin uygulanması sonucunda yaşanmakta olan pandemi sürecinin Türk toplumunu oluşturan bireyleri psikolojik, sosyal ve ekonomik boyutlarda etkilediği görülmüştür. Bireylerin travmatik süreçle birlikte değişim ve dönüşümler yaşadığı anlaşılmıştır.

**Anahtar kelimeler:** Covid-19, travma sonrası dönüşüm, Turkey, koronavirüs etkisi

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## INTRODUCTION

Coronavirus is a large family of viruses that can cause diseases not only in animals but also in humans. Previously experienced SARS and MERS are examples of coronavirus in humans that cause respiratory diseases. Covid-19, an acronym for Coronavirus Disease-2019, is the most recently discovered member of the coronavirus family and continues to exist today. Covid-19 was firstly detected in Wuhan, China, in December 2019<sup>1,2</sup>. Similar to SARS and MERS, Covid-19 is also a virus that causes respiratory diseases, it is detected by fever and cough symptoms, leading to grave results such as death in older people and adults with health problems<sup>3</sup>. On 11 March 2020, the World Health Organization declared Covid-19 as a “pandemic” due to its rapid and severe spread and the resulting deaths on earth<sup>4</sup>. The pandemic describes the epidemic diseases that are rapidly transmitted, seen in a severe manner, detected in large geographical areas and observed in high proportions in the world's population<sup>5</sup>.

In cases of pandemic, administrations of the countries took certain measurements such as travel bans among countries, the cancellation of congresses and meetings, suspending working and education, detecting and quarantining the coronavirus cases, ensuring the isolation, and ensuring the social and physical distancing<sup>6,7,8,9</sup>. The measures taken by individuals in society against pandemics also play a very important role in weakening the source and effect of the disease and in controlling its spread<sup>10</sup>. At this point, a great responsibility falls on the individuals who make up the society and the measures taken by these individuals such as staying at home and paying particular attention on hygiene and social distancing measures when needed to go out are effective in stopping the spread of the disease<sup>6,10</sup>. The measures taken had to bring about social changes. Since many workplaces were closed in the process, people started working from home and had to continue their relationships with their families in a virtual environment. In addition, due to the closure of schools based on the necessity to prevent crowded environments, students continue studying through distance education. It is anticipated that the process will also affect the economies and psychologies of individuals and society, and it is suggested that necessary measures should be taken on these issues as well<sup>9</sup>. In addition to the effects of pandemics on the health of societies, as can be understood, they also

have devastating effects in social and economic terms<sup>6,7</sup>. It is understood that a pandemic, Covid-19, emerged unexpectedly and spread rapidly across the globe, leading to deaths. In addition, in the context of the measures taken, it has led to many changes in people's social lives. This process is likely to have repercussions in the psychology of people. At this point, it would be right to treat the Covid-19 pandemic as a trauma.

The concept of trauma is used to describe the events that unexpectedly emerge and significantly complicate the lives of people, threatening their psychology<sup>11,12</sup>. Similarly, the Covid-19 pandemic emerged suddenly, spread rapidly, and restricted significantly the lives of people due to certain necessary measurements such as staying at home, social distancing, closure of schools and suspension of jobs, etc. In addition, certain cases strikingly affect people such as being diagnosed with Covid-19 and facing the risk of death, moreover, having the possibility to see someone from immediate circle having this risk or even losing that person. In APA<sup>13</sup>, the situation of facing death, facing the risk of death or witnessing such events is evaluated within the concept of the traumatic event.

The Covid-19 pandemic, which was treated as a trauma in this study, is likely to have a number of positive and negative outcomes in individuals. This process may have negative psychological effects such as the development of negative emotions and thoughts in individuals and development of a pessimistic mood<sup>14</sup>. In addition, by coping with the difficulties experienced in this process, some people are able to transform to a higher functionality and experience improvement<sup>15</sup>. Showing development after traumatic events and experiencing positive transformations have been conceptualized as post-traumatic growth, positive adaptation, stress-related growth, etc.<sup>15,16</sup>. Basically, having a positive transformation experienced by individuals was grouped in three dimensions by Tedeschi and Calhoun as positive changes in interpersonal relations (development of family and social relations, etc.), positive changes in self-perception (change in self-perspective, personal empowerment, etc.) and positive changes in the philosophy of life (changing the perspective of life in a positive way, understanding the value of health and life, etc.)<sup>14,17</sup>.

The first Covid-19 case in Turkey was identified on 11 March 2020<sup>18</sup>. By March 12, the number of cases was still one, but by March 13, the number of cases

increased to 5 and there was a growing trend in the number of cases. It should also be noted that the number of tests carried out every day increases more than the number of cases identified<sup>19</sup>. Since the first case in Turkey, many measures have been taken to prevent the spread of the virus. Workplace activities and education in schools have been temporarily suspended under coronavirus measurements. At the first stage, a curfew was imposed on those aged 65 and over and those with chronic problems (21.03.2020), then on citizens aged 20 and below (04.03.2020), and subsequently on weekends for all citizens living in the 31 major provinces (04.12.2020). Necessary measurements have been taken and continue to be taken such as blocking access to major cities and by imposing restrictions on areas where citizens can cause crowds, using masks and compliance with social distancing rules<sup>20</sup>. Considering that the pandemic process will have repercussions in the psychological and social contexts, the Ministry of Health has established psychosocial support lines in 81 provinces in order to provide support to the community in this issue<sup>21</sup>.

The Covid-19 pandemic, which is still ongoing in Turkey and around the world, has been treated as a trauma in this study and its transformative role on the individuals of Turkish society has been examined in this context. In this context, it is aimed to determine the awareness level of the Turkish community about Covid-19, to obtain information about the ways individuals deal with the process, and to reveal the psychological, social and economic effects of the pandemic process on individuals. At this point, based on the coping strategies and positive or negative posttraumatic transformations of individuals obtained from interviews depending on a doctoral thesis conducted on transformative role of illness traumas, the case were adapted to Covid-19 pandemic and a scale was developed by including additional items. This study is of significant importance since it determines the coping strategies applied by individuals in this traumatic process and reveals the negative effects of the process on the psychology of people in Turkish society as well as the positive transformations experienced.

## MATERIALS AND METHODS

The population of this study is comprised of individuals who experience the Covid-19 process in Turkey. It can be seen in the table in Baş's publication that; the size is 384 if the sample is not homogeneous

at 95% accuracy level in the 100 million universe<sup>22</sup>. In Turkey, which has a population of 83 million<sup>23</sup>, although this figure is sufficient, a sample size far above this has been considered. In determining the sample, the convenience sampling method was preferred, and a total of 2115 participants were reached through online environments from each region of Turkey (04.12.2020-04.17.2020).

The ethics committee permission of this research has been given by Süleyman Demirel University Rectorate Ethics Committee of Social and Humanities (90/12-29.04.2020). Incorporation of all participants to the study was based on being volunteer, and their consent was obtained for the use of the data.

## Measures

### Scale development process

*Step 1:* The data collection tool of the study, "Coronavirus Effect Scale", was developed by the researchers. In the doctoral thesis study conducted by Res. Asst. Dilruba İzğüden under the supervision of Prof. Dr. Ramazan Erdem, the subject of disease trauma was discussed<sup>24</sup>. Within the scope of the qualitative research, certain codes were created based on the data obtained from interviews with participants, who suffered from disease trauma, and these codes were clustered under main themes and sub-themes (03.17.2020). Based on the themes obtained from the doctoral thesis research and information obtained from the literature on the Covid-19 pandemic, a 51-item question pool was created to measure the impact of the Covid-19 pandemic within the scope of the research (04.03.2020).

*Step 2:* Expert opinions were taken about the items, and as a result of their contributions, the number of questions reached 69 (04.06.2020). Demographic questions were also added to the 69-item draft scale, which was obtained as a result of the expert contributions, and the pilot application of the study was carried out online with 300 participants during the pandemic process (04.07.2020-04.11.2020).

*Step 3:* The data obtained as a result of the pilot application was subjected to exploratory factor analysis, the size was determined and in this context, some items were eliminated. In line with feedbacks obtained from participants and analysis conducted during the pilot application, some items in the draft scale and demographic questions were eliminated,

some items were revised, and the final version of the scale consisted of 49 items, 9 demographic questions and 8 dimensions.

*Step 4:* The resulting 49-item and 8-dimension form was applied online again during the pandemic process, this time on a larger sample of a total of 2115 participants (04.12.2020-04.17.2020). The obtained data were subjected to factor analyses and the “Coronavirus Effect Scale”, which was developed as a result of all these stages, consisted of 7 dimensions (*awareness about the virus, psychological status, economic condition, tendency towards belief, positive thinking, improvement in self-perception and improvement in philosophy of life* dimensions) and 37 questions. In addition, while developing the scale, the 5-point Likert type scale was used, considering the comparability of the research with other studies and increasing participation in the research<sup>25,26</sup>. The agreement levels of participants for the statements was scaled as “1” if they definitely disagree, and “5” if they definitely agree.

### Statistical analysis

In the scale development process, the scale, which was developed based on the data obtained from the pilot study through the draft scale, was applied to a wider sample and the data obtained from this wider sample were analyzed using the SPSS (Statistical Package for the Social Sciences-SPSS).

### Ensuring validity and reliability

Within the framework of validity analyses, initially, the content validity analyses were carried out on the draft scale. Content validity shows the extent that the items of the scale express the desired state to be measured and to what extent they cover it<sup>26</sup>. In this context, the content validity was achieved by removing some questions and adding some new questions to the form based on expert opinion. As Rubio et al.,<sup>27</sup> stated, one of the methods that can be applied to ensure construct validity is to perform factor analyses. In this context, the data obtained from the pilot application of the draft scale, which was developed for the study, were subjected to exploratory factor analysis. The validity of the scale was strengthened by making some arrangements regarding the comprehensibility of the items as a result of the feedbacks provided in the pilot interviews along with the items obtained as a result of the analyses. In terms of the analyses concerning the reliability of the scale, the internal consistency coefficient Cronbach Alpha was calculated. Validity

and reliability analyses demonstrated that the scale is a valid and reliable tool for measuring the effects of coronavirus.

Following the implementation of the “Coronavirus Effect Scale” that was obtained as a result of the scale development process, frequency and percentage calculations were made for the demographics included in the scale. Arithmetic averages and standard deviations of the items in the scale were calculated and statistical evaluations were made based on these figures. The data were tested for normality, and by determining the kurtosis and skewness values of each dimension, it was determined that the dimensions showed normal distribution. Parametric tests were used in the comparison of these dimensions according to the demographic variables. In this context, for the comparison of two groups the ‘significance test of the difference between two mean values (t test)’ and for the comparison of three and over groups ‘variance analysis (ANOVA) (F test)’ were used. When a difference was found between groups as a result of variance analysis, ‘Tukey's-b test’ was used to determine the source of the difference.

## RESULTS

The frequency distributions of the demographic variables of the study are presented in Table 1. As can be seen in Table 1, the majority of the participant individuals were female (74%) and married (58.6%). The highest frequency figures were determined in the 21-30 age range (44.1%) in terms of age groups, in students (34.9%) concerning the job variable, the participants with a bachelor's degree (58.4%) in terms of educational status, middle income group (80.0%) in terms of income group variable, family (parents, children, spouses) group (92.0%) concerning with whom they were together during the isolation process, and finally those in the “other” category (35.6%) in terms of having a profession during the process

Table 2 demonstrates the arithmetic mean and standard deviation distributions of each statement included in the Coronavirus Effect Scale. Examining the averages of the statements in general, it is observed that the averages of 3.00 and over indicate that individuals tend to agree with the relevant statements. Table also demonstrates that the 2<sup>nd</sup> statement “I know that COVID-19 affects lungs and causes breathing problems” had the highest agreement level for the participants (4.92), and a very

large majority of the participants were aware that the disease originated from the coronavirus is effective on the respiratory system. The statement with the lowest average is “Due to the COVID-19 pandemic I am not able to cover all my household expenses”. Agreement level in this statement was low, which, based on the demographic variables, may be a reflection of the low distribution among participants experiencing dismissal and unpaid leave.

Principal components analysis and Varimax rotation method were applied to determine the factor

**Table 1. Demographic variables**

Variables	Frequency	%	Variables	Frequency	%
Gender			Income Group		
Male	549	26.0	Lower Income Group	368	17.4
Female	1566	74.0	Middle Income Group	1691	80.0
Marital Status			High Income Group	55	2,6
Married	875	41.4	Persons Together in the Social Isolation Process		
Not Married	1240	58.6	Family	1946	92.0
Age (Year)			Friends	40	1,9
-20	333	15.7	Alone	101	4.8
21-30	933	44.1	Other	28	1.3
31-40	447	21.1	Working Status in The Social Isolation Process		
41-50	278	13.1	I continue to work the same way.	149	7.0
51+	124	5.9	I work from home.	491	23.2
Job			I got fired.	17	0,8
State Official	619	29.3	I took leave without pay voluntarily.	13	0.6
Worker	91	4.3	We are working in rotation.	117	5.5
Shopkeeper	33	1.6	I had no job before the process.	505	23.9
Student	739	34.9	I was made to leave without pay.	70	3.3
Housewife	137	6.5	Other	753	35.6
Retired	36	1.7			
Unemployed	94	4.4			
Other	366	17.3			
Education Level					
Primary Education	83	3.9			
Secondary School	261	12.3			
Associate Degree	281	13.3			
Bachelor's Degree	1236	58.4			
Postgraduate Degree	254	12.0			

structure of the Coronavirus Effect Scale. Whether the obtained data are suitable for exploratory factor analysis can be explained by Kaiser-Meyer-Olkin (KMO) and Barlett tests.

The KMO value was determined as 0.896 in the study. This value indicates that the sample size is appropriate to perform factor analysis. In addition, examining the Barlett test results, the chi-square value was found to be significant ( $p < 0.05$ ).

**Table 2. Arithmetic mean and standard deviation values of scale items**

No	Items	mean	SD
1	I know what the symptoms of Covid-19 are.	4.64	.625
2	COVID-19 affects lungs and causes breathing problems.	4.92	.328
3	I know how Covid-19 spreads.	4.76	.556
4	I know Covid-19 spreads very fast.	4.90	.361
5	I know how to protect myself from Covid-19.	4.66	.634
6	I know the meanings of the words; quarantine, social distance and social isolation.	4.88	.399
7	I don't go out unless I have to.	4.78	.591
8	I pay attention to social distance when I have to go out.	4.79	.532
9	I pay attention to using a mask when I have to go out.	4.63	.793
10	I pay attention to using gloves when I have to go out.	3.70	1.506
11	I think I have coronavirus when I have flu symptoms.	3.27	1.317
12	The current situation makes me feel stressed.	3.88	1.266
13	The current situation makes me feel helpless.	3.37	1.427
14	The current situation makes me think that I will die.	2.65	1.419
15	I think my relatives may die during the pandemic.	3.27	1.351
16	In this process, the negative comments I hear worry me.	3.53	1.359
17	The pandemic process challenges me economically.	2.97	1.481
18	I have financial concerns in this process.	3.05	1.485
19	I wasn't prepared for this process economically.	2.79	1.498
20	Due to the COVID-19 pandemic I have trouble paying my bills.	2.33	1.493
21	Due to the COVID-19 pandemic I am not able to cover all my household expenses.	1.98	1.295
22	In this process, I am relieved by praying.	3.81	1.371
23	In this process, I am relieved by worshipping.	3.14	1.642
24	In this process, I am relieved by reading scriptures.	3.01	1.620
25	I think that the emergence of coronavirus is a warning of God to us.	3.55	1.559
26	Since the pandemic started, praying and worshipping are more important for me than they were in the past.	3.40	1.563
27	This process caused my religious beliefs to strengthen.	3.37	1.563
28	I am doing sports more in this process.	2.42	1.428
29	In this process, I am reading books more than ever.	3.22	1.469
30	In this process, I am playing more digital games (computer games, PlayStation etc.).	2.67	1.638
31	In this process, I am using social media more.	4.03	1.221
32	I feel relieved by thinking that I will return to the good old days after this process.	4.09	1.144
33	In this process, I feel relieved by keeping my morale high.	3.89	1.157
34	In this process, I feel relieved by thinking that troubled days will pass.	4.07	1.085
35	In this process, I feel relieved by thinking positively.	3.99	1.118
36	In this process, I have realised the value of my health.	4.56	.843
37	In this process, I have realised the importance of living the moment.	4.42	.998
38	In this process, I have realised the value of life.	4.50	.920
39	In this process, I have realised that anything can happen in life at any moment.	4.69	.735
40	In this process, I have realised that the difficulties we experience strengthen us.	4.19	1.127
41	This process made me feel grown-up.	3.74	1.303
42	This process made me an optimistic person.	3.17	1.425
43	This process made me realise my personal strength.	3.40	1.352
44	This process made me a more tolerant person.	3.15	1.387
45	During this process, my self-awareness has increased.	3.49	1.341
46	In this process, I have developed new relationships.	2.41	1.432
47	In this process, I have had new hobbies.	2.87	1.479
48	In this process, I have started to eat healthier.	3.05	1.464
49	In this process, I have given up my bad habits.	2.44	1.534

Table 3. Coronavirus effect scale factor loads and distributions

Items	Rotated Factor Load Values						
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Q23	.877						
Q26	.871						
Q24	.857						
Q27	.846						
Q22	.827						
Q25	.808						
Q44		.835					
Q43		.822					
Q45		.799					
Q42		.791					
Q41		.666				.386	
Q46		.654					
Q19			.901				
Q17			.891				
Q20			.881				
Q18			.876				
Q21			.825				
Q13				.817			
Q16				.803			
Q14				.797			
Q12				.776			
Q15				.761			
Q11				.618			
Q34					.880		
Q35					.848		
Q33					.836		
Q32					.764		
Q38						.826	
Q37						.762	
Q39						.759	
Q36						.734	
Q3							.718
Q5							.717
Q6							.675
Q2							.660
Q4							.653
Q1							.653

Through the principle component analysis, it was determined that there were 7 factors with eigenvalue above 1 and explaining 67,829% of the variance. The contribution of factors to the total variance is 12,425% for the first factor, 10,917% for the second factor, 10,580% for the third factor, 10,134% for the fourth factor, 8,290% for the fifth factor, 7,756% for the sixth factor, and 7,726% for the seventh factor. Henson and Roberts<sup>28</sup> reported that having a variance of 52% and over is sufficient for the scale studies. In the study, the total contribution of the factors to variance was determined as 67,829%.After

determining the number of factors on the scale, the distribution of items into factors was examined. Concerning the items of the scale, the factor loads and item total correlations are given in Table 3.

During the analysis, items numbered 7,8,9,10,28,29,30,31,40,47,48, and 49 were excluded from the analysis because they had overlapping loads or had a single factor characteristic. With the final analysis, the items numbered 22,23,24,25, and 26 were clustered in the first factor, the items numbered 41,42,43,44,45, and 46 were clustered in the second

factor, the items numbered 17,18,19,20, and 21 were clustered in the third factor, the items numbered 11,12,13,14,15, and 16 were clustered in the fourth factor, and the items numbered 32,33,34, and 35 were clustered under the fifth factor, and the items numbered 36,37,38, and 39 were clustered under the sixth factor and the items numbered 1,2,3,4,5, and 6 were clustered under the seventh factor. It was observed that the factor load values were between .80 and .87 for the first factor, between .65 and .83 for the second factor, between .82 and .90 for the third factor, between .61 and .81 for the fourth factor, between .76 and .88 for the fifth factor, between .73 and .82 for the sixth factor, and between .65 and .71 for the seventh factor. The first factor was named as *awareness about the virus* dimension, the second factor *psychological status* dimension, the third factor *economic*

*condition* dimension, the fourth factor *tendency towards belief* dimension, the fifth factor *positive thinking* dimension, the sixth factor *improvement in self-perception* dimension, and the seventh factor *improvement in philosophy of life* dimension.

The internal consistency coefficient Cronbach Alpha was calculated for the reliability analyses of the entire scale, which was put into its 37-item final form after the analyses, and its sub-dimensions. The Cronbach alpha values of the dimensions and the Skewness and Kurtosis values, which were discussed for the normality test, were also discussed in Table 4. In order to obtain a normal distribution in the *awareness about the virus* dimension and *improvement in philosophy of life* dimension, approximately 40 extreme values were excluded from the analyses.

**Table 4. Psychometric properties of the coronavirus effect scale dimensions**

Dimensions	Number of Expression	Max/Min	Cronbach Alpha	Mean	SD	Normality Test	
						Skewness	Kurtosis
Awareness about the Virus	6	3.5-5	0.755	4.809	.281	-1.632	2.095
Psychological Status	6	1-5	0.867	3.328	1.052	-0.187	-0.862
Economic Condition	5	1-5	0.930	2.624	1.284	0.390	-1.062
Tendency Towards Belief	6	1-5	0.934	3.379	1.349	-0.404	-1.151
Positive Thinking	4	1-5	0.907	4.009	.996	-0.944	0.345
Improvement in Self Perception	6	1-5	0.897	3.226	1.116	-0.252	-0.777
Improvement in Philosophy of Life	4	1.5-5	0.844	4.628	.554	-1.638	2.405

It was observed that the Cronbach alpha values of all the sub-dimensions of the coronavirus effect scale were found to be above 0.70. According to the internal consistency coefficients obtained from the scale, it can be said that the reliability of the measurements is high. The validity and reliability analyses demonstrated that the scale is a valid and reliable tool for measuring the effects of coronavirus. The average scores of participants from the Coronavirus Impact Scale sub-dimensions were determined to be over 3, except for the *economic condition* dimension (2,624). It is understood that individuals have an awareness of the ongoing pandemic process and are affected in many different ways, such as psychology and belief. In addition,

among the lower dimensions of the scale, participants had highest value in the *awareness about the virus* dimension with an average of 4.809, and the participants had a knowledge about the Covid-19.

As can be seen in Table 5, the married individuals and females were found to have higher levels of awareness of the virus than the unmarried individuals and males, respectively. The participants who spent the social isolation process with their friends were found to have lower awareness of the virus compared to the ones who spent this period with their families and other groups ( $p < 0.05$ ). There was no statistically significant difference in other groups in terms of awareness about the virus ( $p > 0.05$ ).



Table 5. Comparison of awareness about the virus dimension according to demographic variables

Variables	n	Mean	SD	Test Value	p
Gender					
1.Male	539	4.767	.317	t=-3.736	.000
2.Female	1556	4.824	.266		
Marital Status					
1.Married	871	4.825	.275	t=2.174	.030
2.Not Married	1224	4.798	.285		
Age (Year)					
1.-20	321	4.788	.271	F=2.250	.061
2.21-30	930	4.798	.291		
3.31-40	445	4.818	.277		
4.41-50	276	4.844	.262		
5.51+	123	4.836	.276		
Job					
1.State Official	618	4.815	.275	F=1.039	.402
2.Worker	89	4.846	.256		
3.Shopkeeper	33	4.828	.290		
4.Student	727	4.789	.288		
5.Housewife	137	4.833	.259		
6.Retired	35	4.838	.230		
7.Unemployed	93	4.811	.248		
8.Other	363	4.815	.300		
Education Level					
1.Primary Education	81	4.849	.260	F=1.149	.331
2.Secondary School	256	4.798	.272		
3.Associate Degree	279	4.825	.289		
4.Bachelor's Degree	1227	4.810	.276		
5.Postgraduate Degree	252	4.787	.311		
Income Group					
1.Lower Income Group	362	4.791	.302	F=1.579	.206
2.Middle Income Group	1677	4.812	.278		
3.High Income Group	55	4.854	.215		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1927	4.811	.279	F=3.003 1<2-4	.029
2.Friends	40	4.679	.366		
3.Alone	100	4.823	.279		
4.Other	28	4.797	.249		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	146	4.792	.300	F=.605	.727
2.I work from home.	490	4.804	.290		
3.I got fired.	17	4.833	.276		
4.I took leave without pay voluntarily.	13	4.923	.231		
5.We are working in rotation.	116	4.847	.274		
6.I had no job before the process.	499	4.801	.278		
7.I was made to leave without pay.	69	4.797	.303		
8.Other	745	4.814	.273		
Total		100			

**Table 6. Comparison of psychological status dimension according to demographic variables**

Variables	n	mean	SD	Test Value	p
Gender					
1.Male	549	2.903	1.055	t=-11.328	,000
2.Female	1566	3.478	1.009		
Marital Status					
1.Married	875	3.278	1.043	t=-1.867	,062
2.Not Married	1240	3.364	1.057		
Age (Year)					
1.-20	333	3.318	1.110	F=4.698 5<1-2-3-4	,001
2.21-30	933	3.394	1.048		
3.31-40	447	3.359	1.005		
4.41-50	278	3.211	1.044		
5.51+	124	3.013	1.038		
Job					
1.State Official	619	3.323	1.015	F=1.193	,303
2.Worker	91	3.170	1.086		
3.Shopkeeper	33	3.338	1.230		
4.Student	739	3.363	1.053		
5.Housewife	137	3.386	1.118		
6.Retired	36	3.250	1.107		
7.Unemployed	94	3.505	1.105		
8.Other	366	3.247	1.037		
Education Level					
1.Primary Education	83	3.232	1.142	F=1.391	,235
2.Secondary School	261	3.260	1.114		
3.Associate Degree	281	3.316	1.069		
4.Bachelor's Degree	1236	3.370	1.040		
5.Postgraduate Degree	254	3.240	,991		
Income Group					
1.Lower Income Group	368	3.458	1.086	F=4.315 3<1	,013
2.Middle Income Group	1691	3.308	1.039		
3.High Income Group	55	3.112	1.143		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1946	3.330	1.056	F=1.409	,238
2.Friends	40	3.412	1.096		
3.Alone	101	3.369	,946		
4.Other	28	2.940	1.004		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	149	3.012	1.106	F=3.358 1<2-5-6-8	,003
2.I work from home.	491	3.344	,998		
3.I got fired.	17	2.941	1.318		
4.I took leave without pay voluntarily.	13	3.384	1.063		
5.We are working in rotation.	117	3.276	1.038		
6.I had no job before the process.	505	3.311	1.066		
7.I was made to leave without pay.	70	3.388	1.030		
8.Other	753	3.403	1.054		
Total		100			

Table 7. Comparison of economic condition dimension according to demographic variables

Variables	n	mean	S	Test value	p
Gender					
1.Male	549	2.618	1.348	t=-.137	.891
2.Female	1565	2.627	1.261		
Marital Status					
1.Married	875	2.448	1.204	t=-5.418	.000
2.Not Married	1239	2.749	1.324		
Age (Year)					
1.-20	333	2.711	1.279	F=6.034 3<1-2	.000
2.21-30	932	2.733	1.342		
3.31-40	447	2.398	1.166		
4.41-50	278	2.587	1.285		
5.51+	124	2.477	1.146		
Job					
1.State Official	619	2.082	1.045	F=30.334 1<8 6<2-3-4-5-7-8 4<3 8<3-7	.000
2.Worker	91	3.156	1.220		
3.Shopkeeper	33	3.533	1.164		
4.Student	739	2.789	1.329		
5.Housewife	137	3.013	1.288		
6.Retired	36	2.488	1.203		
7.Unemployed	94	3.289	1.243		
8.Other	365	2.692	1.272		
Education Level					
1.Primary Education	83	3.301	1.385	F=25.569 3<1-2-4-5 2<1-4-5 4<1	.000
2.Secondary School	261	2.870	1.253		
3.Associate Degree	281	3.026	1.328		
4.Bachelor's Degree	1235	2.528	1.265		
5.Postgraduate Degree	254	2.178	1.070		
Income Group					
1.Lower Income Group	368	3.673	1.259	F=173.496 1-2<3	.000
2.Middle Income Group	1690	2.411	1.173		
3.High Income Group	55	2.196	1.241		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1945	2.622	1.276	F=.928	.427
2.Friends	40	2.825	1.354		
3.Alone	101	2.516	1.344		
4.Other	28	2.878	1.496		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	149	2.685	1.228	F=31.632 1-2-6-8<3-4-7 3-7>4	.000
2.I work from home.	490	2.288	1.151		
3.I got fired.	17	4.129	1.176		
4.I took leave without pay voluntarily.	13	3.461	1.141		
5.We are working in rotation.	117	2.311	1.169		
6.I had no job before the process.	505	2.719	1.272		
7.I was made to leave without pay.	70	4.234	1.020		
8.Other	753	2.619	1.278		
Total		100			

In terms of psychological status, it was observed that the females were more negatively affected by the pandemic in psychological terms. The age groups were compared and it was observed that the

individuals aged 51 years and older suffered less stress and anxiety during the pandemic than those aged 40 years and younger. In terms of income level, it was determined that the lower-income group was

psychologically more affected by this period compared to the high-income group. In terms of working status, it was observed that the people who continued to work have been less affected than those who worked from home, did not work before, were made to leave without pay, and in the 'other' group ( $p < 0.05$ ).

In terms of marital status, occupation, education, and individuals with whom the social isolation process was spent together, agreement to the psychological state did not have a statistically significant difference ( $p > 0.05$ ).

As can be seen in Table 7, during the pandemic, it was determined that the unmarried people and the individuals aged 30 years and younger were economically more affected than the married ones and the individuals aged between 31-40 years, respectively ( $p < 0.05$ ). It is understood that individuals up to the age of 30 had more economic difficulties during the pandemic. The underlying reason for this is that individuals up to the age of 30 were either newly employed or looking for a job and were not prepared for such an unexpected period in the economic sense. It was observed that the public officials were economically less affected than all other groups; while retirees were less affected than the shopkeepers, workers, unemployed, housewives, students, and the 'other' group; the 'other' group was less affected than the shopkeepers and the unemployed; and lastly, the students were less affected than the shopkeepers ( $p < 0.05$ ). It was understood that the public official group had the least economic concern and had the least difficulty during the pandemic because they continued to receive their salaries, and subsequently, the retirees, who continued to receive their pensions, were the group that had the second least economic difficulty. Economically the most challenged group was the shopkeepers, who had to close their shops due to the pandemic.

In terms of education level, individuals with an associate degree were economically less affected by the pandemic than those with other levels of education; those with a high school degree (Secondary education) were less affected than those with bachelor's, postgraduate, and primary school (primary education) degrees; and finally, those with a bachelor's degree were less affected than those with

a primary school degree ( $p < 0.05$ ). Based on this, it can be stated that the most economically challenged group was the participants with a primary school degree. In terms of income level, it was revealed that those with lower income had more economic difficulty during the pandemic ( $p < 0.05$ ). Finally, in terms of working status in the social isolation process, individuals who got fired, those who took leave without pay voluntarily, and those who were made to leave without pay were economically more affected than those who had no job before the pandemic, those who continued to work the same way, those who worked from home, those who worked in rotation, and those in the 'other' group ( $p < 0.05$ ).

In terms of gender and persons with whom the social isolation process was spent together, the scores from the economic condition did not have a statistically significant difference ( $p > 0.05$ ).

In Table 8, it was determined that the married individuals and females were more likely to become interested in religious beliefs than the unmarried ones and males, respectively. The age groups of individuals during the pandemic were compared in terms of religious orientation scores and it was observed that while those aged 20 years and younger and those aged 41-50 years were the groups that were most likely to believe, while those aged 21-30 years received lower scores in this regard. It was determined that housewives were the most religious-oriented occupational group.

In terms of education level, it was determined that the lower the education level, the higher the religious orientation; individuals with primary school, high school, and associate degrees had higher scores than the ones with bachelor's and postgraduate degrees, and the ones with a primary school degree got the highest scores. It was found that the individuals who spent the social isolation process with their families had more religious orientation when compared with the other groups.

Finally, it was observed that those who were made to leave their jobs without any payment during the pandemic received lower scores than the other groups in terms of religious orientation ( $p < 0.05$ ). The income group variable did not cause a difference in terms of religious orientation ( $p > 0.05$ ).

Table 8. Comparison of tendency towards belief dimension according to demographic variables

Variables	n	mean	S	Test value	p
Gender					
1.Male	549	3.155	1.351	t=-4.538	.000
2.Female	1566	3.457	1.340		
Marital Status					
1.Married	875	3.548	1.320	t=4.877	.000
2.Not Married	1240	3.259	1.357		
Age (Year)					
1.-20	333	3.828	1.159	F=17.078 1-4>2 3-5<1	.000
2.21-30	933	3.166	1.379		
3.31-40	447	3.380	1.358		
4.41-50	278	3.575	1.291		
5.51+	124	3.325	1.344		
Job					
1.State Official	619	3.299	1.319	F=13.772 5>1-2-3-6-7-8	.000
2.Worker	91	3.419	1.418		
3.Shopkeeper	33	3.363	1.499		
4.Student	739	3.526	1.259		
5.Housewife	137	4.161	1.123		
6.Retired	36	2.925	1.286		
7.Unemployed	94	3.258	1.455		
8.Other	366	2.989	1.437		
Education Level					
1.Primary Education	83	4.339	1.004	F=29.183 1-4-5>2-3 1>4-5	.000
2.Secondary School	261	3.864	1.218		
3.Associate Degree	281	3.605	1.203		
4.Bachelor's Degree	1236	3.190	1.376		
5.Postgraduate Degree	254	3.231	1.309		
Income Group					
1.Lower Income Group	368	3.442	1.387	F=.917	.400
2.Middle Income Group	1691	3.370	1.334		
3.High Income Group	55	3.200	1.535		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1946	3.426	1.334	F=10.503 1>4	.000
2.Friends	40	3.054	1.441		
3.Alone	101	2.762	1.388		
4.Other	28	2.791	1.409		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	149	3.634	1.287	F=6.658 7<1-2-3-4-5-8	.000
2.I work from home.	491	3.161	1.376		
3.I got fired.	17	3.372	1.671		
4.I took leave without pay voluntarily.	13	3.025	1.711		
5.We are working in rotation.	117	3.269	1.396		
6.I had no job before the process.	505	3.465	1.318		
7.I was made to leave without pay.	70	2.797	1.471		
8.Other	753	3.490	1.299		
Total		100			

**Table 9. Comparison of positive thinking dimension according to demographic variables**

Variables	n	mean	S	Test value	p
Gender					
1.Male	549	4.078	.935	t=1.870	.062
2.Female	1566	3.986	1.016		
Marital Status					
1.Married	875	4.109	.930	t=3.942	.000
2.Not Married	1240	3.939	1.035		
Age (Year)					
1.-20	333	3.924	1.112	F=4.560 1<4-5 2-3<5	.001
2.21-30	933	3.976	1.020		
3.31-40	447	3.978	.957		
4.41-50	278	4.176	.851		
5.51+	124	4.235	.852		
Job					
1.State Official	619	4.072	.883	F=2.743 1-2-3-5>8 2-3>4-7	.008
2.Worker	91	4.178	1.034		
3.Shopkeeper	33	4.340	.953		
4.Student	739	3.961	1.034		
5.Housewife	137	4.125	1.094		
6.Retired	36	4.180	.750		
7.Unemployed	94	3.888	1.021		
8.Other	366	3.901	1.048		
Education Level					
1.Primary Education	83	4.313	.916	F=9.505 2-4<1-5	.000
2.Secondary School	261	3.919	1.156		
3.Associate Degree	281	4.234	.906		
4.Bachelor's Degree	1236	3.928	1.006		
5.Postgraduate Degree	254	4.151	.805		
Income Group					
1.Lower Income Group	368	3.896	1.093	F=3.588 1<3	.028
2.Middle Income Group	1691	4.028	.973		
3.High Income Group	55	4.190	.980		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1946	4.007	.999	F=.119	.949
2.Friends	40	4.037	.939		
3.Alone	101	4.012	.965		
4.Othe	28	4.116	.991		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	149	4.187	1.036	F=1.037	.399
2.I work from home.	491	3.987	.955		
3.I got fired.	17	3.955	1.076		
4.I took leave without pay voluntarily.	13	4.173	.793		
5.We are working in rotation.	117	4.068	.944		
6.I had no job before the process.	505	3.980	1.012		
7.I was made to leave without pay.	70	3.932	.971		
8.Other	753	4.005	1.014		
Total		100			

**Table 10. Comparison of improvement in self-perception dimension according to demographic variables**

Variables	n	mean	S	Test value	p
Gender					
1.Male	549	3.192	1.137	t=-.826	.409
2.Female	1566	3.238	1.108		
Marital Status					
1.Married	875	3.176	1.084	t=-1.750	.080
2.Not Married	1240	3.261	1.136		
Age (Year)					
1.-20	333	3.530	1.131	F=7.899 1>2-3-4-5	.000
2.21-30	933	3.176	1.132		
3.31-40	447	3.115	1.100		
4.41-50	278	3.200	1.043		
5.51+	124	3.241	1.036		
Job					
1.State Official	619	3.172	1.043	F=4.764 4>3	.000
2.Worker	91	3.258	1.224		
3.Shopkeeper	33	2.803	1.049		
4.Student	739	3.391	1.123		
5.Housewife	137	3.226	1.158		
6.Retired	36	2.953	.873		
7.Unemployed	94	3.010	1.223		
8.Other	366	3.097	1.132		
Education Level					
1.Primary Education	83	3.317	1.099	F=12.183 5>1-2-3-4	.000
2.Secondary School	261	3.323	1.166		
3.Associate Degree	281	3.610	1.148		
4.Bachelor's Degree	1236	3.118	1.101		
5.Postgraduate Degree	254	3.198	.997		
Income Group					
1.Lower Income Group	368	3.205	1.208	F=.087	.917
2.Middle Income Group	1691	3.231	1.094		
3.High Income Group	55	3.209	1.143		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1946	3.235	1.113	F=.521	.668
2.Friends	40	3.158	1.035		
3.Alone	101	3.120	1.185		
4.Other	28	3.095	1.151		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	149	3.272	1.133	F=2.291 7<1-2-3-4-5-6-8	.033
2.I work from home.	491	3.151	1.035		
3.I got fired.	17	3.352	1.547		
4.I took leave without pay voluntarily.	13	3.333	.917		
5.We are working in rotation.	117	3.300	1.103		
6.I had no job before the process.	505	3.163	1.158		
7.I was made to leave without pay.	70	2.950	1.183		
8.Other	753	3.317	1.116		
Total		100			

As can be seen in Table 9, it was found that the married individuals relaxed during the pandemic by thinking more positively than the unmarried individuals. In terms of age groups, individuals in the older age group thought more positively during the

pandemic when compared with the other individuals and could relax in this way. In the previous findings, the fact that the individuals aged 51 years and older received lower scores in terms of psychological status, i.e. had less negative psychological state when

compared with the other groups also supports this finding. The participants' scores on positive thinking were compared in terms of occupation and it was found that the shopkeepers, workers, housewives,

and officials had higher scores in positive thinking than the 'other' group; and the shopkeepers and workers had higher scores than the unemployed and the students.

**Tablo 11. Comparison of improvement in philosophy of life dimension according to demographic variables**

Variables	n	mean	S	Test value	p
Gender					
1.Male	522	4.497	.628	t=-5.734	.000
2.Female	1524	4.670	.519		
Marital Status					
1.Married	846	4.606	.561	t=-1.492	.136
2.Not Married	1200	4.643	.550		
Age (Year)					
1.-20	327	4.714	.478	F=8.610 4-5<1-2 1>3	.000
2.21-30	906	4.672	.524		
3.31-40	432	4.561	.591		
4.41-50	264	4.545	.624		
5.51+	117	4.480	.599		
Job					
1.State Official	598	4.555	.566	F=5.101 2-5>1-6-8 4>6-8	.000
2.Worker	87	4.750	.471		
3.Shopkeeper	32	4.656	.653		
4.Student	718	4.688	.511		
5.Housewife	134	4.746	.499		
6.Retired	35	4.500	.559		
7.Unemployed	91	4.620	.608		
8.Other	351	4.567	.610		
Education Level					
1.Primary Education	78	4.660	.587	F=5.163 3<4-5	.000
2.Secondary School	254	4.717	.488		
3.Associate Degree	279	4.700	.496		
4.Bachelor's Degree	1200	4.609	.574		
5.Postgraduate Degree	235	4.528	.552		
Income Group					
1.Lower Income Group	353	4.633	.582	F=.047	.954
2.Middle Income Group	1639	4.628	.548		
3.High Income Group	53	4.608	.579		
Persons Together in the Social Isolation Process					
1.Family (Parents. husband/wife. children)	1888	4.633	.551	F=.935	.423
2.Friends	37	4.527	.567		
3.Alone	94	4.563	.583		
4.Other	27	4.592	.650		
Working Status in The Social Isolation Process					
1.I continue to work the same way.	146	4.522	.598	F=4.449 1-2<6-8	.000
2.I work from home.	472	4.538	.594		
3.I got fired.	15	4.600	.603		
4.I took leave without pay voluntarily.	13	4.750	.420		
5.We are working in rotation.	113	4.626	.519		
6.I had no job before the process.	491	4.674	.536		
7.I was made to leave without pay.	65	4.642	.522		
8.Other	731	4.673	.532		
Total		100			



Based on this, it was found that shopkeepers and workers tended to relax by thinking more positively in general when compared with the other groups. According to education level, individuals with bachelor's and high school degrees received lower scores than the ones with postgraduate and primary school degrees. Finally, individuals in the higher-income group think more positively than the ones in the lower-income group during the pandemic ( $p < 0.05$ ).

The variables of gender, persons with whom the social isolation process was spent together, and the working status did not cause any difference in positive thinking ( $p > 0.05$ ).

When the age groups of participants were compared in terms of scores of improvement in self-perception, it was observed that the individuals aged 20 and younger had higher average scores than the other groups did. In terms of changes in self-perception, students scored higher when compared with the shopkeepers. It is thought that the underlying reason for this finding may be because the shopkeepers closed their businesses and experienced economic difficulties during the pandemic. In terms of change in self-perception, the scores of individuals with a postgraduate degree were higher than those with other educational backgrounds. It can be stated that the awareness levels of individuals with a postgraduate degree increased during the pandemic and experienced positive developments. Finally, those who were made to leave without any payment during the pandemic were found to have lower scores on the change in self-perception when compared with the other groups. Here again, it was observed that the individuals who were unexpectedly forced to take leave during the pandemic and had many concerns about how to go through the period because they could not receive wages had low levels of self-perception improvement ( $p < 0.05$ ).

In terms of change in self-perception, variables of gender, marital status, income level, and persons with whom the social isolation process was spent together did not cause any difference ( $p > 0.05$ ).

The agreement scores for the improvement in the philosophy of life dimension, the details of which are given in Table 11, were compared according to the variables and it was observed that the females experienced more improvement in the philosophy of life during the pandemic than the males did. The participants' age groups were compared in terms of

the scores for the improvement in the philosophy of life dimension and it was determined that the younger the age, the higher the improvement in the philosophy of life and this improvement occurred in the group of individuals aged 20 years and younger the most. The scores of the participants for the improvement in the philosophy of life dimension were compared according to their occupations and it was observed that the workers and housewives had higher scores than officials, retirees, and the 'other' group did; and the students had higher scores than the retirees and the 'other' group. The improvement in the philosophy of life dimension was compared in terms of education levels and it was found that those with bachelor's and postgraduate degrees scored higher than those with associate degrees. In terms of working status, it was also observed that those who continued to work in the same way and worked from home were the groups with relatively the least change in the philosophy of life ( $p < 0.05$ ).

There was no significant difference in the philosophy of life concerning the variables of marital status, income level, and persons with whom the social isolation process was spent together ( $p > 0.05$ ).

## DISCUSSION

The pandemic process, which was covered in this study, has emerged unexpectedly, leading to significant changes in people's lives. The measures taken to prevent the spread of the virus resulted in staying home for long periods, and being unable to see the loved ones and to work, ultimately bringing about changes and transformations in social structures. With Covid-19, the lives of individuals were so shaken that they were affected both psychologically and socially. Aşkın and her friends<sup>29</sup> described the pandemic process as "existential crisis of humankind" that shook the balances on individual, social and economic bases. In the study conducted by Bostan et al.<sup>30</sup> during the period when the pandemic was most common, it was revealed that covid-19 had important effects on the Turkish people. In this context, as mentioned earlier, the Covid-19 pandemic was treated as a trauma within the scope of the research and what kind of transformations this trauma caused in people was investigated.

The research aimed to examine the impact of the pandemic process on Turkish people and develop a scale within this framework. In this context, since the Covid-19 pandemic was continuing during all steps

of the research and there were many restrictions on going out that were still in effect, the data used in the study were obtained online through a developed scale. The Coronavirus Effect Scale, which consisted of 7 dimensions and 37 questions, was obtained as a result of the study initially conducted on 300 people, and subsequently on 2115 people. It would be correct to express the dimensions of the Coronavirus Effect Scale in the following order;

1. Awareness About the Virus Dimension
2. Psychological Status Dimension
3. Economic Condition Dimension
4. Tendency Towards Belief Dimension
5. Positive Thinking Dimension
6. Improvement in the Self-Perception Dimension
7. Improvement in the Philosophy of Life Dimension

The dimensions of the scale in this order indicate the impact of coronavirus pandemic trauma on individuals. That is to say, within the scope of the scale, under the “awareness of the virus” dimension, awareness levels of individuals were measured on issues such as whether they had any basic knowledge of Covid-19, what kind of a disease it causes, and how fast it is transmitted. Under the “psychological status dimension”, the impacts of the pandemic on the psychological states of people, and the level of stress and anxiety caused by the pandemic were examined. In the “economic condition dimension”, the impacts of the pandemic on people in the economic sense and the economic concerns and difficulties experienced were discussed. In the “tendency towards belief dimension”, the individuals were examined for situations such as praying and worshipping, i.e. the ways of relieving that they resort to during the pandemic, and getting closer to Allah and strengthening of faith in the period that may emerge as a result of these. The “positive thinking dimension” was examined as another way of coping with the trauma, and it was discussed that people within the scope of the dimension were able to survive the period with an optimistic attitude by keeping their morale high during the period. While naming the “improvement in self-perception dimension”, the name of the *change in the self-perception dimension*, which is one of the post-traumatic growth dimensions of Calhoun and Tedeschi<sup>14</sup>, was taken as reference. The dimension addresses the fact that people feel stronger with the pandemic trauma, that their awareness of themselves increases, and that the period matures them at this point. The final

dimension, “improvement in the philosophy of life”, which took its name from the *change in the philosophy of life* dimension of Calhoun and Tedeschi<sup>14</sup> that was among the dimensions of post-traumatic growth, discusses, based on the trauma of the Covid-19 pandemic, the emergence of positive improvements in the approaches of individuals to life, resulting in positive transformations in understanding the value of the moment, life, and health.

At this point, as a result of the analyses of the data obtained in the study, it was understood that the participants had knowledge of the symptoms of the Coronavirus disease, how it is transmitted, and ways of protection, etc. In the study of Bostan et al.<sup>30</sup>, it was also seen that the sensitivity of the people about coronavirus pandemic was very high and necessary care was taken for protection. It was also understood from the findings that the current Covid-19 pandemic process has significant effects on the psychologies of individuals. In the study of Rajkumar<sup>31</sup>, which was revealed as a result of Covid-19 and the existing literature on mental health, it was revealed that the pandemic process caused negative psychological conditions such as stress, depression and anxiety in individuals. In this context, people become stressed and feel helpless due to the lack of clear information on how the pandemic will proceed. At the same time, people become worried that they and those around them may die from the virus. The fact that the pandemic was so full of uncertainties and that it has suddenly appeared has traumatized people. At certain points, it causes people to think that they are infected with the virus even in the slightest cough, leading to even the point of psychological obsession. The study also found that the females, the young, middle-aged people, and the socioeconomically lower-income group were affected more negatively by the pandemic in psychological terms. In the study conducted by Cao et al.<sup>32</sup> On the undergraduate students studying at the medical school in China, the level of anxiety related to the pandemic of the participants was high. In addition, while the female participants in the study were found to have higher levels of anxiety than men, the fact that having a regular family income was seen as a protective factor against anxiety, and the findings support the research findings. Again, in a study conducted by Wang and his friends<sup>33</sup>, it was revealed that students, that is, young people and women, were psychologically more affected by the pandemic process and that people were concerned about their family members. The Covid-19 pandemic has economic impacts as well as

its psychological impacts. The pandemic, which caused many people to be unable to go to work in an unexpected way, caught them economically unprepared. As stated in the report of the United Nations<sup>34</sup>, the pandemic process caused global job losses in a very short time. At this point, in the scope of the study, especially the shopkeepers who had to close their shops, those who were discharged from their jobs without any payment, and those who got fired were hard-pressed economically and had difficulty in affording their payments during the pandemic. Medium and long-term sustainable plans should be made under the leadership of strong leaders and governments in order to balance and revive the economy, as mentioned by Nicola and her friends<sup>35</sup> in pandemic processes that have socioeconomic effects such as this and that.

People can deal with these kinds of psychological and economic difficulties during the pandemic through positive thinking. At this point, within the scope of the study, believing that life would return to normal, keeping their morale high, and having positive thoughts enabled people to fight this period and relax. People in the higher-income group and those in the higher age group tended to think more positively. At this point, it was observed that the groups that were negatively affected by the pandemic and the positive-minded groups were inversely correlated. It can be stated that individuals who tended to think positively during the pandemic were less damaged from the period psychologically. Arslan et al.<sup>36</sup> also found that optimism reduces the effects of coronavirus-related stress on the mental health of their study. There are also spiritual elements as another way of relief in the current traumatic period. People prefer to overcome this difficult period by praying and worshipping. At this point, in addition to the use of religious orientation to deal with the trauma period, the challenging process has also contributed to people in understanding the importance of faith. In the study of Gashi<sup>37</sup> on the people who have caught and survived the coronavirus, it was revealed that the participants used religious coping methods such as prayer, patience, and worship in overcoming this difficult process.

Covid-19 pandemic, which is considered as trauma within the scope of the research, can cause adverse effects such as posttraumatic stress disorder in people<sup>38,39</sup>. However, this research has been put forward considering that it may also be possible for people to cope with the traumatic event and enter the

development process. As a result of the research, it has been seen that; the participants' philosophies of life have improved highly during the current pandemic. The pandemic, which emerged unexpectedly and seriously changed people's lives, has led to the development of a mindset in people's philosophies of life that anything can happen at any time. In these days when it is not known when life will return to its normal course, people have once again understood how precious each moment is and the value of life. Also, situations such as the fear of contracting the deadly disease caused by the Covid-19 pandemic, the fact that the number of people dying from the disease was heard everywhere every day, etc., have contributed to people's understanding of the value of health. It was also understood that the participants experienced positive changes in their self-perceptions. The current difficult period has enabled people to realize their power by increasing their awareness of themselves. The long-term period of the pandemic has helped people to mature, and it was understood that people have become more moderate and optimistic. At this point, it was also understood that the young and those with higher educational levels experienced more improvement in their self-perceptions and philosophy. Similarly, in a study in which the effects of SARS epidemic on individuals were examined, it was found that in addition to negative effects, the epidemic allowed individuals to strengthen their family and friendship relationships, adopt a healthier lifestyle and experience spiritual development<sup>40</sup>.

Finally, it should be stated that; since the research was conducted in the pandemic process, the data were collected electronically, face-to-face interviews were not provided with the participants and this was the limitation of the research. As another constraint, while the issue of post-traumatic growth can be detected in more ways after circumventing, since the application process of the research took place within the pandemic process, information regarding any dimension in post-traumatic growth could not be obtained.

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## REFERENCES

1. CDC (Centers for Disease Control and Prevention). Situation summary 2020. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html> (accessed April 2020).
2. WHO. 2020. <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses> (accessed April 2020).
3. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72 314 cases from the Chinese center for disease control and prevention. *JAMA*. 2020;323:1239-1242.
4. WHO. WHO Virtual press conference on COVID-19. March 11, 1-17, 2020. [https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-and-final-11mar2020.pdf?sfvrsn=cb432bb3\\_2](https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-and-final-11mar2020.pdf?sfvrsn=cb432bb3_2) (accessed April 2020).
5. Qiu W, Rutherford S, Mao A, Chu C. The pandemic and its impacts. *Health, Culture and Society*, 2017;9:1-11.
6. Bootsma MCJ, Ferguson NM. The effect of public health measures on the 1918 influenza pandemic in U.S. cities. *Proc Natl Acad Sci*. 2007;104:7588-93.
7. Smith RD, Keogh-Brown MR, Barnett T, Tait J. The economy-wide impact of pandemic influenza on the UK: A computable general equilibrium modelling experiment. *BMJ*. 2009;339:1-7.
8. Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Kobinger G, Ungchusak K. COVID-19: towards controlling of a pandemic. *Lancet*. 2020;1015-18.
9. WHO. Coronavirus disease 2019 (COVID-19): situation report. 2020. (accessed April 2020).
10. Wu JT, Riley S, Leung GM. Reducing the impact of the next influenza pandemic using household-based public health interventions. *Hong Kong Med J*. 2009;15:38-41.
11. Tedeschi RG, Calhoun LG. *Trauma and Transformation: Growing in The Aftermath of Suffering*. Thousand Oaks, CA Sage, 1995.
12. Calhoun LG, Tedeschi RG. The Foundations of Posttraumatic Growth: An Expanded Framework. In *Handbook of Posttraumatic Growth* (Eds. LG Calhoun, RG Tedeschi): 1-23. London, Lawrence Erlbaum Associates, 2006.
13. APA (American Psychiatric Association). *Amerikan Psikiyatri Birliği: Mental Bozuklukların Tanısal ve Sayımsal El Kitabı*, 4. Ed, (DSM-4) (Trans. E Köroğlu). Ankara, Hekimler Yayın Birliği, 1994.
14. Calhoun LG, Tedeschi RG. *Facilitating Posttraumatic Growth: A Clinician's Guide*. Charlotte, Routledge, 1999.
15. Linley PA, Joseph S. Positive change following trauma and adversity: A review. *J Trauma Stress*. 2004;17:11-21.
16. Tedeschi RG, Calhoun LG. Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychol Inq*. 2004;15:1-18.
17. Tedeschi RG, Calhoun LG. The posttraumatic growth inventory: measuring the positive legacy of trauma. *J Trauma Stress*. 1996;9:455-471.
18. T.C. Sağlık Bakanlığı-Halk Sağlığı Genel Müdürlüğü. COVID-19 (SARS-Cov-2 enfeksiyonu) rehberi-bilim kurulu çalışması. Ankara: 2020. [https://covid19bilgi.saglik.gov.tr/depo/rehberler/COVID-19\\_Rehberi.pdf](https://covid19bilgi.saglik.gov.tr/depo/rehberler/COVID-19_Rehberi.pdf) (accessed April 2020).
19. T.C. Sağlık Bakanlığı. Türkiye'deki güncel durum. 2020. <https://covid19.saglik.gov.tr/> (accessed April 2020).
20. T.C. İçişleri Bakanlığı. 2020. <https://www.icisleri.gov.tr/haberler-yeni> (accessed April 2020).
21. T.C. Sağlık Bakanlığı. 81 il psikososyal destek hat bilgileri. 2020. <https://covid19bilgi.saglik.gov.tr/tr/destek-hat-bilgileri> (accessed April 2020).
22. Can A. *SPSS ile Bilimsel Araştırma Sürecinde Nicel Veri Analizi*, 6. Ed. Ankara, Pegem Akademi, 2018.
23. TÜİK (Türkiye İstatistik Kurumu). Adrese dayalı nüfus kayıt sistemi sonuçları. 2019. <http://www.tuik.gov.tr/PreHaberBultenleri.do?pid=33705> (accessed July 2020).
24. İzgüden D. Sağlık çalışanlarının hastalık travmalarının yaşamlarındaki dönüştürücü rolü üzerine bir araştırma (Doktora tezi). Isparta, Süleyman Demirel University, 2020.
25. Saleh F, Ryan C. Analysing service quality in the hospitality industry using the SERVQUAL model. *Service Industries Journal*. 1991;11:324-45.
26. Babakus E, Mangold WG. Adapting the SERVQUAL scale to hospital services: an empirical investigation. *Health Serv Res*. 1992;26:767-86.
27. Rubio DM, Berg-Weger M, Tebb SS, Lee ES, Rauch S. Objectifying content validity: Conducting a content validity study in social work research. *Soc Work Res*. 2003;27:94-104.
28. Henson RK, Roberts JK. Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educ Psychol Meas*. 2006;66:393-416.
29. Bozkurt Y, Zeybek Z, Aşkın R. Covid-19 pandemisi: Psikolojik etkileri ve terapötik müdahaleler. *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi*.

- 2020;19:304-18.
30. Bostan S, Erdem R, Öztürk YE, Kılıç T, Yılmaz A. The effect of COVID-19 pandemic on the Turkish society. *Electronic Journal of General Medicine*. 2020;17(6):em237.
31. Rajkumar RP, COVID-19 and mental health: A review of the existing literature. *Asian J Psychiatry*. 2020;1-5.
32. Cao W, Fang Z, Hou G, Han M, Xu X, Dong J et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res*. 2020;112934:1-5.
33. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health*. 2020;17(5):1-25.
34. United Nations. World economic situation and prospects as of mid-2020. [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020\\_MYU\\_Report.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020_MYU_Report.pdf), (accessed July 2020).
35. Nicola M, Alsaifi Z, Sohrabi C, Kerwan A, Al-Jabir A, Iosifidis C et al. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int J Surg*. 2020;78:185-193.
36. Arslan G, Yıldırım M, Tanhan A, Buluş M and Allen KA. Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Coronavirus Stress Measure. *Int J Ment Health Addict*. 2020; doi:10.1007.11469-020-00337-6.
37. Gashi F. Koronavirüse yakalanmış kişilerde tedavi döneminde dini başa çıkmanın etkisi. *Pamukkale Üniversitesi İlahiyat Fakültesi Dergisi*. 2020;7:511-35.
38. Liu N, Zhang F, Wei C, Jia Y, Shang Z, Sun L et al. Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter. *Psychiatry Res*. 2020;287:112921.
39. Liang L, Ren H, Cao R, Hu Y, Qin Z, Li C et al. The effect of COVID-19 on youth mental health. *Psychiatr Q*. 2020;1-12.
40. Lau JT, Yang X, Tsui HY, Pang E, Wing YK. Positive mental health-related impacts of the SARS epidemic on the general public in Hong Kong and their associations with other negative impacts. *J Infect*. 2006;53:114-24.

**APPENDIX**

**THE CORONAVIRUS EFFECT SCALE\***



1	2	3	4	5		
Strongly Disagree				Strongly Agree		
No	Items	1	2	3	4	5
1	I know what the symptoms of Covid-19 are.	1	2	3	4	5
2	COVID-19 affects lungs and causes breathing problems.	1	2	3	4	5
3	I know how Covid-19 spreads.	1	2	3	4	5
4	I know Covid-19 spreads very fast.	1	2	3	4	5
5	I know how to protect myself from Covid-19.	1	2	3	4	5
6	I know the meanings of the words; quarantine, social distance and social isolation.	1	2	3	4	5
7	The pandemic process challenges me economically.	1	2	3	4	5
8	I have financial concerns in this process.	1	2	3	4	5
9	I wasn't prepared for this process economically.	1	2	3	4	5
10	Due to the COVID-19 pandemic I have trouble paying my bills.	1	2	3	4	5
11	Due to the COVID-19 pandemic I am not able to cover all my household expenses.	1	2	3	4	5
12	I think I have coronavirus when I have flu symptoms.	1	2	3	4	5
13	The current situation makes me feel stressed.	1	2	3	4	5
14	The current situation makes me feel helpless.	1	2	3	4	5
15	The current situation makes me think that I will die.	1	2	3	4	5
16	I think my relatives may die during the pandemic.	1	2	3	4	5
17	In this process, the negative comments I hear worry me.	1	2	3	4	5
18	In this process, I am relieved by praying.	1	2	3	4	5
19	In this process, I am relieved by worshipping.	1	2	3	4	5
20	In this process, I am relieved by reading scriptures.	1	2	3	4	5
21	I think that the emergence of coronavirus is a warning of God to us.	1	2	3	4	5
22	Since the pandemic started, praying and worshipping are more important for me than they were in the past.	1	2	3	4	5
23	This process caused my religious beliefs to strengthen.	1	2	3	4	5
24	I feel relieved by thinking that I will return to the good old days after this process.	1	2	3	4	5
25	In this process, I feel relieved by keeping my morale high.	1	2	3	4	5
26	In this process, I feel relieved by thinking that troubled days will pass.	1	2	3	4	5
27	In this process, I feel relieved by thinking positively.	1	2	3	4	5
28	This process made me feel grown-up.	1	2	3	4	5
29	This process made me an optimistic person.	1	2	3	4	5
30	This process made me realise my personal strength.	1	2	3	4	5
31	This process made me a more tolerant person.	1	2	3	4	5
32	During this process, my self-awareness has increased.	1	2	3	4	5
33	In this process, I have developed new relationships.	1	2	3	4	5
34	In this process, I have realised the value of my health.	1	2	3	4	5
35	In this process, I have realised the importance of living the moment.	1	2	3	4	5
36	In this process, I have realised the value of life.	1	2	3	4	5
37	In this process, I have realised that anything can happen in life at any moment.	1	2	3	4	5

## **DIMENSIONS OF CORONAVIRUS EFFECT SCALE**

Awareness of the Virus Dimension: 1, 2, 3, 4, 5, 6

Psychological Situation Dimension: 7, 8, 9, 10, 11

Economical Situation Dimension: 12, 13, 14, 15, 16, 17

Towards Faith Dimension: 18, 19, 20, 21, 22, 23

Thinking Positive Dimension: 24, 25, 26, 27

Development in Self Perception Dimension: 28, 29, 30, 31, 32, 33

Development in Life Philosophy Dimension: 34, 35, 36, 37

\* You can contact the authors to reach the Turkish form of the scale.

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