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The impact of the COVID-19 pandemic on the quality of life and depression, anxiety, and stress levels of individuals above the age of eighteen

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Abstract

Purpose: The aim of this study is to analyze the impact of the COVID-19 pandemic on the quality of life and the depression, anxiety, and stress levels of individuals above the age of eighteen.

Design and Methods: This study used the snowball method. Data were collected using the sociodemographic question form, the Depression, Anxiety, Stress Scale-21, and the SF-12 Life Quality Scale.

Findings: A statistically significant relationship ($p < .05$) was measured between age, gender, health condition, concomitant chronic and mental disease, fear of the COVID-19 pandemic, home confinement in this particular period, and the need for psychological support as well as mean scores of Depression, Anxiety, Stress Scale-21, and SF-12 Life Quality Scale.

Practice Implications: Against the likelihood of facing new pandemics in the future, a guideline could be planned to protect and improve prospective the psychosocial wellness of individuals and society.

KEYWORDS
COVID-19, life quality, mental health, pandemic

1 | BACKGROUND

COVID-19 was first reported on December 31, 2019 in the city of Wuhan in Hubei Province of China, and upon the identification of certain pneumonia cases on January 7, 2020 with an unidentifiable etymology, the outbreak of a novel coronavirus (2019-nCoV), which had never been identified in earlier studies, was declared. Subsequently, the 2019-nCoV terminology for the disease was changed to and recognized as COVID-19.[1] As has been reported in its early stages, COVID-19 spreads via droplets through respiration, respiratory secretion, and direct contact.[2,3] The common symptoms of the infection are respiratory symptoms, fever, cough, dyspnea, and some gastrointestinal symptoms in rare instances. In COVID-19, there is a high risk of developing severe symptoms for the elderly and for those inflicted with underlying diseases

(hypertension, heart diseases, diabetes, liver diseases, and respiratory disorder).[4]

COVID-19 transmits through human contact and there has been a steady rise in the number of infected individuals.[4] As of May 5, 2020, there were a total of 3,442,234 COVID-19 cases on a global scale and 239,740 reported deaths.[5] In Turkey, there were 2600 deaths and a total of 127,659 COVID-19 cases on the same date.[6] As a global health crisis, the COVID-19 pandemic is the widest pneumonic pandemic since severe acute respiratory tract syndrome (SARS) in 2003. The total number of COVID-19 cases and deaths has already outpaced the number of deaths and cases reported for the SARS pandemic.[7]

Upon detecting the first case in Turkey on March 11, the Turkish government took immediate action. Specific actions were put into effect to stop viral spread; travel restrictions began in March and a 14-day quarantine became mandatory for travelers from abroad.

Other measures were put into place, including a mandatory curfew for specific age groups, restricted working hours, distance education in schools, the closing of many businesses, controlled entrance and exit points for severely affected cities and quarantine rules to isolate cities, police checkpoints at city borders, informative public campaigns, and free distribution of masks. Other large-scale measures were enacted since then. As a result of such measures, a large number of citizens were forced to stay at home to be safe from the virus and social distancing became the common practice. In effect, a "desperate" mood arose among people in compulsory isolation.

The rapid spread of the COVID-19 pandemic all over the world triggered a state of fear by causing a serious threat to physical health. It also became imperative to take a closer look at the effects of the pandemic on mental health because, as has been indicated in earlier studies, during such periods, humans experience certain psychosocial impacts, such as arenosophobia (fear of becoming sick), necrophobia (fear of dying), stigmatization, and desperation.[8,9] Researchers have found a correlation between pandemics of acute respiratory tract infection (influenza, SARS, etc.) and mental disorders. People in home confinement and social isolation are likely to experience feelings of anger, loneliness, and boredom. In the early stages of the SARS pandemic, a myriad of psychiatric symptoms such as panic attacks, anxiety, depression, suicidal impulses, delirium, psychomotor agitation, and psychotic signs were reported.[10] Furthermore, stress disorders were detected among home-quarantined, socially isolated individuals.[11] Hence, it was claimed that the mental problems of individuals or communities were due to the COVID-19 pandemic.

Rapidly expanding throughout Turkey and the entire globe, the COVID-19 pandemic has now become a severe threat to public health. During these days when the COVID-19 pandemic is raging, there are not yet any identifiable studies on its psychological impact and mental health consequences in Turkey. Hence, this study is a vanguard in that context, and the aim of this study was to examine the impact of the COVID-19 pandemic on the quality of life and the depression, anxiety, and stress levels of individuals above the age of eighteen.

2 | MATERIALS AND METHODS

2.1 | Study design and sampling

A descriptive and correlational design was used. In the research, a snowball method that focused on people living in Turkey at the outbreak of the COVID-19 pandemic was administered. A web-based survey was designed[12–15] and initially sent to university students who were then asked to re-send the survey to those they knew.

2.2 | Inclusion criteria

The inclusion criteria were as follows:

- Being at age 18 or above.

- All participants should be able to read and write Turkish and be willing to participate and able to give consent.

2.3 | Exclusion criterion

The exclusion criterion was

- Being at age under 18 (two participants were excluded from the study.)

2.4 | Setting

As the Turkish Government recommended that citizens minimize face-to-face interaction by staying at home in an effort to prevent the further spread of the pandemic (with a curfew for those below age 20 and above age 65), researchers of this study had to design a web-based survey to integrate voluntary participants. Answers for the survey questions were collected from online meetings on participants' electronic devices, including desktops or laptop computers, tablets, and mobile devices (via Whatsapp, e-mail, and Instagram).

2.5 | Data collection

This study was conducted among a total of 2037 participants between April 3, 2020 and April 9, 2020, 3 weeks after the first reported case of the COVID-19 virus in Turkey. In the first part of the survey shared with participants, the scope and aim of this study were provided, and it was noted that participation in this study was on a voluntary basis. In the survey, the identity data of the participants were not recorded. The inclusion criteria were as follows: being at age 18 and above and willing to participate in the study. Two participants below the age of 18 were excluded from the study.

As data collection tools, the researchers utilized a "Socio-Demographic Questionnaire Form," the "Depression, Anxiety, Stress Scale-21," and the "SF-12 Life Quality Scale." The average time spent on completing the data collection forms was 5 min.

2.5.1 | Socio-demographic questionnaire form

In the sociodemographic questionnaire form, questions were related to age, gender, marital status, and income level. Other questions were related to aspects such as working/not working in the healthcare profession, continuing/discontinuing professional life, the participant's health condition, the presence of mental or chronic disease, having taken the coronavirus test or knowing someone who had taken the test, and the manner in which coronavirus pandemic has impacted his/her professional life, family and social life, and mental state.[12,16,17]

2.5.2 | SF-12 Life Quality Scale

Designed to measure the quality of life, this scale is based on 12 questions under eight different subdimensions. The SF-36 Life Quality Scale was originally developed by Ware et al. In the SF-12 Life Quality Scale, components of physical function (two items), social function (one item), limitations due to physical problems (two items), limitations due to emotional problems (two items), mental health (two items), energy and fatigue (one item), pain (one item), and overall health perception (one item) are measured. The shorter length of the scale is more convenient for applicability. This scale has a different scoring method from SF-36. In the shorter form SF-12, physical (SF12-PCS) and mental (SF12-MCS) component summary scores are computed as subdimensions. The summary of the total score of the physical and mental component from the scale varies between 0 and 100; the higher the score, the better is the quality of life. In the assessment stage, the participant's last 4 weeks are taken into consideration. In a study by Ware et al.,[18] Cronbach's alpha coefficient of the scale was computed as 0.89. Ataoğlu et al.[19] conducted Turkish language validity and reliability trials of the SF-12 Life Quality Scale and computed the Cronbach's alpha coefficient of the scale as 0.80; thus, the Cronbach's alpha value was measured as 0.80 in this study.

2.5.3 | Depression Anxiety Stress Scale-21

The original version of the Depression, Anxiety, Stress Scale consisted of 42 items and three subscales. In 1995, Lovibond and Lovibond conducted validity and reliability tests and revised the form to get a shorter version with 21 items. The scale has three subdimensions with seven items in the subdimensions of depression, anxiety, and stress. The scale analyzes depression, anxiety, and stress symptoms in the past week through a quattro rating classified as (0) never and (3) always.[20] The higher the score, the more severe is the state of mental disorder. The Turkish language validity and reliability trial of the shorter version of the scale (21 items) was tested with normal and clinical sampling by Sarıçam (2018), and at the end of factor analysis, it became clear that the scale had three subdimensions. In the clinical sampling, these three factors were reported to exhibit a perfect good-fit index value, whereas in the normal sampling, they had a satisfactory good-fit index value. In the *depression subdimension*, the aim was to measure mood states such as pessimism and procrastination in starting a task and feeling of tension, despondency, agony, vanity, low mood, aversion, and loss of meaning in life. The *anxiety subdimension* involved analyzing mood states such as fear, panic, anxiety, and body reactions in the face of such aversions. The *stress subdimension* aimed to measure mood states like feelings of edginess, uneasiness, rage, anger, impatience, and intolerance.[21] In this study, Cronbach's alpha values of the Depression, Anxiety, and Stress scales were, respectively, computed as 0.855, 0.805, and 0.820.

2.6 | Ethical aspect of the research

The Ethics Committee's Approval was received before initiating this study (2020/08). In the web-based form, the objective of this study was stated and participation was conditioned on a voluntary basis. The study was administered in accordance with the principles of the Helsinki Declaration.

2.7 | Data analysis

In the analysis of data collected from the research, the SPSS 24.0 (Statistical Package of Social Sciences for Windows) statistical software program was utilized. Categorical variables used in the analysis were listed as figure (percentage) and continuous variables as mean ± standard deviation. The Kolmogorov–Smirnov and Shapiro–Wilk tests were employed to check if the distribution of continuous variables exhibited a good fit with a normal distribution. The data were reported to display normal distribution. For statistical computations among independent groups, t-test, one-way variance analysis (ANOVA), and Pearson correlation tests were executed. To find internal consistency, Cronbach's alpha was computed. Statistical significance level was accepted as $p < .05$.

3 | FINDINGS

The mean age was computed as 27.70 ± 9.28 in this study.

It was reported that 54.1% of the research participants belonged to the 20–29 age range, 73.0% were female, 33.6% were healthcare personnel, 46.7% held a bachelor's degree, 68.1% were single, 49.1% had an income level equal to their expenses, 18.4% no longer continued their work due to the COVID-19 pandemic, 54.2% considered their health condition good, 12.3% had a chronic disorder, and 7.4% have one or more than one mental disorders (Table 1).

A statistically significant relationship was detected between the participants' age, gender, health condition, concomitant chronic and mental disorders, and the "depression, anxiety, stress" levels and quality of life ($p < .05$). The mean scores of the scales were computed as follows: SF-12 life quality "physical component": 73.00 ± 20.36, "mental component": 52.41 ± 24.99, depression: 5.62 ± 4.20, anxiety: 3.45 ± 3.16, and stress: 5.68 ± 3.84 (Table 1).

For the research participants, a state of fear due to the COVID-19 pandemic and the impact of temporary home confinement on their mental health and need for psychological support were reported to have maintained a statistically significant relationship ($p < .05$) with "depression, anxiety, stress" levels, and quality of life (Table 2).

A total of 56.0% of research participants reported that due to the pandemic, they were glad to spend more time with family members, 58.0% reported that during this period they felt most affected by distancing from their workplace/school, 47.2% reported that the possibility of catching the virus most affected their mental

TABLE 1 A comparison of sociodemographic and health condition features and SF-12 life quality and depression, anxiety, stress levels of research participants (n = 2037)

| | | Depression, Anxiety, and Stress Scale | | | SF-12 Life quality | |
| | | Depression | Anxiety | Stress | PCS | MCS |
	n (%)	X̄ ± SD	X̄ ± SD	X̄ ± SD	X̄ ± SD	X̄ ± SD
Age						
18–19 age range	231 (11.3)	5.63 ± 4.03	3.11 ± 2.86	5.79 ± 3.84	74.51 ± 20.01	55.91 ± 24.49
20–29 age range	1103 (54.1)	6.01 ± 4.31	3.65 ± 3.21	5.94 ± 3.92	72.89 ± 20.01	48.26 ± 24.21
30–39 age range	454 (22.3)	5.38 ± 4.25	3.56 ± 3.40	5.58 ± 3.94	74.24 ± 20.46	54.64 ± 25.20
40–49 age range	176 (8.6)	4.35 ± 3.21	2.74 ± 2.69	4.78 ± 2.88	71.42 ±;19.85	63.10 ± 24.01
≥50 age	73 (3.6)	4.10 ± 3.82	2.43 ± 2.44	4.27 ± 3.26	66.09 ± 25.52	64.46 ± 24.75
Significance[*]		**p = .001**	**p = .001**	**p = .001**	**p = .014**	**p = .001**
Gender						
Female	1486 (73.0)	5.85 ± 4.25	3.76 ± 3.27	6.04 ± 3.90	71.46 ± 20.78	49.90 ± 24.68
Male	551 (27.0)	4.98 ± 4.00	2.62 ± 2.68	4.70 ± 3.48	77.18 ± 18.58	59.18 ± 24.59
Significance[**]		**p = .001**	**p = .001**	**p = .001**	**p = .001**	**p = .001**
Are you a healthcare personnel?						
No	1353 (66.4)	5.24 ± 4.06	3.15 ± 2.94	5.33 ± 3.73	73.19 ± 20.22	54.69 ± 24.86
Nurse	386 (18.9)	6.43 ± 4.39	4.25 ± 3.64	6.57 ± 4.01	72.84 ± 20.23	45.66 ± 25.05
Doctor	33 (1.6)	6.66 ± 4.80	4.30 ± 4.27	6.75 ± 3.69	79.79 ± 20.22	49.88 ± 23.86
ATT[a] (Emergency staff)	64 (3.1)	7.12 ± 4.76	3.90 ± 2.96	6.40 ± 3.67	70.31 ± 22.43	50.05 ± 23.96
Other healthcare personnel[a]	201 (9.9)	5.90 ± 4.13	3.64 ± 3.18	5.90 ± 3.99	71.80 ± 20.79	51.18 ± 23.94
Significance[*]		**p = .001**	**p = .001**	**p = .001**	p = .228	**p = .001**
Education level						
Literate	118 (5.8)	6.41 ± 4.83	3.72 ± 3.52	6.11 ± 3.99	68.64 ± 21.42	48.18 ± 24.99
Elementary school	53 (2,6)	4.47 ± 3.98	3.01 ± 2.59	4.83 ± 4.32	71.14 ± 18.59	60.97 ± 24.99
High school	623 (30.6)	5.75 ± 4.21	3.36 ± 2.91	5.86 ± 3.88	73.13 ± 19.97	53.86 ± 25.27
Bachelor's degree	952 (46.7)	5.54 ± 4.07	3.48 ± 3.14	5.62 ± 3.75	73.38 ± 20.07	51.01 ± 24.57
Master's degree	291 (14.3)	5.45 ± 4.32	3.49 ± 3.67	5.46 ± 3.87	73.63 ± 21.88	54.04 ± 24.99
Significance[*]		**p = .047**	p = .629	p = .155	p = .166	**p = .003**
Marital status						
Married	649 (31.9)	5.81 ± 4.21	3.52 ± 3.32	5.56 ± 3.74	71.64 ± 21.60	50.71 ± 24.53
Single	1388 (68.1)	5.20 ± 4.15	3.41 ± 3.09	5.74 ± 3.88	73.64 ± 19.73	56.04 ± 25.60
Significance[**]		**p = .003**	p = .469	p = .326	**p = .038**	**p = .001**
Income level statement						
Income below expenses	661 (32.4)	6.01 ± 4.23	3.56 ± 3.20	5.96 ± 3.93	70.30 ± 21.04	50.15 ± 24.71
Income equal to expenses	1001 (49.1)	5.51 ± 4.12	3.48 ± 3.12	5.68 ± 3.79	73.83 ± 19.96	52.74 ± 25.34
Income above expenses	375 (18.4)	5.21 ± 4.31	3.17 ± 3.22	5.19 ± 3.76	75.56 ± 19.74	55.51 ± 24.21
Significance[*]		**p = .006**	p = .139	**p = .008**	**p = .001**	**p = .003**
Continuing/discontinuing professional life						
Not working	944 (46.3)	5.66 ± 4.20	3.30 ± 2.92	5.71 ± 3.83	72.06 ± 20.18	51.73 ± 25.03
Still working	448 (22.0)	5.99 ± 4.43	4.06 ± 3.61	6.09 ± 4.06	75.01 ± 20.18	51.74 ± 25.93
Not working due to COVID-19 pandemic	375 (18.4)	5.36 ± 4.02	3.22 ± 3.07	5.45 ± 3.73	72.55 ± 20.91	53.80 ± 24.03
Working in a flexible schedule	148 (7.3)	5.31 ± 3.95	3.39 ± 3.42	5.32 ± 3.53	71.76 ± 21.91	54.29 ± 24.56
Working at home	122 (6.0)	5.10 ± 4.04	3.15 ± 2.99	5.07 ± 3.62	75.88 ± 18.14	53.58 ± 24.64
Significance[*]		p = .108	**p = .001**	**p = .029**	**p = .048**	p = .511
Health condition						
Good	1105 (54.2)	4.68 ± 3.88	2.61 ± 2.70	4.74 ± 3.51	79.85 ± 16.92	58.37 ± 23.95
Average	889 (43.6)	6.51 ± 4.17	4.30 ± 3.26	6.64 ± 3.82	65.82 ± 20.45	46.04 ± 24.07
Bad	43 (2.1)	11.18 ± 4.47	7.34 ± 4.43	9.86 ± 4.70	45.63 ± 25.39	31.04 ± 26.28
Significance[*]		**p = .001**	**p = .001**	**p = .001**	**p = .001**	**p = .001**

TABLE 1 (Continued)

| | n (%) | Depression, Anxiety, and Stress Scale | | | SF-12 Life quality | |
		Depression X̄ ± SD	Anxiety X̄ ± SD	Stress X̄ ± SD	PCS X̄ ± SD	MCS X̄ ± SD
Do you have any chronic disorder?						
Yes	251 (12.3)	6.52 ± 4.70	4.65 ± 3.90	6.57 ± 4.15	61.53 ± 23.31	48.70 ± 26.90
No	1786 (87.7)	5.49 ± 4.11	3.28 ± 3.01	5.55 ± 3.78	74.62 ± 19.38	52.93 ± 24.67
Significance**		p = .001	p = .001	p = .001	p = .001	p = .012
Do you have any mental disorder?						
No	1886 (92.6)	5.38 ± 4.06	3.23 ± 2.98	5.45 ± 3.70	73.91 ± 19.91	53.50 ± 24.83
Minimum one	143 (7.0)	8.29 ± 4.67	5.90 ± 3.89	8.40 ± 4.22	62.32 ± 23.00	39.05 ± 22.42
More than one	8 (0.4)	13.25 ± 4.26	10.00 ± 5.04	10.62 ± 6.27	51.04 ± 4.85	34.89 ± 33.36
Significance**		p = .001	p = .001	p = .001	p = .001	p = .001
Total	2037 (100)	5.62 ± 4.20	3.45 ± 3.16	5.68 ± 3.84	73.00 ± 20.36	52.41 ± 24.99

Note: Other healthcare personnel: Midwife, Technician (anesthesia, laboratory, physical examination, radiology etc.), ambulance driver, patient care staff, cleaning staff, secretary, patient consultant, technical staff.

Abbreviations: MCS, mental component summary; PCS, physical component summary.

[a]ATT: Graduate of Emergency and First Aid Program.

*ANOVA test.

**Independent groups t test, p < .05.

state, 54.9% reported that in terms of family and social life interactions, they felt most affected by seeing their family, relatives, colleagues, and neighbors less frequently, and 64.9% reported that they received news on the pandemic from the ministry and state establishments (Table 3).

SF-12 Life quality was detected to maintain a positive and moderate correlation with "Physical Component" and "Mental Component" (r = 0.467, p = .001). A negative and moderate correlation was determined between "Physical Component" and Depression, Anxiety, and Stress (p = .001). Between "Mental Component" and Depression, Anxiety, and Stress, however, a negative and strong correlation was identified (p = .001). A positive and strong correlation was measured among Depression, Anxiety, and Stress (r = 0.738, p = .001) (Table 4).

4 | DISCUSSION

COVID-19 draws parallels with the SARS coronavirus that broke out as a global pandemic virus in 2003. Despite the differences in the clinical symptoms of both diseases, there are noteworthy similarities in terms of grounds of infection, epidemiological features, and modes of transmission. In COVID-19, the rate of transmission is faster than SARS, whereas it has a lower rate of mortality than SARS.[4,22,23] As these pandemics break out instantaneously and the transmissible power of the virus is unprecedented, humans are inevitably pushed toward depression, anxiety, and stress. Limitations on daily life and social activities not only in Turkey but in the entire world naturally

make humans vulnerable in the face of stress and anxiety. As a consequence, there may be a loss of confidence toward life in general, the mental health of society may be damaged, and the quality of life could be severely altered.[17] From that perspective, this study was conducted to analyze the impact of the COVID-19 pandemic on the quality of life and the depression, anxiety, and stress levels of selected adult individuals in Turkey.

Wherever humans confront a dangerous situation, they tend to experience a feeling of stress as a natural, normal, and essential response. Stress-induced emotions are mostly related to feelings of rage and anger. In the failure to cope with stress-induced stimulants, pessimism is the secondary emotion. The most imminent post-stress symptoms of psychological turbulence are anxiety, depression, insomnia, and fatigue.[24] In terms of physical and mental health, once individuals respond to COVID-19 via an extreme stress reaction, it may be an effective reaction to empower the human body in the physical fight against the burden of the pandemic. If the stress response rises above the tolerable threshold for the human body, it is most likely to witness deterioration in physical (cardiovascular problems and metabolic changes in endocrine and neurological system) and mental health. Furthermore, there may be severe physical and mental disorders that become noticeable.[25,26] It was determined in this study that people of an older age corresponded to lower scores in the depression, anxiety, and stress parameters (Table 1). In a similar study, it was detected that among the younger population, stress and depression levels were much higher than among the elderly population[27]; in a different study, the depression level increased with old age, whereas the anxiety level went down among

TABLE 2 A comparison of SF-12 life quality and depression, anxiety, stress levels, and state of being impacted by COVID-19 pandemic among research participants (n = 2037)

| | | Depression, Anxiety, and Stress Scale | | | SF-12 Life quality | |
| | | Depression | Anxiety | Stress | PCS | MCS |
	n (%)	X̄± SD	X̄± SD	X̄± SD	X̄± SD	X̄± SD
State of fear due to COVID-19 pandemic						
Yes	1560 (76.6)	6.00 ± 4.18	3.85 ± 3.24	6.14 ± 3.78	71.94 ± 20.71	49.29 ± 24.28
No	477 (23.4)	4.36 ± 4.02	2.14 ± 2.48	4.17 ± 3.64	76.50 ± 18.78	62.61 ± 24.58
Significance*		*p* = .001	*p* = .001	*p* = .001	*p* = .001	*p* = .001
Impact of home confinement on mental health						
Positive	267 (13.1)	4.62 ± 3.63	3.41 ± 3.02	5.22 ± 3.58	73.53 ± 20.86	58.73 ± 24.99
Negative	1139 (55.9)	6.64 ± 4.34	4.00 ± 3.28	6.63 ± 3.82	70.42 ± 20.59	44.59 ± 23.52
Neutral	631 (31.0)	4.20 ± 3.62	2.47 ± 2.74	4.16 ± 3.44	77.44 ± 18.94	63.85 ± 22.29
Significance**		*p* = .001	*p* = .001	*p* = .001	*p* = .001	*p* = .001
Having undergone COVID-19 test personally or by his/ her relatives						
Yes	57 (2.8)	6.33 ± 4.45	4.45 ± 3.87	6.07 ± 3.62	71.18 ± 22.83	49.72 ± 26.08
No	1980 (97.2)	5.60 ± 4.19	3.42 ± 3.14	5.67 ± 3.84	73.06 ± 20.29	52.49 ± 24.96
Significance*		*p* = .194	*p* = .015	*p* = .443	*p* = .496	*p* = .411
Having undergone COVID-19 test personally or by his/ her relatives, and COVID-19 test result positive						
Yes	49 (2.4)	6.38 ± 4.79	4.65 ± 4.15	6.36 ± 4.61	66.92 ± 24.09	47.40 ± 26.73
No	1988 (97.6)	5.60 ± 4.18	3.42 ± 3.13	5.66 ± 3.82	73.15 ± 20.25	52.53 ± 24.94
Significance*		*p* = .196	*p* = .007	*p* = .208	*p* = .034	*p* = .156
Paying attention to warnings to fight against COVID-19 pandemic						
I never pay attention	18 (0.9)	6.27 ± 5.05	3.27 ± 3.28	5.61 ± 5.16	73.63 ± 19.78	51.11 ± 26.74
I rarely pay attention	103 (5.1)	6.25 ± 4.67	3.35 ± 2.99	5.70 ± 4.14	72.65 ± 20.94	55.38 ± 26.09
I do pay attention	939 (46.1)	5.34 ± 3.89	2.99 ± 2.67	5.32 ± 3.50	71.48 ± 19.43	54.94 ± 23.77
I do pay attention at all times	977 (48.0)	5.80 ± 4.40	3.90 ± 3.54	6.02 ± 4.05	68.28 ± 23.83	49.69 ± 25.72
Significance**		*p* = .035	*p* = .001	*p* = .001	*p* = .437	*p* = .001
Need for psychological support in this period						
Yes	543 (26.7)	8.68 ± 4.47	5.90 ± 3.74	8.68 ± 3.84	64.73 ± 22.09	36.23 ± 21.56
No	1494 (73.3)	4.50 ± 3.48	2.56 ± 2.37	4.59 ± 3.20	76.01 ± 18.82	58.29 ± 23.52
Significance*		*p* = .001	*p* = .001	*p* = .001	*p* = .001	*p* = .001
Total	2037 (100)	5.62 ± 4.20	3.45 ± 3.16	5.68 ± 3.84	73.00 ± 20.36	52.41 ± 24.99

Abbreviations: MCS, mental component summary; PCS, physical component summary.

*Independent groups *t* test, *p* < .05.

**ANOVA test.

older individuals.[28,29] It is also believed that as the young population has to work, it fears catching the virus or spreading it to their loved ones, and more likely to exhibit higher levels of depression, anxiety, and stress. Additionally, quality of life decreased as age increased (Table 1). In the study by Hui et al.[30] among the victims of the SARS disease, the one-year impact on the victims' quality of life was observed, and it was concluded that as one got older, in the SF-36 Life Quality Scale, physical function and mental health scores lowered. In similar research among the younger population, the score in the Life Quality Scale was higher.[31] In line with an older age, there was a higher frequency of chronic diseases, loneliness, fatigue, and sleep disturbances, and as a response to the COVID-19 pandemic, fear, ambiguity, social life limitations, and curfews could also have been underlying causes behind the fall in the quality of life.

It also became evident that among female respondents, depression, anxiety, and stress scores were higher than the scores from male respondents (Table 1), similar to findings in the relevant literature.[28,32–34] In our study, life quality scores of the female

TABLE 3 Distribution of being impacted by COVID-19 pandemic among research participants (*n* = 2037)

	n	%
What has been the best result of home confinement for you due to the COVID-19 pandemic?[a]		
Spending time with my family	1140	56.0
Sparing time for my personal needs	945	46.4
Sparing time for cleaning	520	25.5
Sparing time for praying and worshipping	515	25.3
Regular sleeping	449	22.0
Keeping a balanced diet	385	18.9
Sparing more time on social media	383	18.8
Sparing time for exercising	159	7.8
Sparing time for telephone chats	158	7.8
Working professionally from home	138	6.8
What events have affected you most in terms of work/school life due to the COVID-19 pandemic?[a]		
I have not been affected at all	316	15.5
I have been distanced from my workplace/school	1182	58.0
I have continued going to work	324	15.9
I have been negatively affected in terms of finance	312	15.3
I have had to work from home	182	8.9
I have had to close down my business	30	1.5
What events have most affected your current mental state in the COVID-19 pandemic?[a]		
I have not been affected at all	160	7.9
Fear of catching the virus	961	47.2
Anxiety for the future	904	44.4
Fear of spreading the virus	893	43.8
I have become a cleaning freak	391	19.2
I feel sorrowful	757	37.2
I have developed death anxiety	315	15.5
I have become obsessive	227	11.1
What events have most affected your family and social life interactions in the COVID-19 pandemic?[a]		
I have not been affected at all	192	9.4
I have been seeing my family, relatives, colleagues and neighbors less frequently	118	54.9
I no longer have any fun in my social life	1046	51.4
I have been distanced from my family	351	17.2
I have had to change my place of residence	267	13.1
I have become more lonely	196	9.6
Which media channels do you use to have awareness on COVID-19 pandemic?[a]		
I follow the news on television and the internet	1437	70.5
I follow the news from the Ministry and state establishments	1322	64.9
From social media	920	45.2
From healthcare personnel	421	20.7
From scientific research	399	19.6
From friends and relatives	310	15.2

[a]Multiple choices have been selected.

TABLE 4 Correlation distribution of SF-12 Life Quality and Depression, Anxiety, and Stress Scale Scores (*n* = 2037)

	1	2	3	4	5
SF-12 Life Quality Scale					
PCS(1) *r*		0.469	−0.389	−0.432	−0.392
p		.001	.001	.001	.001
MCS(2) *r*			−0.633	−0.549	−0.603
p			.001	.001	.001
Depression, Anxiety, and Stress Scale					
Depression (3) *r*				0.695	0.776
p				.001	.001
Anxiety (4) *r*					0.738
p					.001
Stress (5) *r*					
p					

Abbreviations: MCS, mental component summary; PCS, physical component summary.

respondents were lower than the scores of male respondents (Table 1). There are a number of studies that provided identical results in the relevant literature.[14,35] It is generally known that stress and anxiety are more common among females; hence, the life quality of females has been affected more negatively. The vulnerability of women in the face of mental troubles was evidenced in earlier studies as well.

In our study depression, anxiety, and stress scores among healthcare personnel were measured to be higher than for other people. In addition, the mean scores of the mental component in the Life Quality Scale were determined to be lower than for other groups (Table 1). McAlonan et al.[36] conducted a study among 176 healthcare personnel by administering the Depression–Anxiety–Stress Scale-21, and they determined that compared with the general population, healthcare personnel displayed higher depression, anxiety, and stress scores. In the same vein, Lai et al.[13] conducted a study among 1257 healthcare personnel in China at the outbreak of the coronavirus pandemic, and they observed that the healthcare personnel exhibited higher depression, anxiety, and stress scores. Kwek et al.[37] conducted a study after a 3-month interval to determine the psychological state and quality of life of individuals who had received SARS treatment, and they found that the SF-36 Life Quality Scale score for healthcare personnel was comparatively lower than other patients who had been treated. As healthcare personnel are the direct caretakers for COVID-19 victims and are exposed to dangerous conditions, they are worried about the possibility of catching the virus or transmitting the disease to their family. As they are the primary risk group for infection, it is natural that this group would have elevated levels of depression, anxiety, and stress. Moreover, dealing with confirmed COVID-19 cases and suspicious cases, a heavy workload, increased work hours, deficiencies in protective

equipment, lack of effective treatment, and ineffective support are obvious triggers for the high depression, anxiety, and stress levels among healthcare personnel, leading to negative effects on their quality of life.

In this study, the depression level of those with a lower education level was measured to be higher (Table 1). In another study a significant relationship was discovered between education level and depression level, and it was determined that the depression level was higher for those with a low education level.[34] It is suggested that people with a high education level have a high-income level and secure employment, whereas those with a low education level strive to cope with a range of problems such as unemployment, low wages, and lack of financial means. Therefore, in the face of the pandemic, individuals with a low education level tend to experience anxiety, and the mental component of the quality of life likely decreases as a consequence. Furthermore, it is possible that ignorance of the COVID-19 virus, including its rapid spread, not knowing how long it will continue, the threat to human life, and the resulting need for home confinement, and the health and safety of the family are also some factors that affect an individual's depression level.

It was asserted in this study that a statistically significant relationship existed between marital status and depression score, and for married participants, depression scores were higher than the scores for single participants (Table 1). However, another study found an insignificant relationship between marital status and a state of depression.[15] A different research concluded that among those staying in a 14-day quarantine due to the coronavirus pandemic, depression levels were measured to be higher for those who lacked social capital, that is, a social support system that consisted of spouse, colleagues, relatives, or neighbors.[38] In a relevant study, the depression level was measured to be lower among married individuals.[39] Additionally, another study indicated that a significant relationship existed between marital status and a state of stress, and there was a lower stress level among married participants.[27] Thus, studies have so far provided conflicting results. It is suggested that the reasons for detecting high depression levels among married people in this study are that individuals feel that they are not fulfilling their duties toward the family, because they have left their job or have taken the unpaid leave at the demand of the employer, and resultant financial worries, or if they go to work, they fear catching the virus or spreading the virus to his/her spouse or kids, and even the fear of losing their lives due to infection with the virus. These conditions may cause a range of negative impacts on the quality of life of married people.

In this study, there were higher depression and stress scores among individuals whose income level fell below their expenses, but a significant relationship was not identified between income level and anxiety scores (Table 1). In another study that was carried out at the outbreak of the SARS pandemic, it was also concluded that the income level and the depression level were correlated and depression scores among those with a low-income level were higher.[15] Being forced to quit one's job, closing down one's business, or taking unpaid leave, and the resultant financial worries, as well as uncertainty about when these problems will end, could also be the reasons for the high depression and stress levels in this group.

Moreover, as it has been at tested that income level, as the biggest provider of economic conditions, is the most salient indicator of quality of life, it is widely considered that the pandemic might have more negatively affected life quality of the group who considered their income level to be low.

In our study, we found that those who reported maintaining a good health condition were able to manifest lower scores in depression, anxiety, and stress; conversely, those who reported a worse health condition exhibited higher depression, anxiety, and stress scores. In addition, it became clear that those who reported good health conditions scored a higher quality of life, whereas those who reported a worse health condition exhibited a lower quality of life score (Table 1). In the same vein, a study by Liu et al. indicated that among those who reported that they maintained a good health condition, depression scores were measured as low.[27] Moreover, depression, anxiety, and stress scores were computed to be high among those afflicted with a chronic illness or a mental disorder (Table 1). Likewise, in the cohort study by Wang et al.[29] to detect psychological reactions and relevant factors among the general population in China at the early stages of the COVID-19 pandemic, 1210 participants were surveyed and those with a secondary disorder manifested higher depression, anxiety, and stress scores. As is well known, cardiovascular disease, chronic respiratory disorder, diabetes, hypertension, cancer, and miscellaneous chronic disorders play a significant role in elevating the risk of death after exposure to COVID-19.[40] It is true that a person's physical, psychological, and social health are solid indicators of quality of life, but another effective indicator is the perception of health and chronic disease, as a negative perception of one's health condition and having to cope with a chronic disease also have an effect on the quality of life. Having a chronic disease and constantly viewing the link between chronic disorders and deaths due to COVID-19 on TV news or the internet are liable to cause a rise in depression, anxiety, and stress levels for this group.

Participants who had to continue going to work also displayed higher anxiety and stress levels than other groups (Table 1). The fear of catching the virus while commuting to work or at the workplace and the fear of spreading the virus to family members at home may also be the reasons behind the rise in their anxiety and stress level.

Those who expressed fear due to the COVID-19 pandemic included those affected negatively by those paying too much attention to pandemic warnings, and those requesting psychological support during this period displayed a significant rise in depression, anxiety, and stress levels and a correspondingly significant fall in their quality of life (Table 2). COVID-19 infection is a novel disease; hence, its outbreak and spread would naturally accelerate cognitive anxiety and dread in a society. Home confinement for an uncertain period of time, distancing from daily life and limited access to social activities to achieve isolation from the virus, the fear of catching and spreading the virus, and increased sleep time and lethargy could necessarily be the driving factors behind depression, anxiety, stress, and a consequential decrease in quality of life. However, those who tested positive for COVID-19 or knew someone who tested positive exhibited no significant rise in their anxiety levels (Table 2). Positive test results personally or from someone they knew, the fear of

catching the virus, the fear of spreading the virus, and/or the fear of dying from the virus, and the fear of distancing from or losing beloved ones could have triggered anxiety. In this study, although a statistically significant relationship was measured between a positive COVID-19 test result and the "physical component," there was no evident relationship with the "mental component."

In this study, participants were asked to report the best things about staying at home due to the COVID-19 pandemic, and they claimed that it was spending time with family members. In the same vein, they reported that in terms of family and social life interactions, they were most negatively affected by the lack of uniting with family, relatives, colleagues, and neighbors; in terms of work and school life, the most adverse impact was reported to be staying away from the workplace/school (Table 3). This is a clear expression of the importance of engaging in social interactions and maintaining a routine. Once people can keep social support systems nearby, engage in interactions with loved ones, maintain a regular life schedule, and take part in work and learning settings, they can emerge as physically and mentally empowered human beings. In the presence of a suddenly occurring disease that soon turned into a global pandemic and managing to live in a period imbued with ambiguities, it is more obvious than ever that there is a higher need to maintain social interaction and fulfill social roles.

In our study, it has been determined that participants mostly gathered data on the COVID-19 pandemic via media outlets (Table 3). This finding is similar to previous studies that presented similar results.[15] The media's coverage of pandemic news or any other type of exposure could also drive the stress response and the fear of death, leaving a negative impact on mental health. Participants reported that due to the current pandemic, the most adverse impacts on their mental health accumulated around the fear of catching and spreading the virus, anxiety about the future, and feeling despondent (Table 3). To secure both mental health and quality of life, it is crucial that people feel safe both for themselves and their families without feeling any kind of pressure, without being trapped by financial or moral anxiety, and without being overwhelmed by insecurity about their health. In the correlation analysis, it was determined that a rise in physical and mental quality of life led to a decrease in depression, anxiety, and stress levels (Table 4). The COVID-19 pandemic led to a significantly negative impact on the physical and mental subdimensions of the quality of life. A deterioration in life quality similarly formed a correlation with depression, anxiety, and stress levels.

5 | IMPLICATIONS FOR NURSING PRACTICE

Some of the important duties of public health officials and personnel are to respond to disasters, prevent the spread of disease, and reveal existing problems through research. In this respect, public health nurses are pioneers in epidemics. Pandemic outbreaks are the kind of conditions that alter the physical, mental, and social conditions of individuals, in particular, and society, in general. In such instances, treatments should be based on the philosophy of public healthcare and analysis should be framed in a holistic perspective. In accordance with the findings of this study, it is reasonable to argue that with pandemic diseases, individuals develop anxiety both for themselves and their loved ones, and in their fight against the outbreak, they are forced to distance from work life, social life, education, and production settings. In line with these findings, it is suggested that to manage COVID-19 pandemic, which is a public health crisis, psychosocial support can be provided to at-risk groups and the entire society.

During this global public health crisis, it is essential to assess the disproportionately exposed populations at risk. Nurses need to gain skills to identify the needs of vulnerable groups and protect these groups from discrimination and inequalities in health care. Nurses also play a key role in providing public education on disease prevention and reducing the spread of misinformation about the epidemic. It is hoped that nurses will contribute to the development of interventions to reduce their difficulties to protect and improve the psychosocial health of individuals and society in the possibility of encountering new pandemics in the future.

6 | RESEARCH LIMITATIONS

There are a few limitations to this study. First, this research was applied to one country only, whereas in reality, COVID-19 is a global epidemic that has turned into a pandemic. Another limitation was the presence of a device that supported the program for attending this study and completing the survey. Those who lacked this supportive device were excluded from the study. Besides, an internet connection was required for completion of the survey and relevant skills to complete the survey were essential. Those with no internet connection or those who lacked the relevant skills to complete the survey were, thus, not included in the study.

CONFLICT OF INTERESTS
The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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