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The Effect of Personality Traits on COVID-19 Stress Level During the COVID-19 Pandemic in Turkey

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Abstract

Objective: This study aimed to examine the relationship between personality traits and Coronavirus disease-2019 (COVID-19) stress level.

Methods: This descriptive correlational study was conducted between December 2020-January 2021 using an online survey of 360 participants. Data were collected using information form, COVID-19 stress scale, and the International Personality Item Pool-Big-Five inventory.

Results: The participants had a mean age of 28.43±6.88 years and their mean years of education was 15.0±2.24 years. The mean total score on the COVID-19 stress scale was 53.87±10.78 (17-73), indicating moderate stress. Evaluation of the relationship between personality traits and COVID-19 stress revealed a positive correlation between scores on the extroversion subscale of the personality inventory and the compulsive checking subscale of the COVID-19 stress scale. Agreeableness and conscientiousness scores were also positively correlated with the compulsive checking and danger/contamination subscales of the COVID-19 stress scale.

Conclusion: This study identified relationships between scores on the COVID-19 stress scale and the IPIP Big-Five factor markers. As high stress level is a risk factor for the development of psychiatric disorders, the early identification of stressed individuals is important improve public mental health.

Keywords: COVID-19, stress, personality traits

INTRODUCTION

The novel Coronavirus disease-2019 (COVID-19) is highly contagious and was declared a pandemic by the World Health Organization (WHO) just over three months after first appearing in China (1). Characterized by high morbidity and mortality rates, COVID-19 has negatively affected not only the physical health of infected individuals, but also the mental health of people worldwide by causing constant, high levels of stress (2-4). This extreme stress is a result of various factors such as the rapid spread of the virus, high mortality rates, fear of transmission, change in routines due to quarantine measures, helplessness, and inability to cope (5).

Initial findings from China indicated that more than a quarter of the general population experienced moderate to severe stress or anxiety-related symptoms in response to COVID-19 (4,5). Other studies have identified problems such as anxiety, depression, and somatization (4-6). These findings are similar to those previously reported during a 2003 quarantine in Toronto due to an outbreak of severe acute respiratory syndrome, in a 2014 quarantine in West Africa due to Ebola, and a Korean quarantine due to Middle East respiratory syndrome (7-10). Since March 11, 2020, the COVID-19 pandemic has dominated global current events, created major crises, and led to fear and stress, anxiety, and an anxiety syndrome characterized by avoidance, excessive checking, and anxiety in many people (1,11-13).

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Stressors induced by the COVID-19 pandemic include quarantining, changes in routine, uncertainty and fear of the unknown, fear of infection, poor concentration, reduced physical activity and exposure to sunlight, sleep disturbances, changes in eating habits, and increased following of news and media about COVID-19 (2,14-18). Stress is actually an adaptive response by living organisms to internal and external threats, and is an extremely complex defense mechanism. Stress is not simply a response to a stimulus, but an interaction between the individual and the environment that involves subjective perception and evaluation of stressors, thus creating a highly personalized process. Therefore, stress and personality traits are interrelated (19,20).

Personality, which is determined largely by our genetic traits (60%) and the rest by environmental factors, makes us vulnerable or resistant to stressors. In other words, we respond to stress with our personality traits (20). Known worldwide as the most valid and reliable personality model, the Big-Five personality factors are a basic and comprehensive framework that classifies personality traits into five dimensions: extroversion, agreeableness, conscientiousness, neuroticism, and openness. Recent studies have indicated that personality traits are associated with certain behaviors and attitudes toward the COVID-19 pandemic (21-23). Although the relationship between the Big-Five personality traits, neuroticism, and depression and the mechanisms underlying these relationships are not completely clear, it is reported that positive coping styles (such as expressing negative emotions), avoidance, and seeking support may partially mediate the relationship between personality traits and mental health (19,24).

The serious problems caused by COVID-19 are also ongoing in our country. According to the WHO data, our country has the sixth highest number of cases in the world. Over 61,000 deaths have been attributed to COVID-19 since the start of the pandemic, and vaccination rates are still not at desired levels (25). Due to the weak and fragile nature of the country's economy, dozens of people lost their jobs due to the pandemic, and the frequency of suicide has been higher than ever before our history. All of these factors have increased stress levels among the Turkish population. Therefore, we believe it is important to examine the relationship between socio-demographic variables and personality traits. In this context, this study was conducted to examine the relationship between personality traits and level of COVID-19-related stress during the COVID-19 pandemic. Accordingly, the research questions are;

• What is the COVID-19 stress level of individuals?

• What is the relationship between personality traits of individuals and COVID-19 stress level?

• What is the effect of individuals' personality traits on COVID-19 stress level?

METHODS

Study Design and Sample

A descriptive correlational study was carried out using an internet-based data collection technique (Google Forms survey) between December 2020 and January 2021. The study population consisted of students enrolled in any department within the faculty of health sciences of a public university and their families. The improbable random sampling method was used in the sampling of the study. The sample of the study consisted of individuals between the ages of 18-60, who can understand and communicate in Turkish, who have access to the online data form (e.g., via smartphone, computer), who do not have any physical disability to participate in the study, between December 2020 and January 2021. First of all, in the research; 415 participants were reached with an online questionnaire form, but 55 participants who did not complete the questionnaire were excluded from the study and the study was terminated with 360 individuals.

Data Collection

Data were collected for this study using a personal information form, the COVID-19 stress scale, and the 50-item International Personality Item Pool (IPIP) Big-Five factor markers inventory.

Personal information form: This form consists of about the participants' individual characteristics age, education level, income level, chronic diseases, body mass index, smoking, place of residence, considers self at a high risk for COVID-19, face economic loss during the pandemic, family history of COVID-19 infection, feeling of defenseless against changes caused by the COVID-19 pandemic, fear of dying during the pandemic, and lost a relative due to the pandemic and history of COVID-19 contact.

COVID-19 stress scale: Taylor et al. (1) developed this scale to evaluate the stress experienced during the COVID-19 pandemic. Validity and reliability studies of the Turkish version were conducted by Demirgöz Bal et al. (25). The scale is a 36-item self-report scale designed to assess the severity of symptoms. As in the original form, the Turkish version has five subscales: COVID danger and contamination (items 1, 2, 3, 4, 5, 6, 19, 20, 21, 22, 23, and 24), COVID socio-economic consequences (items 7, 8, 9, 10, 11, and 12), COVID xenophobia (items 13, 14, 15, 16, 17, and 18), COVID traumatic stress (items 25, 26, 28, 29, and 30), and

COVID compulsive checking (31, 32, 33, 34, 35, and 36). There are no reverse-coded items in the scale. For each item, respondents choose the response option that most accurately describes their experience during the COVID-19 pandemic. Respondents rate to what degree and at what frequency they have experienced the feelings described in the items over the last 7 days on a 5-point scale from 0 (not at all/never) to 4 (extremely/almost always). Higher scores indicate a higher level of stress associated with the COVID-19 pandemic. In this study, the Cronbach's alpha value of the scale was determined as 0.94.

IPIP Big-Five factor markers: The IPIP Big-Five factor scale is 50- and 100 items. The validity and reliability study for the Turkish version of the 50-item inventory (B5KT-50-Tr) was conducted by Tatar (26). It is a self-report instrument with a 5-point Likert scale from 1 (disagree) to 5 (agree) and has five subscales that correspond to the Big-Five personality traits (extroversion, agreeableness, conscientiousness, emotional stability, and intelligence/imagination). In this study, it was determined that Cronbach's alpha values for the five sub-dimensions of the scale ranged from 0.81 to 0.90.

Ethics Statement

Before the study, permission to conduct scientific research related to COVID-19 was obtained from the Ministry of Health (2020-11-12T13_31_40). Approval for the study was then obtained from the Marmara University Faculty of Health Sciences Ethics Committee (26 November 2020/69). The study was conducted in accordance with the Declaration of Helsinki and the participants' consent was obtained at the beginning of the survey.

Statistical Analysis

The data were analyzed using SPSS version 21.0 software. Descriptive statistics were given as mean, standard deviation (±), and range for continuous variables and as frequency and percentage for categorical variables. The results of Kolmogorov-Smirnov test to evaluate the distribution of the data indicated that the data were normally distributed. Student's t-test or analysis of variance was used to compare the participants' socio-demographic and COVID-19 pandemic-related characteristics with their COVID-19 stress scale and B5KT-50-Tr scores. Pearson's correlation analysis was used to test the relationship between COVID-19 stress scale and B5KT-50-Tr scores. Multiple linear regression analysis was performed to determine the effect of personality traits on COVID-19 stress level. In this study, the statistical significance level was determined as $p<0.05$.

RESULTS

The mean age of the participants in the study was 28.43±6.88 years (range, 18-55), mean years of education was 15.03±2.24 years (range, 5-22), the majority of them (91.4%) were women, 8.6% were men, and mean number of people in the household was 3.73±1.80 (range, 1-11). Nearly a quarter (24.2%) of the participants reported having regular employment outside the home during the pandemic, 7.2% of the participants had seen a psychiatrist during the pandemic, and 6.9% had received a psychiatric diagnosis (Table 1).

The participants' mean total score on the COVID-19 stress scale was 53.87±10.78 (range, 17-73), indicating moderate stress. Mean subscale scores were 22.13±4.74 (range, 12-30) for danger and contamination, 6.90±1.36 (range, 4-10) for socio-economic consequences, 6.99±1.68 (range, 4-10) for xenophobia, 10.66±2.27 (range, 6-15) for traumatic stress, and 7.18±1.79 (range, 2-10) for compulsive checking.

On the COVID-19 stress scale, single participants had higher total and traumatic stress subscale scores than married participants, while participants with more than 15 years of education had higher scores in the compulsive checking subscale and lower scores in the xenophobia subscale compared to participants with 15 years of education or less ($p<0.05$). In addition, participants with any chronic disease (e.g., hypertension, diabetes) and those with children had significantly higher total scores and traumatic stress and xenophobia subscale scores ($p<0.05$) (Table 2).

When we examined the relationship between personality and COVID-19 stress, we determined that B5KT-50-Tr extroversion subscale score was positively correlated with compulsive checking subscale score on the COVID-19 stress scale. B5KT-50-Tr agreeableness and conscientiousness scores were positively correlated with scores in the compulsive checking and danger/contamination subscales of the COVID-19 stress scale. In addition, higher emotional stability scores on the B5KT-50-Tr were associated with lower total COVID-19 stress score and lower danger/contamination, xenophobia, and traumatic stress subscale scores. However, higher intelligence and imagination scores on the B5KT-50-Tr were associated with higher danger/contamination, compulsive checking, and total scores on the COVID-19 stress scale (Table 3).

According to our multiple linear regression analysis to determine the predictive value of the extroversion, emotional stability, and intelligence/imagination personality traits for COVID-19 stress level, these variables explained 23% of the total variance in COVID-19 stress level. It was determined that a 1-point increase

in emotional stability score on the B5KT-50-Tr was associated with a 0.628-point decrease in total COVID-19 stress score, while each 1-point increase in intelligence/imagination score was associated with a 0.606-point increase in total COVID-19 stress score (Table 4).

DISCUSSION

This study was conducted to determine the relationship between personality and socio-demographic characteristics and COVID-19 stress level. Our finding that single participants had higher mean traumatic stress subscale and total scores on the COVID-19 stress scale is similar to the results of other studies (27,28). Consistent with our findings, Tee et al. (29) also reported higher levels of stress, anxiety, and depression in single people. Participants in this study who had more than 15 years of education had higher scores in the compulsive checking subscale of the COVID-19 stress scale, while less educated participants had higher scores on the xenophobia subscale. As an individual's level of education increases, their awareness is higher and thus we expect their stress levels to be lower. However, although the highly educated participants in our study had a slightly lower mean total score on the COVID-19 stress scale, their higher score for compulsive checking may be a result of their efforts to cope effectively with the intense anxiety experienced during the pandemic. Similar to our study, participants with a high education level were reported to have fewer symptoms of anxiety, depression, and PTSD in a study by Liang et al. (30) and lower levels of stress in a study by Zager Kocjan et al. (31).

In this study, we observed that participants with children had higher COVID-19 stress scale total score and xenophobia and

Table 1. Socio-economic characteristics of the participants

		Number (n)	Percentage (%)
Economic status	Income less than expenses	101	28.1
	Income equivalent to expenses	225	62.5
	Income greater than expenses	34	9.4
Body mass index	<18.5 (underweight)	26	7.2
	18.5-24.9 (normal weight)	250	69.4
	>25.0 (overweight)	84	23.3
Comorbidity	Yes	30	8.3
	No	330	91.7
Smoking	Yes	61	16.9
	No	299	83.1
Place of residence	Rural area	31	8.6
	Suburban area	85	23.6
	Urban area	244	67.8
Considers self at high risk for COVID-19	Yes	46	12.8
	No	314	87.2
Faces economic loss during the pandemic	Yes	189	52.5
	No	171	47.5
Family history of COVID-19 infection	Yes	129	35.8
	No	231	64.2
Feeling of defenseless against changes caused by the COVID-19 pandemic	Yes	289	80.3
	No	71	19.7
Fear of dying during the pandemic	Yes	194	53.9
	No	166	46.1
Lost a relative due to the pandemic	Yes	65	18.1
	No	295	81.9
History of COVID-19 contact	Yes	127	35.3
	No	233	64.7

COVID-19: Coronavirus disease-2019

Table 2. COVID-19 stress scale total and subscale scores

Variable		Danger and contamination	Socio-economic consequences	Xenophobia	Traumatic stress	Compulsive checking	Total
		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	
Marital status	Married (n=311)	30.56±10.21	5.38±6.04	11.44±6.94	7.16±5.91	11.65±5.55	66.22±21.54
	Single (n=49)	33.26±8.69	5.24±5.76	13.51±8.67	10.85±7.51	12.51±5.44	75.38±24.54
	t/p	-1.765/0.078	0.156/0.876	-1.867/0.063	**-3.920/0.000**	-0.987/0.324	**-2.429/0.016**
Education level	≤15 years (n=130)	31.59±9.44	5.58±6.34	12.72±6.90	8.03±6.54	10.43±5.20	68.36±24.43
	>15 years (n=230)	30.56±10.24	5.24±5.80	11.16±7.35	7.45±6.11	12.53±5.42	66.76±24.91
	t/p	0.939/0.348	0.511/0.680	**1.978/0.049**	0.834/0.405	**-3.469/0.001**	0.514/0.607
BMI	<18.5 (underweight) (n=26)[a]	30.19±8.99	3.69±4.88	12.11±5.55	8.84±5.46	10.50±4.98	65.34±16.68
	18.5-24.9 (normal) (n=250)[b]	31.05±9.80	4.98±5.59	11.62±6.91	7.12±5.76	11.92±5.34	66.70±23.16
	>25.0 (overweight) (n=84)[c]	30.82±10.79	7.04±7.11	11.89±8.55	8.89±7.65	11.73±6.50	70.39±30.61
	F/p	0.094/0.910	**4.935/0.008 c>a.b**	0.083/0.921	**3.021/.050 c>a.b**	0.755/0.471	0.801/0.450
Economic status	Income less than expenses (n=101)[a]	32.52±10.67	7.03±6.76	13.01±6.71	8.92±6.24	12.12±5.37	74.22±25.71
	Income equivalent to expenses (n=225)[b]	30.21±9.63	4.33±5.24	11.25±7.13	7.13±6.05	11.55±5.84	64.40±23.37
	Income greater than expenses (n=34)[c]	31.64±9.61	5.47±6.57	10.97±8.18	7.41±7.36	12.20±4.72	67.70±26.97
	F/p	2.146/0.118	**11.117/0.000 a>b**	2.293/0.102	2.877/0.058	0.479/0.620	**5.656/0.004 a>b**
Has children	Yes (n=38)	33.39±9.18	6.73±5.84	15.44±7.61	11.71±7.29	12.47±6.05	79.76±24.13
	No (n=322)	30.64±10.02	5.20±6.00	11.28±7.06	7.18±5.94	11.69±5.56	66.01±24.41
	t/p	1.265/0.207	-0.0142/0.887	**3.406/0.001**	**4.307/0.000**	0.811/0.418	**3.286/0.001**
Chronic health problem	Yes (n=30)	33.83±10.35	6.20±6.34	15.33±7.03	10.66±7.84	13.06±6.76	79.10±26.08
	No (n=330)	30.67±9.90	5.29±5.97	11.39±7.16	7.39±6.04	11.65±5.49	66.41±24.85
	t/p	1.667/0.096	0.792/0.429	**2.885/0.004**	**2.764/.006**	1.318/0.188	**2.716/0.007**
Family history of COVID-19	Yes (n=129)	32.42±9.52	6.04±6.35	11.86±7.03	7.99±6.74	11.84±5.71	70.16±25.51
	No (n=231)	29.29±10.20	4.62±5.50	11.57±7.45	11.84±5.71	11.69±5.50	64.48±23.51
	t/p	**3.010/0.003**	**3.350/0.025**	0.379/0.705	1.052/0.293	0.254/0.800	**2.190/0.029**
Economic loss due to pandemic	Yes (n=189)	30.55±10.22	4.85±6.59	10.45±7.62	7.05±6.54	11.69±5.30	65.21±26.05
	No (n=171)	31.14±9.83	5.65±5.63	12.43±6.91	7.67±6.12	11.81±5.56	68.72±23.89
	t/p	-0.537/0.591	-1.222/0.222	-2.505/0.013	-0.029/0.977	-0.195/0.845	-1.293/0.197
Fear of dying due to pandemic	Yes (n 194)	34.14±9.41	6.36±6.56	12.39±7.42	9.26±6.52	13.10±5.69	75.27±24.56
	No (n=166)	27.18±9.28	4.21±5.03	10.94±6.93	5.78±5.40	10.21±5.10	58.34±21.63
	t/p	**7.035/0.000**	**3.440/0.001**	1.899/0.058	**5.452/0.000**	**5.036/0.000**	**6.882/0.000**

F: One-Way ANOVA, t: Student's t-test, COVID-19: Coronavirus disease-2019, BMI: Body mass index, SD: Standard deviation

traumatic stress subscale scores than those without children. This finding supports the results of Brown et al. (32), who reported that COVID-19-related stressors and high anxiety and depressive symptoms were associated with higher perceived stress in parents. In contrast, Elbay et al. (33) reported that people who were married and had one or more children had lower scores on the depression anxiety and stress scale-21. This difference in results between studies may be due to differences in the populations studied, the measurement tools used, and cultural structure.

We also observed that participants with low income had higher xenophobia and total COVID-19 stress scores. Similarly, Brooks et al. (2) reported in their study that financial losses experienced during the pandemic had negative psychological effects on individuals, while Khan et al. (34) reported that people facing economic uncertainty exhibited common stress, anxiety, and depressive symptoms. Although the countries differ, the finding that people with low income experience higher anxiety and stress during the pandemic is a constant. A recent systematic review on the subject showed that unemployment was an important risk factor for mental health problems (35).

In this study, we determined that participants with chronic health problems scored high on the COVID-19 stress scale overall and in the xenophobia and traumatic stress subscales. This is consistent with previous studies indicating that psychological distress is higher among people with chronic diseases or poor health (5,36,37). In addition, we observed that participants who stated that they were afraid of dying due to the pandemic experienced intense COVID-19-related stress. The recent systematic review mentioned above also identified the presence of chronic disease as a risk factor for mental health disorders (35).

In addition, we observed higher COVID-19 stress scale scores among participants who knew someone who had COVID-19 infection. Similarly, Duan et al. (38) reported that having an infected friend or family member was associated with higher anxiety levels, and Wang et al. (5) reported that participants with family had high anxiety about the spread of COVID-19 among family members. This relationship between fear of loss of life and stress during the pandemic is likely due to the unavoidable interconnection of physical, psychological, social, and financial health.

In our study, we determined that participants exhibiting the personality trait of conscientiousness had high scores in the danger and contamination and compulsive checking domains of the COVID-19 stress scale. Individuals with high levels of responsibility tend to use active problem-focused solutions and usually avoid maladaptive emotion-focused coping strategies (39). This finding suggests that individuals with high scores on

Table 3. Comparison of COVID-19 stress scale and IPIP Big-Five factor markers 50-item inventory scores

COVID-19 stress scale and subscales	Big-Five 50-item personality test (B5KT-50-Tr) subscales									
	Extroversion		Agreeableness		Conscientiousness		Emotional stability		Intelligence/ imagination	
	r	p	r	p	r	p	r	p	r	p
Danger and contamination	0.021	0.698	0.182	**0.001***	0.136	**0.010***	-0.184	**0.000***	0.173	**0.001***
Socio-economic consequences	0.030	0.577	-0.046	0.389	0.024	0.654	-0.037	0.480	0.079	0.134
Xenophobia	-0.028	0.593	-0.037	0.489	0.008	0.874	-0.109	**0.038***	-0.070	0.188
Traumatic stress	-0.011	0.840	-0.069	0.189	-0.021	0.693	-0.108	**0.038***	0.062	0.239
Compulsive checking	0.161	**0.002***	0.145	**0.006***	0.159	**0.002***	0.049	0.351	0.202	**0.000***
Total	0.041	0.438	0.067	0.204	0.094	0.075	-0.132	**0.012***	0.120	**0.010***

r: Pearson correlation test, *p<0.05, COVID-19: Coronavirus disease-2019

Table 4. Multiple regression analysis of the effect of personality traits on COVID stress scale score

Variables personality trait	B	Standard error	Beta (β)	t	p
(Contrast)	51.211	8.604		5.952	0.000
Extroversion	0.373	0.263	0.105	1.421	0.156
Emotional stability	-0.628	0.170	-0.238	-3.695	**0.000**
Intelligence/imagination	0.606	0.258	0.145	2.349	**0.019**

R: 0.397, adjusted R2: 0.234, F: 6.854, p=0.000 Durbin Watson: 1.753, COVID: Coronavirus

the conscientiousness subscale may be more worried about careful planning and rational decision-making, especially when faced with a stressor.

It has been reported in the literature that personality traits are strongly associated with a wide range of important life outcomes, general well-being, physical and mental health, and stress (40). Similarly, in this study we found that lower scores for the personality trait of emotional stability were associated with higher stress levels. A similar study by Nikčević et al. (13) showed that individuals with neurotic personality traits had higher levels of COVID-19 anxiety.

In other studies, it was reported that depression, PTSD somatic symptoms, and anxiety were significantly higher in patients who had a history of COVID-19 infection (39,40). On the other hand, our results showed that participants with an extroverted personality tended to have compulsive behaviors. In other similar studies, extroversion was reported to be negatively related to emotion-focused coping, whereas another study suggested that individuals who scored high on the extroversion scale used active coping strategies and positive re-evaluation (38-40). This may be due to these individuals' efforts to cope with stress in order to minimize the negative effects of the stressor and the problem they are experiencing.

Studies have indicated that agreeableness, which is another dimension of the Big-Five personality model, is negatively associated with emotion-focused coping (39,40). In this study, we observed that participants who scored high on the agreeableness subscale also had high compulsive checking and danger/contamination scores. Although agreeableness is considered a positive feature that is especially helpful in times of crisis, the significant changes induced by the pandemic may have resulted in higher compulsive checking and danger/contamination scores due to the intensity of the stress experienced during the pandemic. All of these findings demonstrate that the five major personality traits are strongly related to levels of stress during the COVID-19 pandemic. Therefore, these results may facilitate the development of necessary interventions, treatments, and preventive measures.

We believe that during the pandemic, taking into account the role of personality in stress management, monitoring at-risk groups more closely, and providing early intervention when necessary are important to protect against other mental illnesses. In addition to the measures being implemented to fight the pandemic, increasing social support as much as possible, ensuring that people receive professional help when they feel unwell, and promoting a healthy diet, regular exercise, adequate sleep, and activities and hobbies that help manage stress are recommended to reduce stress levels during this period (40). As with many other diseases, it is essential to recognize psychiatric problems early and intervene before these problems progress and become chronic. As high stress level is a risk factor for the development of psychiatric disorders, the early identification of stressed individuals and provision of qualified care are important in order to protect their mental health and improve public mental health. Psychiatric personal play an important role in the early recognition, prevention, and when necessary, treatment referral of individuals with high levels of stress. Understanding the impact of the COVID-19 pandemic on people's stress levels is key in determining what precautions can be taken.

Study Limitations

Research data were collected through an online questionnaire. In addition, it is an important limitation that it is based on participants' self-report.

CONCLUSION

In accordance with the findings of this study, it is reasonable to argue that with, relationships between scores on the COVID-19 stress scale and the personality traits markers. Health professionals are pioneers in epidemics. We believe that during the pandemic, taking into account the role of personality in stress management, monitoring at-risk groups more closely, and providing early intervention when necessary are important to protect against other mental illnesses. As with many other diseases, it is essential to recognize psychiatric problems early and intervene before these problems progress and become chronic. As high stress level is a risk factor for the development of psychiatric disorders, the early identification of stressed individuals and provision of qualified care are important in order to protect their mental health and improve public mental health. Health professionals role in the early recognition, prevention, and when necessary, treatment referral of individuals with high levels of stress. Health professionals 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.

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Ethics

Ethics Committee Approval: Before the study, permission to conduct scientific research related to COVID-19 was obtained from the Ministry of Health (2020-11-12T13_31_40). Approval for the study was then obtained from the Marmara University Faculty of Health Sciences Ethics Committee (26 November 2020/69).

Informed Consent: The study was conducted in accordance with the Declaration of Helsinki and the participants' consent was obtained at the beginning of the survey.

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Authorship Contributions

Concept: F.B.B., M.D., M.D.B., Design: F.B.B., M.D., M.D.B., Data Collection or Processing: F.B.B., M.D., M.D.B., Analysis or Interpretation: M.D., Literature Search: F.B.B., M.D.B., Writing: F.B.B., M.D., M.D.B.

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