


Evaluating the Factors (Stress, Anxiety and Depression) Affecting the Mental Health Condition of Nurses During the COVID-19 Pandemic

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Abstract

This study aimed to determine the depression, anxiety and stress levels that have negatively impacted nurses' mental health during the COVID-19 pandemic. A sample group of 826 nurses working in Turkey were asked to fill in an online questionnaire in order to evaluate their psychological responses and the related factors that have adversely affected their mental health during the COVID-19 pandemic. In total, 696 nurses (84.3%) showed symptoms of depression, 644 (78%) reported anxiety and 543 (65.74%) reported stress. This study also highlighted that the most concerning factor for the nurses was the risk of transmitting the COVID-19 infection to their household members (89.2%). The most important problems faced by the nurses during COVID-19 included equipment shortages (50.7%), administrative problems (38.5%) and issues such as accommodation and nutrition (27.4%). These were found to have a statistically significant correlation with the nurses' levels of depression, anxiety and stress. The fear of losing a household member, the inability to their household's social needs and the fear of death were among the factors that concerned nurses during the COVID-19 pandemic, significantly affecting their levels of depression, anxiety and stress. Taking the necessary measures to deal with the aforementioned problems and fears is important to protect the health, productivity and efficiency of nurses during the pandemic period.

Keywords

COVID-19, nurses, mental health, stress, Turkey

Introduction

Mental health is considered to be one of the most important indicators of health in a community, and poor mental health can lead to many other problems for an individual (Khodadadi et al., 2016). Anxiety and depression are common symptoms of mental health problems (Gärtner et al., 2010). Anxiety is a multifaceted phenomenon, consisting of distressing emotions, physiological arousal and associated bodily sensations, thoughts and images of danger, and avoidance and other defensive behaviours. This phenomenon is experienced on an occasional basis by many people in daily life (Özdin & Bayrak Özdin, 2020). Physical conditions can affect mental disorders, especially mood disorders such as depression and anxiety (Scott et al., 2007). Research has shown that 75% of mental disorders are first seen during a patients' youth. In this period, the stress factors due to academic expectations and life can affect mental health (Othman et al., 2019). Stress can trigger depression and anxiety (Phillips et al., 2015). Managing

mental disorders properly is very important, as unmanaged mental disorders may contribute to substance abuse and suicide (Mahmoud et al., 2012). Beyond the importance to the individuals involved, in the nursing workforce, low energy and a high incidence of common mental disorders have

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implications for patient care (Perry et al., 2015). Nurses' mental health problems could endanger the lives and satisfaction of hospital patients and the quality of services provided, and lead to reduced productivity and clinical effectiveness (Loukzadeh & Mazloom Bafrooi, 2013).

Nurses are healthcare workers who play a key role in carrying out healthcare services. During the COVID-19 pandemic, nurses have made a considerable effort to provide isolation and treatment for patients in intensive care units and clinics. They have also met the healthcare needs of other patients undergoing treatment due to other diseases. Factors like prolonged contact with patients who have tested positive for SARS-CoV-2 and a protective equipment shortage have put nurses at significant risk of acquiring the infection (Rosa et al., 2020). These situations can negatively affect the mental health of nurses (Cho et al., 2021). A previous study of 325 participant nurses conducted in the Philippines revealed that nurses who had stronger physical endurance and who received more organisational and social support demonstrated a lower level of anxiety (Labrague & De los Santos, 2020). In Portugal, a study focussing on 767 nurses found that, compared to the general population, nurses had higher levels of depression, anxiety and stress (Sampaio et al., 2020). Besides their role as healthcare workers, many nurses have social roles, including being a parent to their children. According to previous studies, the most important factors affecting the level of anxiety of nurses during the pandemic are being female, having fewer rest periods due to their social roles and having children (Mo et al., 2020).

According to the data released in November 2020 by the International Council of Nurses, at least 1500 nurses working in 44 different countries have died due to COVID-19 (<https://www.icn.ch/news/>). Moreover, since December 2020, around 120,000 healthcare workers in Turkey have tested positive for SARS-CoV-2. It is known that 216 workers, 19 of whom were professional nurses, have since died from the infection (<https://www.icn.ch/news/>). Studies performed on healthcare workers during the pandemic showed that nurses have been one of the groups most affected by COVID-19 in Turkey (Hacimusalar et al., 2020; Elbay et al., 2020). Special attention is required to improve the experience of nurses during the pandemic. Researchers refer to personal protective equipment support, nurse training, reasonable shift schedules, providing psychological support and the support given by both organisations and the government (Huang et al., 2020; Maben & Bridges, 2020; Shen et al., 2020).

During a pandemic, it is essential to determine the needs of nurses and to create interventions. Agreeing with this point of view, this study points out the problems and factors faced by nurses in Turkey in the fight against COVID-19, and their adverse impacts on their mental health, working conditions and social lives. In this context, this study tried to find answers to the questions 'what levels of depression, anxiety and stress did nurses experience?', 'what problems did nurses face and what

concerns did they have?' and 'what factors affected nurses' mental health?'

Methods

Population and Sampling

The research population was comprised of 246,808 nurses actively working in both the private and public sectors in Turkey (Ministry of Health, 2018). Approximately 73% of the nurses worked in a public hospital, 12% in university hospitals and 13% in private hospitals (Ministry of Health, 2018). The formula proposed by Cochran (1977) was used to calculate the sample size in this study. Following the calculations, the number of nurses included in the sample was calculated to be 663, with an error margin of ± 0.05 at a confidence level of 99%. The inclusion criteria were as follows: actively working nurses, in a public or private sector hospital. Participants who did not meet the inclusion criteria were excluded. In the sampling, attention was paid to the fact that the people included in the sample represented nurses working in the public, university and private sectors. For this purpose, the questionnaire was delivered to approximately 1000 nurses working in different regions of Turkey via email and WhatsApp. Considering the total number of nurses, 700 of the questionnaires were delivered to public sector nurses, 150 to university nurses and 150 to private sector nurses.

A total of 924 questionnaires were returned. However, 98 responses that were duplicates or had missing values were not used. Data from 826 nurses were used in this study. The number of responses exceeded the calculated sample size. The distribution of nurses in the sample was close to the distribution of the sector according to state data (public hospitals 79.18%, university hospitals 10.05% and private hospitals 10.77%). Both of these facts suggest that the study sample had good representative power regarding the overall nursing population.

Data Collection

During the study, an e-survey consisting of three parts was used to assess mental health, problems faced and socio-demographic characteristics. In the first section, the Depression, Anxiety and Stress Scale (DASS)-21 was used, comprised of 21 expressions in three dimensions. This is one of the commonly used scales for detecting mental health problems, developed by Lovibond and Lovibond (1995). The validity and reliability study of the Turkish translation was assessed by Yilmaz et al. (2017). According to these results, while the factor loads of the scale vary between .41 and .81, the validity coefficients of the data belonging to the scale range from .755 to .822. Each subscale includes seven statements. The items consisted of statements referring to the previous week, and the respondents were asked to read

Table 1. Participant Characteristics.

		n	%
Gender	Female	736	89.1
	Male	90	10.9
Marital status	Married	536	64.9
	Single	290	35.1
Age	20–30	264	32.0
	31–40	264	32.0
	41–50	272	32.9
	≥51	26	3.1
Department	Surgery	140	16.9
	Internal	510	61.7
	Clinical support	176	21.4
Is the service you work with pandemic service?	Yes	97	11.7
	No	729	88.3
Institution	Public hospital	654	79.2
	University hospital	83	10.1
	Private hospital	89	10.7
Do you have children?	Yes	524	63.4
	No	302	36.6
Can you go home after work or on duty?	Yes	753	91.2
	No	73	8.8
Have you been diagnosed with COVID-19 positive?	Yes	29	3.5
	No	797	96.5
Frequency of contact with COVID-19 patients	Never	265	32.1
	Sometimes	352	42.6
	Often	209	25.3
Are the measures taken in your institution sufficient?	Yes	169	20.5
	Partially	439	53.1
	No	218	26.4
DASS-21 depression	Normal	130	15.7
	Mild	97	11.7
	Moderate	305	36.9
	Severe	159	19.2
	Extremely severe	135	16.3
DASS-21 anxiety	Normal	182	22.0
	Mild	137	16.6
	Moderate	161	19.5
	Severe	121	14.6
	Extremely severe	225	27.2
DASS-21 stress	Normal	283	34.3
	Mild	135	16.3
	Moderate	193	23.4
	Severe	165	20.0
	Extremely severe	50	6.1

these statements and rate the frequency of the negative emotions. The ratings were made using a series of 4-point Likert-type scales from 0 (did not apply to me at all/never) to 3 (applied to me very much/always). Higher scores indicate more severe emotional distress. In the second section of the survey, the problems of healthcare employees during the pandemic and their working area were queried. In the last section, socio-demographic characteristics (e.g. gender, age, marital status, department and job role) were analysed.

All of the respondents gave informed consent at the beginning of the survey by answering a yes-no question. This was in order to confirm their willingness to participate in the study. The data was collected in April and May 2020.

Analysis of the Data

The data used in the scope of this study was evaluated using Statistical Package for the Social Sciences (SPSS) (23) and Analysis of Moment Structures (AMOS) (23) statistical

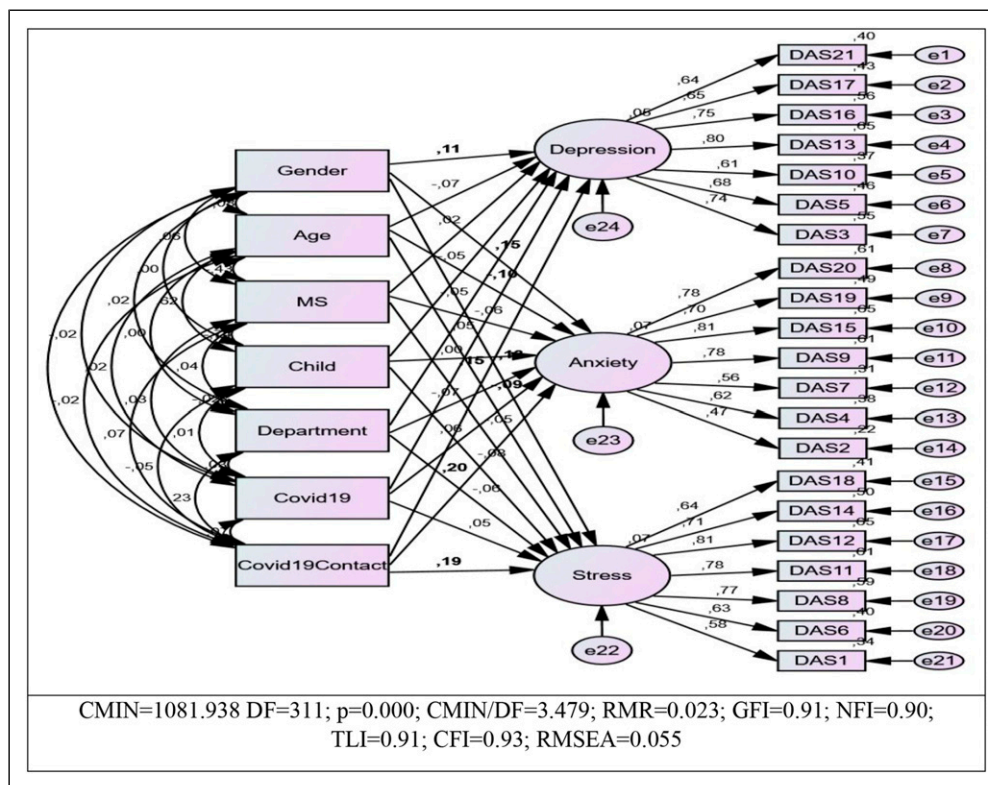


Figure 1. The structural equation model to evaluate the relationship between the socio-demographic characteristics of nurses and their depression, anxiety and stress levels.

software. Descriptive statistics are indicated by frequency, percentage, mean, and *SD*. The structural validity of the DASS-21, was examined by Confirmatory Factor Analysis (CFA). Cronbach's alpha coefficient was used to evaluate the reliability of the DASS-21. To evaluate the relationships between the nurses' socio-demographic characteristics and their psychological symptoms during the COVID-19 pandemic, and the effects of their factors of concern on their psychological symptoms during the COVID-19 pandemic, a structural equation model was used.

Results

Participant Characteristics

The socio-demographic characteristics of the 826 nurses included in the study are shown in [Table 1](#). It can be seen that the majority of participants were female, 64.9% of whom were married, with 32.9% aged between 41 and 50 years old. Additionally, 61.7% of the overall participants provided nursing services in the internal disease department, while 11.7% reported that they worked in pandemic units. Overall, 79.2% of the participants stated that they worked in health facilities operating under the Turkish Health Ministry, and 63.4% of these participants said that they had children.

Regarding the current circumstances, 3.5% of the total participants said that they had been diagnosed with COVID-19, while 67.9% expressed that they had been in contact with COVID-19 patients. Additionally, 26.4% of the overall participants stated that they found the measures taken by the health facilities that they worked for during the COVID-19 pandemic to be insufficient.

Validity and Reliability Analysis

The structural validity of the scale (DASS-21) used in this study was measured by applying CFA. This analysis showed that the model fit criteria (CMIN = 902.289 DF = 185; $p = .000$; CMIN/DF = 4.877; RMR = .028; GFI = .90; NFI = .91; TLI = .92; CFI = .93; RMSEA = .069) were acceptable. For the confidence analysis, the Cronbach's alpha value was .872 for DASS-Depression, .860 for DASS-Anxiety, .872 for DASS-Stress, and .947 for DASS-21 in general. These values are higher than the threshold value of .7 ([Diamantopoulos et al., 2012](#)). These findings guarantee the construct reliability, and all constructs were considered to be accurate.

Results of the Depression Anxiety Stress Scale

The overall and subscale average DASS-21 scores of the participant nurses are shown in [Table 1](#). Out of all participants,

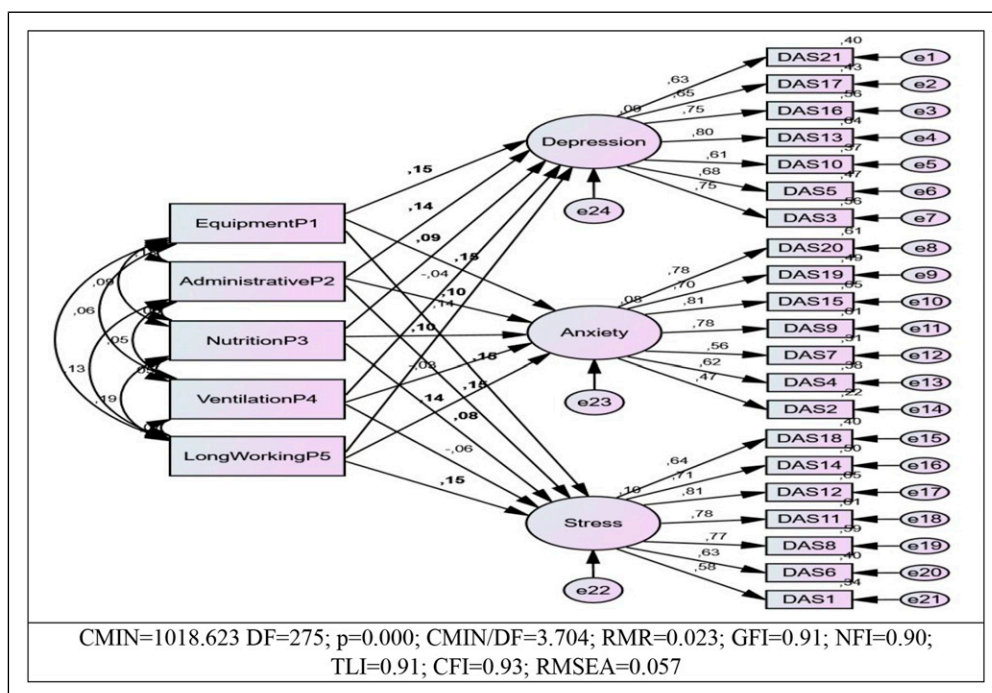


Figure 2. The structural equation model to evaluate the effects of problems on nurses' depression, anxiety and stress levels during the COVID-19 pandemic.

696 (84.3%) showed signs of depression, 644 (78.0%) reported anxiety and 543 (65.74%) reported stress. Considering the depression subscale, 11.7% showed mild, 36.9% moderate, 19.2% severe and 16.3% very severe symptoms of depression. For the anxiety subscale, 16.6% of the sample group showed mild, 19.5% moderate, 14.6% severe and 27.2% severe anxiety symptoms. For the stress subscale, 16.3% showed mild, 23.4% moderate, 20% severe and 6.1% very severe symptoms.

Findings Related to the Relationship Between the Nurses' Socio-demographic Characteristics and Psychological Symptoms

Figure 1 shows the structural equation model and the goodness-of-fit model used to evaluate the relationship between the socio-demographic characteristics of the nurses and their depression, anxiety and stress levels. As seen in Figure 1, the model fit criteria (CMIN = 1081.938 DF = 311; $p = .000$; CMIN/DF = 3.479; RMR = .023; GFI = .91; NFI = .90; TLI = .91; CFI = .93; RMSEA = .055) fell within acceptable model fit criteria limits.

The socio-demographic characteristic 'gender' and contact with patients diagnosed with COVID-19 showed a statistically significant correlation with depression, anxiety and stress levels in these nurses ($p < .05$). It was also found out that the age variable showed a non-significant correlation with the

levels of anxiety and stress. Accordingly, it was found that female nurses showed more symptoms of depression, anxiety and stress than male nurses. Also, nurses who had contact with COVID-19 patients showed more symptoms of depression, anxiety and stress than those who did not. There was an inverse correlation between age and anxiety/stress symptoms. In other words, older nurses had lower levels of anxiety and stress symptoms (Table A1). Thus, it can be suggested that, as they age and progress in the profession, nurses' experience increases and their ability to cope with stress improves.

Findings Related to the Effects of Problems on Nurses' Psychological Symptoms During the COVID-19 Pandemic

The research participants were asked about the issues that had emerged during the COVID-19 pandemic. The top five issues that the participants found challenging were the protective equipment shortage (50.7%), administrative problems (38.5%), issues such as accommodation and nutrition (27.4%), problems with ventilation (27.2%) and long working hours (25.2%).

Figure 2 shows the structural equation model and the goodness-of-fit model used to evaluate the effects of the top five issues on nurses' depression, anxiety and stress levels during the COVID-19 pandemic. As seen in this figure, the

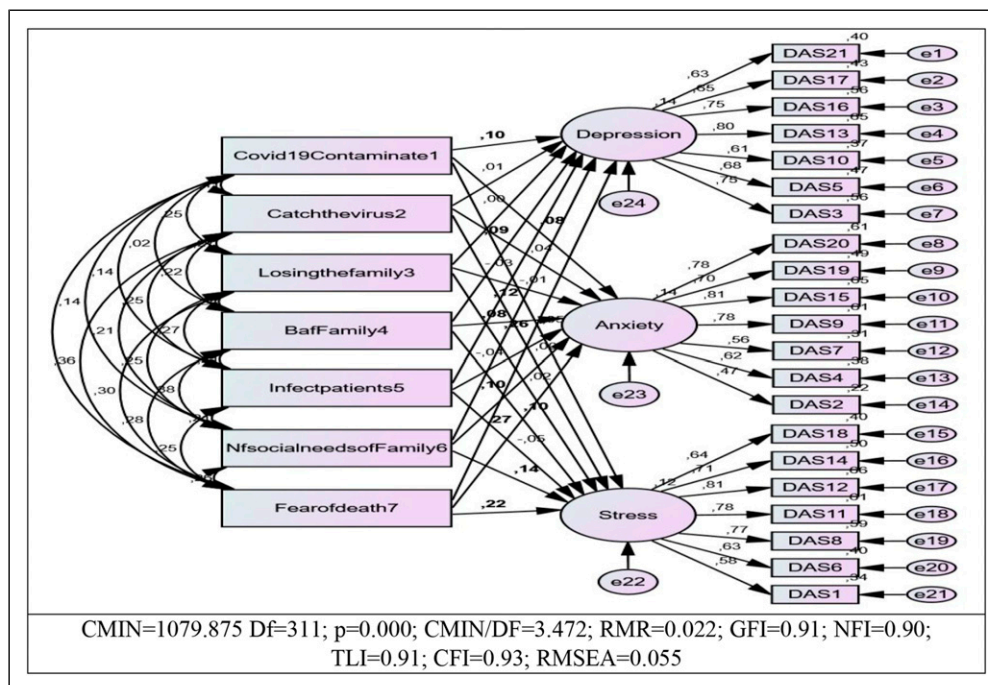


Figure 3. The structural equation model to evaluate the effects of factors concern the nurses on their depression, anxiety and stress levels during the COVID-19 pandemic.

model fit criteria (CMIN = 1018.623 DF = 275; $p = .000$; CMIN/DF = 3.704; RMR = .023; GFI = .91; NFI = .90; TLI = .91; CFI = .93; RMSEA = .057) fell within acceptable limits.

The protective equipment shortage, administrative problems, issues such as accommodation and nutrition, and long working hours were considered by these nurses to have been challenging during the COVID-19 pandemic. Additionally, these challenges were found to have a statistically significant correlation with nurses' depression, anxiety and stress levels ($p < .05$) (Table A2). The problem with the protective equipment shortage observed in the early period of the pandemic seemed to ease over time as the Turkish Health Ministry took responsive measures and the production of protective equipment later increased.

Findings Related to the Effects of the Factors of Concern on Nurses' Psychological Symptoms During the COVID-19 Pandemic

The research participants were asked about the factors that concerned them during the COVID-19 pandemic. The participants listed the following factors: the risk of transmitting the infection to their household and inner circle (89.2%), the risk of getting infected (60.0%), the fear of losing a household member (58.6%), the risk of infecting patients undergoing treatment (41.6%), the inability to meet their household's social needs (37.0%) and the fear of death (30.5%). Figure 3

shows the structural equation model and the goodness-of-fit model used to evaluate the effects of the aforementioned factors of concern on nurses' depression, anxiety and stress levels during the COVID-19 pandemic. As seen in this figure, the model fit criteria (CMIN = 1079.875 Df = 311; $p = .000$; CMIN/DF = 3.472; RMR = .022; GFI = .91; NFI = .90; TLI = .91; CFI = .93; RMSEA = .055) fell within acceptable limits.

Factors including fear of losing a household member, the inability to meet the household's social needs, and a fear of death had a statistically significant effect on the nurses' depression, anxiety and stress levels ($p < .05$). Concern surrounding carrying the infection on to their household members and inner circle also had a statistically significant effect on the nurses' depression and anxiety levels ($p < .05$) (Table A3).

Discussion

Anxiety and depression symptoms are common among nurses in Turkey (Zengin & Gümüş, 2019). However, there is no clear statistical data or cross-sectional study with multiple dimensions and a large sample on this subject before the COVID-19 pandemic. The findings of a study conducted with a limited sample before the pandemic showed that the levels of perceived depression and anxiety were high among nurses, the prevalence of depression was higher than the normal population, and there was a relationship between

burnout and anxiety among nurses (Denat et al., 2016; Boya et al., 2008; Yıkılkan et al., 2014). Moreover, it was determined that working conditions, salary and socio-demographic variables affected the depression and anxiety levels of nurses in the pre-pandemic period in Turkey (Altıntoprak et al., 2008; Muşlu, 2012). The most important finding of this study, which differs from findings before the COVID-19 pandemic, is that the important factors that increase the depression and anxiety levels of nurses were the fear of infecting their families and the fear of death among family members. The data suggests that the COVID-19 pandemic created social anxiety among nurses, as well as professional and personal concerns.

Beyond any doubt, crises such as the COVID-19 pandemic, which do occur infrequently, result in significant and long-lasting effects on both society and healthcare workers. This research shows that, in Turkey, 84.3% of nurses showed signs of depression, while 78.0% showed signs of anxiety and 65.74% showed signs of stress. Regarding the strength of the psychological effects, it was found that 35.5% of the participants showed severe or very severe levels of depression, 41.9% of anxiety and 26.1% of stress. According to study findings, female nurses indicate higher mental health risk, including depression, anxiety and stress symptoms than male nurses (Bahadır-Yılmaz & Yüksel, 2020; Pournalizadeh et al., 2020; Roberts et al., 2021; Shechter et al., 2020). A similar result was obtained in the present study. These findings also show that there is an inverse correlation between age and anxiety/stress symptoms.

The study participants listed the challenges that they face during the ongoing COVID-19 pandemic, including protective equipment shortage, administrative problems, issues related to accommodation and nutrition, problems with ventilation and long working hours. The challenges with the most adverse impact on their psychological conditions were the protective equipment shortage and the long working hours. Another issue with a significant effect on the stress symptoms of the nurses was administrative problems. In many studies focused on nurses during the pandemic, personal protective equipment and the working conditions were emphasised (Pournalizadeh et al., 2020; Sampaio et al., 2020), as in the findings of the current study.

A study carried out by Sampaio et al. (2020) highlighted that long working hours and insufficient personal protective equipment further increased nurses' anxiety and stress levels. Pournalizadeh et al. (2020) stated in their work that difficulty in accessing protective equipment directly affected the rise in the nurses' anxiety and depression levels during the COVID-19 pandemic. As stated earlier, since the early days of the pandemic, many countries, including Turkey, have to a large extent solved the problem of the insufficiency of protective equipment and long working hours. This has been achieved by undertaking the

necessary preventative measures, including the increased production of protective equipment and the recruitment of new personnel.

In studies conducted in various countries, nurses stated that they were worried about passing the infection on to their household members (Halcomb et al., 2020; Nemati et al., 2020; Sun et al., 2020). The research participants in this study stated that the most important factors that worried them included the risk of passing the infection on to their household members and inner circle, the risk of getting infected, the fear of losing a household member, the fear of infecting other patients already undergoing treatment, their inability to meet their household's social needs and their fear of death. Among them, the fear of death was the number one source of concern, with the heaviest adverse effect regarding the mental health of the nurses.

There are a number of implications arising from the findings of this study. These include the importance of providing sufficient protective equipment in a timely manner, keeping working hours to a reasonable level, demonstrating institutional support for nurses and taking the necessary measures to protect workers, their household members and inner circles. These measures are likely to have a positive effect on nurses' mental health. Social and financial support should also be provided.

The support provided to parents and their children (social and psychological support) is of high significance. The press must be encouraged to release more information to inform society about the need for public support for nurses, including reducing the level of violence towards nurses, and the importance of following the rules in the fight against the COVID-19 pandemic. These measures will reduce the case numbers and workload in hospitals and consequently enhance the morale and motivation of healthcare workers.

The main limitation of this study is that it relies solely on data collected using a cross-sectional survey. Similar studies should be carried out by conducting qualitative interviews with nurses.

Conclusion

Beyond any doubt, healthcare workers have played a huge role in the fight against the pandemics that have affected society. Therefore, it is essential to take the necessary measures beforehand to enable nurses, who mainly work at the forefront of patient care, to perform their tasks effectively. As part of the fight against the current pandemic, it is thought that identifying the factors that negatively affect the mental health conditions of healthcare workers, and taking measures to remove them, is an important task.

APPENDIX

Table A1. Findings Related to the Relationship between the Nurses' Socio-demographic Characteristics and Psychological Symptoms.

Endogenous Variables	Exogenous Variables Socio-Demographic	Standardised Regression Weights	S.E.	C.R.	p
Depression	<— Gender ^a	.112	.069	3.009	.003
Anxiety	<— Gender ^a	.152	.077	4.122	***
Stress	<— Gender ^a	.125	.063	3.407	***
Depression	<— Age	-.069	.031	-1.481	.139
Anxiety	<— Age	-.104	.034	-2.245	.025
Stress	<— Age	-.092	.028	-1.985	.047
Depression	<— MS ^b	.016	.066	.289	.773
Anxiety	<— MS ^b	-.057	.073	-1.067	.286
Stress	<— MS ^b	-.050	.060	-.933	.351
Depression	<— Child ^c	-.046	.075	-.742	.458
Anxiety	<— Child ^c	-.004	.083	-.057	.955
Stress	<— Child ^c	-.076	.068	-1.244	.214
Depression	<— Department ^d	-.053	.068	-1.406	.160
Anxiety	<— Department ^d	-.068	.075	-1.839	.066
Stress	<— Department ^d	-.064	.061	-1.733	.083
Depression	<— Covid-19 ^e	.049	.115	1.352	.176
Anxiety	<— Covid-19 ^e	.060	.128	1.663	.096
Stress	<— Covid-19 ^e	.055	.105	1.516	.129
Depression	<— Covid-19Contact ^f	.150	.047	3.929	***
Anxiety	<— Covid-19Contact ^f	.199	.052	5.289	***
Stress	<— Covid-19Contact ^f	.193	.043	5.081	***

^aReference (Male).

^bReference (Married)

^c1 = yes, 0 = no.

^d1 = pandemic, 0 = other

^e1 = yes, 0 = no

^f1 = yes, 0 = no; *** p < .001.

Table A2. Findings Related to the Effects of Problems on Nurses' Psychological Symptoms during the COVID-19 Pandemic.

Endogenous Variables	Exogenous Variables Problems ^a	Standardised Regression Weights	SE	C.R.	p
Depression	<— EquipmentP1	.154	.043	4.202	***
Anxiety	<— EquipmentP1	.155	.047	4.227	***
Stress	<— EquipmentP1	.151	.039	4.157	***
Depression	<— AdministrativeP2	.142	.044	3.878	***
Anxiety	<— AdministrativeP2	.096	.049	2.625	.009
Stress	<— AdministrativeP2	.154	.040	4.212	***
Anxiety	<— NutritionP3	.095	.053	2.598	.009
Stress	<— NutritionP3	.081	.043	2.222	.026
Depression	<— NutritionP3	.090	.047	2.469	.014
Depression	<— VentilationP4	-.039	.047	-1.098	.272
Anxiety	<— VentilationP4	-.032	.053	-0.900	.368
Stress	<— VentilationP4	-.056	.043	-1.562	.118
Depression	<— LongWorkingP5	.142	.049	3.841	***
Anxiety	<— LongWorkingP5	.140	.055	3.768	***
Stress	<— LongWorkingP5	.151	.045	4.095	***

^a0 = no, 1 = yes.

**p < .001.

Table A3. Findings About the Effects of Factors Concern the Nurses on Their Depression, Anxiety and Stress Levels During the COVID-19 Pandemic.

Endogenous Variables	Exogenous Variables	Concern factors ^a	Standardised Regression Weights	S.E.	C.R.	p
Depression	<—	COVID-19Contaminate1	.101	.068	2.763	.006
Anxiety	<—	COVID-19Contaminate1	.075	.076	2.068	.039
Stress	<—	COVID-19Contaminate1	.053	.063	1.462	.144
Depression	<—	Catchthvirus2	.007	.046	.171	.864
Anxiety	<—	Catchthvirus2	.038	.051	.988	.323
Stress	<—	Catchthvirus2	.002	.042	.053	.958
Depression	<—	Losingthfamily3	-.002	.046	-.043	.966
Anxiety	<—	Losingthfamily3	-.010	.052	-.247	.805
Stress	<—	Losingthfamily3	.020	.042	.511	.610
Depression	<—	Baffamily4	.088	.046	2.245	.025
Anxiety	<—	Baffamily4	.080	.051	2.037	.042
Stress	<—	Baffamily4	.101	.042	2.551	.011
Depression	<—	Infectpatients5	-.029	.044	-.759	.448
Anxiety	<—	Infectpatients5	-.042	.050	-1.110	.267
Stress	<—	Infectpatients5	-.052	.041	-1.362	.173
Depression	<—	NfsocialneedsofFamily6	.116	.047	2.945	.003
Anxiety	<—	NfsocialneedsofFamily6	.097	.053	2.480	.013
Stress	<—	NfsocialneedsofFamily6	.139	.044	3.496	***
Depression	<—	Fearofdeath7	.256	.051	6.242	***
Anxiety	<—	Fearofdeath7	.273	.057	6.786	***
Stress	<—	Fearofdeath7	.218	.047	5.370	***

^a0 = no, 1 = yes.

***p < .001.

Author Contributions

Study conception and design: O.I., D.T. and A.Z. Data collection: O.I, N.T. and O.T. Data analysis and interpretation: O.I, N.T. and O.T. Drafting of the article: O.I.,D.T., N.T. and A.Z. Critical revision of the article: O.I., D.T., N.T., A.Z. and O.T.

Declaration of Conflicting Interests

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Ethical Approval

Before initiating the research, ethical permission was granted by the Human Research Ethics Committee of Atılım University, Number: 59394181-604.01.02-2485.

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