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RESEARCH

The Effect of Personality Traits of Surgical Nurses on COVID-19 Fear, Work Stress and Psychological Resilience in the Pandemic

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A B S T R A C T

Keywords:

psychological resilience
work stress
fear
perioperative nurse
COVID-19 pandemic

Purpose: This research was carried out to determine the effects of the personality traits of surgical nurses on covid-19 fear, work stress and psychological resilience in the pandemic.

Design: The research was descriptive and cross-sectional types.

Methods: The study was conducted between February 2021 and May 2021 at a State University Research Hospital. The research aimed to reach all surgery nurses (357) working in surgical units without selecting a sample. The sample included 325 participants. At the end of the study, the participation rate was 91.03%. Study reporting adheres to STROBE checklist.

Findings: It was determined that 43.4% of the nurses participating in the study were in the age range of 26-30, 64.9% were women. The correlation values between the COVID-19 Fear Scale and the Nurse Stress Scale scores were found to be significant in the positive direction. The correlation values between the Eysenck Personality Questionnaire neuroticism sub-dimension and the Nurse Stress Scale, and Fear of COVID-19 Scale scores were found to be positive.

Conclusion: During the pandemic, it is suggested that nurses' work stress and psychological resilience levels should be evaluated at regular intervals and that in-service trainings on coping with stress and stress management should be organized. Taking the necessary precautions and improving working conditions will have positive effects on both the health of nurses and patient care.

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The World Health Organizations (WHO) declared COVID-19 a pandemic on March 11, 2020, and COVID-19 continued to spread rapidly around the world, making it one of today's most important problems.¹ When the data published by WHO were examined, the total number of cases was 386,548,962 and the total number of deaths was 5,705,754 in the period from December 12, 2019, when the first case was seen, to February 4, 2022.² In Turkey, it was reported that the total number of cases was 10,808,770 and the total number of deaths was 85,600 in the period from March 11, 2020, when the first case was reported, to February 4, 2022.³

In the fight against the pandemic, nurses fought on the front line and ensured the continuity of health care services.⁴ In this process, health care professionals, who are in one-to-one contact with patients and care for patients, have a higher risk of transmission

compared to other individuals. The number of cases and deaths announced, quarantine practices, heavy working conditions, and increased workload may cause stress, fear, and psychological problems in health care workers.⁵⁻⁷ In addition, Kang et al.⁸ stated that during the pandemic period, health care professionals faced mental health problems, such as stress, anxiety, and anger. Mo et al.,⁹ determined that there was widespread pressure on nurses struggling with the pandemic.

Background

Health workers experience anxiety, fear, stress, and sleep disorders due to the pandemic.^{7,10-12} According to the study of Aksoy and Koçak¹³, the most intense emotions that nurses and midwives felt related to COVID-19 were anxiety, restlessness, and fear. Ünver and Yenigün⁷ determined that surgical nurses who worked as a surgical nurse before the pandemic and now continue to work in pandemic units including emergency service, surgical wards, intensive care units and operating room had a moderate fear of COVID-19.

Conflict of Interest: None to report.

Data Availability Statement: All data are available upon request to the corresponding author.

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Nurses face many situations that create stress in their work environment. In addition to these situations, the levels of stress and fear caused by the COVID-19 pandemic may differ according to the personal and cultural characteristics, beliefs, and experiences of nurses. The most important reason for this difference is that individuals have different personality traits.^{14,15}

Personality traits have a significant impact on individuals' understanding and evaluation of the working environment. Individuals' personality traits affect the work environment; at the same time, personality traits are also affected by the work environment.¹⁶ In addition to being an important factor affecting the formation of stress, personality also changes the effect level of stress. Depending on their personality traits, individuals can easily be negatively affected by stress or remain resistant to stress.^{17,18}

When the studies on work stress in nursing are examined, stress sources arising from the working environment are quite high. Surgical units are environments with intense risk for nurses due to reasons such as infection risk, excess working conditions, and exposure to dangerous substances.¹⁹⁻²¹ In addition, the need to meet the care needs of patients in surgical units is much higher than in other units. However, the stress on nurses from working in surgical units for a long time can be psychologically exhausting. In this context, work stress may be felt higher in surgical nurses due to the COVID-19 pandemic. In this respect, it is very important to determine the COVID-19 fear, work stress, and psychological resilience levels of nurses working in surgical units and providing one-to-one care to patients during the COVID19 pandemic. This research was carried out to determine the effects of the personality traits of nurses working in surgical units in a state university research hospital during the COVID-19 pandemic on the levels of fear of COVID-19, work stress, and psychological resilience.

Research Questions

At the end of the research, the aim is to answer the following questions:

- Do the personality traits of nurses working in surgical units during the COVID-19 pandemic period have an effect on the level of fear of COVID-19?
- Do the personality traits of nurses working in surgical units during the COVID-19 pandemic period have an effect on the level of work stress?
- Do the personality traits of nurses working in surgical units during the COVID-19 pandemic period have an effect on the level of psychological resilience?

Methods

Setting and Samples

The research was descriptive and cross-sectional types. The study was conducted between February 2021 and June 2021 at a State University Research Hospital. The research aimed to reach all surgery nurses (N = 357) operating room, intensive care unit, emergency room, and surgical services without selecting a sample. The sample included 325 participants. At the end of the study, the participation rate was 91.03%.

Measurements

The data were collected by using the personal information form prepared by the researchers in line with the literature, Eysenck Personality Questionnaire-Revised Abbreviated Form (EPQ-RAF), Nurse Stress Scale (NSS), Connor-Davidson Resilience Scale (CD-RISC), and Fear of COVID-19 Scale.

Personal Information Form

The Personal Information Form was prepared by the researchers in line with the literature. It consists of 22 questions that include age, gender, marital status, educational status, and sociodemographic characteristics of COVID-19 and inquires about situations that may affect stress and COVID-19 fear and resilience levels, such as which surgical unit they work in.^{7,10,22}

Eysenck Personality Questionnaire- Revised Abbreviated Form

EPQR-A, was developed by Francis et al.²³ and translated and validated in Turkish by Karancı et al.²⁴ in 2007. EPQR-A consists of 24 items and three sub-dimensions in which personality is evaluated. These sub-dimensions are extroversion, neuroticism, and psychoticism. Also, the "lie" sub-dimension was added to prevent bias at the time of application of the form and to provide control related to its validity. Each question in the survey is answered as "Yes" and "No". Each of the sub-dimensions consists of six items and is evaluated. In the Turkish validity and reliability study of the scale, the Cronbach Alpha value was calculated as $\alpha=0.84$, 0.82, 0.69, and 0.69 for extraversion, neuroticism, psychoticism and lying dimensions, respectively.

Fear of COVID-19 Scale

The Fear of Covid-19 Scale was developed by Ahorsu et al.²⁵ to measure the fear of COVID-19. The scale was translated and validated in Turkish by Satici et al.²⁶ in 2020. The scale is unidimensional and includes seven items. The items are scored using a 5-point Likert type scale including the answers; "5- strongly agree," "4- agree," "3- neither agree nor disagree," "2- disagree," "1- strongly disagree." The minimum score possible is seven and the highest score possible is 35. A high score indicates a high fear of COVID-19. In the Turkish validity and reliability study of the scale, the Cronbach Alpha value was calculated as $\alpha = 0.82$.

Nurse Stress Scale (NSS)

The NSS, developed by Gray-Toft and Anderson, consists of 34 items and seven factors including "Uncertainty Concerning Treatment," "Workload," "The Death of a Patient," "Conflict with a Physician," "Conflict with Peers," "Insufficient Support," and "Suffering Patient."²⁷ The scale was translated and validated in Turkish by Mert et al.²⁸ in 2020. The items rated using the 4-point Likert system as (1) never, (2) sometimes, (3) often, (4) very often. The minimum score possible is 34 and the highest score possible is 136. The high overall score indicates that the nurse experiences more frequent stress periods about individual stress problems in the physical, psychological, and physical environment. In the Turkish validity and reliability study of the scale, the Cronbach Alpha value was calculated as $\alpha = 0.86$.

Connor-Davidson Resilience Scale

The CD-RISC was developed by Connor and Davidson²⁹ and the validity and reliability of the Turkish version were confirmed by Karaimak in 2010.³⁰ The CD-RISC consists of 25 items and three sub-dimensions, each rated on a five-point scale ranging from "not at all true" (0) to "almost always true" (4). Total scores range from 0 to 100 with higher scores indicating greater resilience. In the Turkish validity and reliability study of the scale, the Cronbach Alpha value was calculated as $\alpha = 0.92$.

Ethical Considerations

For the research, necessary permissions were obtained from the Ethics Committee of the Faculty of Nursing at a state University and institutional permission was obtained from a state University Research Hospital. Before the data collection forms were applied, the purpose of the research was explained to the

Table 1
Distribution of Socio-Demographical Characteristics of Nurses Working in Surgical Units (N = 325)

Characteristics	N	%
<i>Age</i>		
20-25 years	138	42.5
26-30 years	141	43.4
31-35 years	34	10.4
>36 years	12	3.7
<i>Gender</i>		
Female	211	64.9
Male	114	35.1
<i>Marital status</i>		
Married	113	34.8
Single	212	65.2
<i>Working clinic</i>		
Surgical unit	150	46.2
Intensive care unit	76	23.4
Operating room	54	16.6
Emergency unit	45	13.8
<i>Working schedule</i>		
Only day shift	31	9.5
Only night shift	18	5.5
Night and day shift	276	85

participants and their verbal and written approvals were obtained by informing them that they can leave the study at any stage of the research whenever they want. The STROBE checklist was used in the reporting of the study.

Data Analysis

The study data were analyzed using the Statistical Package for Social Sciences (SPSS, Chicago, IL) for Windows, version 22.0. Percentages, Kruskal-Wallis, T test and The Pearson product-moment correlation coefficient tests, Cronbach Alpha analysis were used to evaluate the data.

Results

A large number (43.4%) of the nurses participating in the study were in the age range of 26-30, 64.9% were women, and 65.2% were single. Many (46.2%) of the nurses worked in surgical services, 23.4% in the intensive care unit, 16.6% in the operating room, and 13.8% in the emergency room. The majority (85%) of the nurses worked in shifts (Table 1).

A majority (52.9%) of the nurses participating in the study previously were infected with COVID-19, and 77.5% stated that the virus was transmitted to them from the hospital. Of the nurses' relatives, 32.9% were infected with COVID-19, and 19.7% of the nurses transmitted COVID-19 infection to one of their relatives. The rate of feeling guilty about the risk of transmitting COVID-19 infection to one of the relatives of the nurses was 57.2%. Some (22.2%) nurses were considering resigning and 56.6% of them were considering switching to another profession due to the impact of the COVID-19 pandemic period (Table 2).

No significant difference was found in terms of NSS mean scores according to age, gender, having a child, working style, and choice of work unit for voluntarily. ($P < .05$ was considered significant). According to these findings, the NSS scores of married nurses were higher than those of single nurses. Nurses working in the operating room had higher NSS scores than nurses working in the emergency room, intensive care unit, and surgical service (Table 3).

There was no significant difference in the mean scores of the COVID-19 Fear Scale scores of nurses according to gender. A significant difference ($P < .05$) was found between gender in terms of the

Table 2
Distribution of Demographic Characteristics of Nurses Working in Surgical Units Regarding COVID-19 (N = 325)

	N	%
<i>COVID-19 infected status</i>		
Yes	172	52.9
No	153	47.1
<i>Contagion Source of COVID-19 Infection</i>		
Family	9	5.2
Hospital	134	77.5
Friends	20	11.6
Other	10	5.7
<i>COVID-19 infected status of relatives</i>		
Yes	107	32.9
No	218	67.1
<i>Transmission of COVID-19 infection by nurses to their relatives</i>		
Yes	64	19.7
No	261	80.3
<i>Nurses' guilt related to the risk of transmitting COVID-19 infection to their relatives</i>		
Yes	186	57.2
No	139	42.8
<i>Consideration of resigning during the COVID-19 pandemic period</i>		
Yes	72	22.2
No	253	77.8
<i>Consideration of moving to another profession during the COVID-19 pandemic period</i>		
Yes	184	56.6
No	141	43.4

mean score of the COVID-19 Fear Scale according to age, marital status, unit, and working type. Nurses in the 36 and over age group had higher COVID-19 fear scores than other age groups. Married nurses had higher COVID-19 fear scores than single nurses. Nurses working in the operating room had higher COVID-19 fear scores than nurses working in the emergency room, intensive care unit, and surgical service. Nurses who work constantly during the day had higher COVID-19 fear scores than those who work shifts or constantly at night (Table 3).

No significant difference was found in terms of CD-RISC mean scores of nurses according to age, marital status, unit, and working type. A significant difference ($P < .05$) was found in terms of CD-RISC mean scores according to gender. According to these findings, the psychological resilience of male nurses was higher than that of female nurses (Table 3).

The correlation values between the EPQ-RAF neuroticism sub-dimension and the NSS and Fear of COVID-19 Scale scores were found to be positive ($P < .05$) and significant. The stress and fear of COVID-19 increased in nurses with neuroticism personality trait (Table 4).

A positive ($P < .05$) significant correlation was found in the correlation values between the Eysenck Personality Questionnaire extraversion sub-dimension and CD-RISC scores. The psychological resilience of nurses with extraversion personality traits was higher (Table 4).

The correlation values between the lie dimension and the nurse stress scale and CDRS scores were found to be positive ($P < .05$) and significant (Table 4).

The correlation values between the COVID-19 Fear Scale and the NSS scores were found to be significant in the positive direction ($p < .05$). Therefore, as the fear of COVID-19 increases, nurse stress increases (Table 4).

Discussion

The research findings were discussed in order to determine the relationship between the personality traits of nurses working in surgical units and the fear of COVID-19, work stress, and psychological resilience levels.

Table 3
Comparison of Nurse Stress Scale, COVID-19 Fear Scale, and Connor-Davidson Resilience Scale Scores According to Nurses' Descriptive Characteristics (N = 325)

		Nurse Stress Scale X±SD	COVID-19 Fear Scale X±SD	Connor-Davidson Resilience Scale X±SD
Age	20-25 years	96.02±19.15	23.18±5.44	55.19±17.66
	26-30 years	93.18±17.79	22.28±6.19	58.15±18.91
	31-35 years	91.50±21.51	22.85±6.39	55.85±21.03
	>36 years	94.08±15.78	28.42±3.11	60.58±15.71
	Test, Pvalue	KW=3.028 P = .387	KW = 13.494 P = .004	KW = 2.296 P = .513
Gender	Female	95.41±18.54	23.39±6.16	54.46±18.07
	Male	92.10±18.92	22.12±5.34	60.96±18.65
	Test, Pvalue	t=1.525 P = .128	t=1.937 P = .054	t=-3.062 P = .002
Marital Status	Married	97.14±17.17	24.24±5.64	57.26±19.42
	Single	92.59±19.40	22.20±5.95	56.55±18.09
	Test, p value	T = 2.093 P = .037	T = 2.984 P = .003	T = .327 P = .744
Working Clinic	Operating Room	100.96±18.66	24.46±5.74	55.19±21.53
	Emergency Unit	92.76±16.07	23.96±5.42	57.98±13.94
	Intensive Care Unit	94.08±19.86	21.72±6.65	57.66±19.63
	Surgical Unit	92.36±18.49	22.72±5.60	56.47±18.08
	Test, P value	F=2.978 P = .032	F=2.827 P = .039	F=.265 P = .85
Working Schedule	Only Day shift	99.42±20.06	26.61±5.62	50.35±15.89
	Only Night shift	98.56±15.24	22.39±5.07	54.22±16.56
	Night and Day shift	93.38±18.69	22.57±5.87	57.62±18.79
	Test, Pvalue	KW=4.07 P = .130	KW=16.43 P = .000	KW=4.61 P = .100

P values shown in boldface represent $P < 0.05$.

When the studies on work stress of nurses are examined, the stress levels of nurses are different, and they experience work stress for different reasons. The mean work stress score of surgical nurses was 96.02±19.153 higher in the 20-25 age range. Similarly, in the pre-pandemic study of Öcal et al., it was found that the work stress of surgical nurses in the same age group was higher than in other age groups.²¹ It is possible that nurses in this age group experience more stress due to the fact that they have just started the profession, their lack of experience, intense working conditions during the pandemic period, and fear of being infected. In the literature, it has been stated that older nurses with increased experience have lower stress, anxiety, and depression, whereas younger nurses have a higher risk of developing anxiety and depressive symptoms.³¹ This finding of this study is similar to the literature.³¹

The work stress mean score was found to be higher in female nurses 95.41±18.540. Similarly, Ersan et al. found that women experience more work stress than men.³² Men and women respond

differently to stress mentally, emotionally, and physically. Women's psychological responses to stress are more than their physiological responses. In this respect, the psychological effect of stress is higher in women. Lai et al.³³ found that being a woman is associated with experiencing severe depression, anxiety, and distress. In another study conducted on nurses, the female gender was found to be positively associated with moderate/high stress.³⁴

We found that the work stress mean score of surgical nurses was higher in the married group 97.14±17.166, and the difference significantly higher. This finding is similar to the result of Camci and Kavuran's study.³⁵ In Turkish culture, marriage imposes more responsibilities on individuals. This finding can be explained by factors such as the intense working tempo in the pandemic, the fear of being infected, and fear of infecting family members.

We found that the mean work stress score of the nurses working in the operating room 100.96±18.662 was higher than the nurses working in the emergency room, intensive care unit, and surgical

Table 4
Correlation Values Related to the Relationship Between Nurses' Stress Scale, Connor-Davidson Resilience Scale, and COVID-19 Fear Scale Scores According to Eysenck Personality Traits

		1	2	3	4	5	6
1- EPQ*-Neuroticism Dimension	r	1					
2- EPQ-Extraversion Dimension	r	-.539**	1				
3- EPQ-Psychoticism Dimension	r	-.131*	-.237**	1			
4- EPQ- Lie Dimension	r	-.565**	.448**	-.430**	1		
5-Nurse Stress Scale	r	.348**	-.218**	-.164**	.348**	1	
6- Connor-Davidson Resilience Scale	r	-.460**	.485**	.006	.299**	-.497**	1
7- COVID-19 Fear Scale	r	.240**	-.148**	-.206**	-.032	.507**	-.493**

* EPQ: Eysenck Personality Questionnaire

** P = .05

service, and the difference between them was significant. Chiang and Chang³⁶ stated in their study that the work stress levels of nurses differ according to the unit in which they work. Alayanak's³⁷ determined that the emergency service workers had higher work stress. Camci and Kavuran³⁵ determined that the work stress of nurses working in intensive care units was higher. Operating rooms are an environment with intense risk for health care professionals. Working in the same environment and in the same position for a long time, excessive workload and working hours, and emergency surgery cases involving COVID-19 may cause the stress level of nurses to increase.

We found that the work stress mean score of the surgical nurses who work continuously during the day was 99.42 ± 20.058 higher, and the difference between them was insignificant. Contrary to the findings of this research, the study conducted by Alayanak³⁷ before the pandemic determined that nurses who kept shifts experienced more work stress. In addition to the workload in the clinic, we can state that the nurses who work during the day feel the work stress more intensely due to being in contact with the patients and relatives of the patients during the pandemic period.

We found that the mean COVID-19 Fear score of the surgical nurses at the age of 36 and above was 28.42 ± 3.118 higher, and the difference between them was significant. Similarly, Ünver and Yenigün⁷ found the COVID-19 Fear score was higher in older nurses. Contrary to this result, the COVID-19 Fear score was found to be higher in the younger age group in the study of Saraçoğlu et al.¹² Data published by the Ministry of Health shows that the rates of cases, hospitalizations, and deaths for COVID-19 increase with age.³⁸ The increase in chronic diseases and some risk factors in nurses due to advancing age may cause an increase in the level of fear of COVID-19.

We found that the mean COVID-19 fear score was 23.39 ± 6.164 higher in women. Bakioglu et al.,³⁹ stated that the fear level of COVID-19 among women is higher than that of men. Contrary to this result, Cao et al.⁴⁰ stated that the psychological effects of COVID-19 do not change with gender and show similar characteristics.

We found that the mean COVID-19 fear score was 24.24 ± 5.640 higher in the married group, and the difference between them was significant. Similarly, Arpacioğlu et al.,⁴¹ found that among health care professionals, those living with parents/spouses/children experienced a higher fear of COVID-19 than those living alone. As a reflection of the married nurses living with their spouse/child/parents, the thought of infecting both themselves and their family members may cause them to feel more fear of COVID-19.

We found that the mean COVID-19 fear score of nurses working in the operating room was 24.46 ± 5.735 higher, and the difference between them was significant. The individuals with the highest risk of contamination of pathogens with materials that have come into contact with blood and body fluids, known as biological risks, are operating room workers. The most commonly transmitted pathogens in the literature are hepatitis B virus (HBV), hepatitis C virus (HCV), and HIV.⁴² During the pandemic period, ambient air is constantly polluted due to the spread of the expiratory air of the patients, especially during the surgery of patients infected with COVID-19. Prolonged exposure to this air in operating rooms may cause them to feel more fear. It has been stated in the literature that operating room and intensive care workers experience fear of COVID-19.^{12,43,44}

We found that the mean COVID-19 fear is higher in nurses 26.61 ± 5.619 who work continuously during the day, and the difference between them is significant. The day shift, when there is heavy traffic due to the discharge of patients during the day, the admission of new patients, and discharge training for patients and their families, may cause an increase in the level of fear of COVID-19 in employees.

The mean psychological resilience score of the surgical nurses was 60.58 ± 15.710 at the age of 36 and above, and the difference between

them was insignificant. This finding is similar to the result of Kaya's study.⁴⁵ In the literature, the level of psychological resilience varies according to age.^{45,46} As age progresses, individuals gain more coping skills with the effect of the development of their personalities and the increase in their life experiences.⁴⁷ This situation contributes to the fact that people are less affected by negative situations and increase their psychological resilience levels.

We found that the mean psychological resilience score of male nurses was 60.96 ± 18.648 at most, and the difference between them was significant. This result is similar to the literature findings.^{48,49} Contrary to these findings, there are studies in which the psychological resilience levels of women are higher than those of men.^{45,46,50} We can say that men express resilience more because the roles and expectations imposed on men in society may cause them to feel more resilient in the face of difficult situations.

The mean psychological resilience score of the surgical nurses was found to be 57.26 ± 19.424 higher in the married group. While the psychological resilience levels of single nurses were found to be higher in studies conducted before the pandemic period,^{45,46} other studies, similar to the findings of this study, found that the level of psychological resilience of married nurses was higher.^{50,51} It has been suggested that married individuals have higher resilience due to the additional layer of social connection in their social support systems compared with unmarried individuals.⁵²

Nurses working in the emergency department had the highest mean score for psychological resilience. This finding is similar to the results of the study by Karakiş.⁵³ Pre-pandemic, it was determined that the operating room and intensive care nurses had higher psychological resilience.^{46,54} The experience of emergency nurses may have paved the way for them to be less affected by the stress factor during this period.

When the correlation relationship between dependent variables was examined, between neuroticism sub-dimension, nurse stress, and fear of COVID-19, it was found that there is a positive significant relationship between the extraversion sub-dimension and psychological resilience and between the fear of COVID-19 and nurse stress.

In the literature, it has been stated that the neuroticism personality type is more prone to negative emotional states and stress formation.^{24,55} We can state that nurses with neuroticism personality type are more affected physically and psychologically and experience more stress. The stress levels of nurses with neurotic personality type who are more affected physically and psychologically during the pandemic process have increased. In this context, we can say that the increased stress level and anxiety in nurses with the neuroticism personality trait are a triggering factor for fear of COVID-19.

Limitations

This study has some limitations. The data obtained from the study were limited only to surgical nurses working in a training and research hospital. In this context, the results of the study cannot be generalized to all surgical nurses. In this study, fear of COVID-19, work stress and resilience measurements were limited by the scale tool and detailed causes were not evaluated. Therefore, the results of nurses' fear of COVID-19, work stress and psychological resilience are limited to scale items, nurses' personality and some descriptive characteristics. In order to increase the validity and reliability of the research results, it can be recommended to expand the scope of the research and apply the sample size in larger groups and in surgical units in different hospitals.

Conclusion

In this study, it was determined that the levels of fear of COVID-19, work stress, and psychological resilience of surgical nurses differ

according to their individual characteristics, such as age, gender, marital status, unit, and working style. In addition, it has been determined that the personality traits of surgical nurses are closely related to the fear of COVID-19, work stress, and psychological resilience levels. Most nurses are afraid of COVID-19, and work-related stress levels increase accordingly. Considering these results, employing nurses in appropriate areas will have positive effects on both nurses and work efficiency. During the pandemic, it is suggested that nurses' work stress and psychological resilience levels should be evaluated at regular intervals and that in-service education on coping with stress and stress management should be organized. The education can contribute to reducing the stress level of nurses due to the fear of COVID-19 and increasing psychological resilience. Taking the necessary precautions and improving working conditions will have positive effects on both the health of nurses and patient care.

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