

The effect of emotional intelligence on burnout and fear of COVID-19: A Descriptive and cross-sectional study on nurses

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Abstract:

Burnout causes both physical and psychosocial problems. Nurses who experience burnout are more likely to underperform, compromise professional quality standards, engage in unethical practices, neglect their patients, work reluctantly, suffer from low job satisfaction, and consider quitting. Emotional intelligence is one's ability to manage one's emotions. Emotional intelligence improves psychological health. This cross-sectional and descriptive study investigated the effect of emotional intelligence on burnout and fear of COVID-19. The research was conducted between March and July 2021. The sample consisted of 110 nurses. Data were collected using a personal information form, the Emotional Intelligence Scale (EIS), the Fear of COVID-19 Scale (FCV-19S), and the Maslach Burnout Inventory (MBI). Participants had high EIS, FCV-19S, and MBI scores. Participants who had received training in emotional intelligence before had a significantly higher median EIS score than those who had not ($p < 0.05$). Moreover, participants who had received training in emotional intelligence before had substantially lower median MBI "emotional exhaustion" and "depersonalization" subscale scores than those who had not ($p < 0.05$). There was a negative correlation between EIS and MBI scores, suggesting that the higher the emotional intelligence, the lower the burnout levels ($p < 0.05$). However, there was no correlation between EIS and FCV-19S scores ($p > 0.05$). Nurses with high emotional intelligence levels are less likely to experience burnout. Authorities should train nurses in emotional intelligence to help them cope with the challenges of possible epidemics, such as the COVID-19 pandemic.

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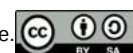
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INTRODUCTION

Emotional intelligence is the ability to recognize and change one's own and other people's emotions (Drigas et al., 2021). Emotional intelligence is potential power, defined as the ability to base thoughts on logical data using emotional intuitions (Zall & Kangavari, 2022). Emotional intelligence is one's ability to manage emotions (Szcześniak & Tulecka, 2020). Emotional intelligence improves psychological health (Moradian et al., 2022). It helps people cope with stress (Cejudo et al., 2018), experience less chronic fatigue (Huang et al., 2020), manage their emotions, perform better at work (Alonazi, 2020), and adopt health-promoting behaviors (Salysers et al., 2017). It also increases patient satisfaction (Oyur Çelik, 2017). People with high emotional intelligence better cope with stressors and adapt to novel situations (Baudry et al., 2018; Cejudo et al., 2018). Emotional intelligence also affects nurses' care behaviors and, thus, the quality of care (Salysers et al., 2017). Burnout, a common psychological phenomenon among nurses, adversely affects the quality of care.

Maslach and Jackson (1981) define burnout as "a syndrome of emotional exhaustion and cynicism that frequently occurs among individuals who do 'people-work.'" They state that burnout has a three-dimensional structure: emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout is defined as a syndrome conceptualized as resulting from chronic

workplace stress that has not been successfully managed. The novel coronavirus disease (COVID-19) broke out at the end of 2019 and took hold of the whole world. Nurses experienced high levels of burnout as they worked tirelessly to withstand the dynamic and severe nature of the COVID-19 pandemic. Research has shown that three in five nurses experienced burnout during the COVID-19 pandemic (Kamali et al., 2020; Sinsky et al., 2021). Galanis et al. (2021) conducted a systematic review and meta-analysis to determine the level of burnout and associated risk factors among nurses (N=18.935) during the COVID-19 pandemic. They found that three in five nurses experienced emotional exhaustion (34.1%), depersonalization (12.6%), or reduced personal accomplishment (15.2%). Research has also shown that nurses were three times more likely to experience burnout during the COVID-19 pandemic than before (Woo et al., 2020; Galanis et al., 2021).

Burnout causes both physical (insomnia, headaches) and psychosocial problems (depression, anxiety, substance abuse) (Salyers et al., 2017). Nurses who experience burnout are more likely to underperform, compromise professional quality standards, engage in unethical practices, neglect their patients, work reluctantly, suffer from low job satisfaction, and consider quitting (Salyers et al., 2017; Jun et al., 2021). Not only does burnout take a toll on nurses, but it also jeopardizes the functionality of healthcare institutions and the well-being of patients. Burnout is associated with increased mortality, hospital falls and traumas, nosocomial infections, medical errors, unethical behaviors, and negligence. A negative correlation exists between burnout and patient safety and satisfaction (Salyers et al., 2017).

Consultation-liaison psychiatry (CLP) nurses are responsible for helping nurses express their feelings about work stress, solving their problems, supporting them, creating and maintaining support groups, and planning therapeutic group activities needed to increase their professional self-esteem, personal self-esteem, and entrepreneurship (Mishkin et al., 2022). CLP nurses are responsible for integrating care's medical and psychiatric aspects, evaluating its effectiveness, and identifying and eliminating the causes that reduce it (Ferrari et al., 2019). Burnout adversely affects nurses' mental health and the quality of care they provide (Kakemam et al., 2021). Therefore, consultation-liaison psychiatry nurses can utilize emotional intelligence to help nurses develop resilience to cope with stressors and mental health disorders due to the COVID-19 pandemic. Our results will also help authorities develop nursing interventions better to prepare nurses for times of crisis in the future.

METHOD

Objective

This cross-sectional and descriptive study investigated the effect of emotional intelligence on burnout and fear of COVID-19. The research was conducted between March and July 2021.

Sample

The study population consisted of 400 nurses working for a Training and Research Hospital (KEAH) north of Türkiye in 2021. The sample size was determined using the formula for a known population: $(n = Nt^2 pq/d^2 (N-1)+t^2pq)$. The results showed that a sample of 197 would be large enough to detect significant differences.

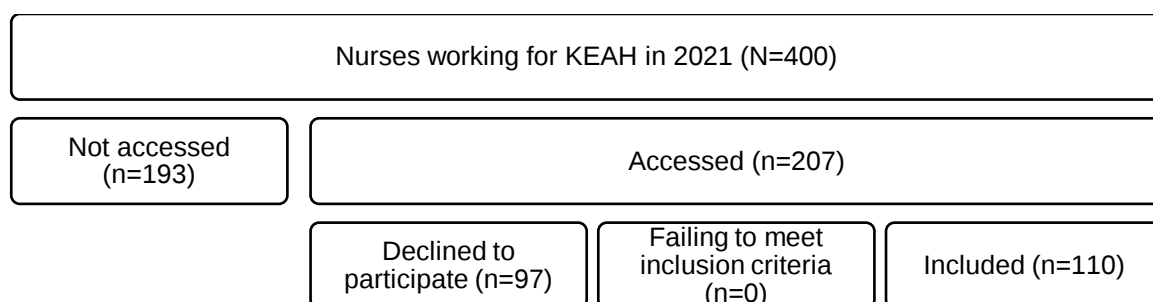


Figure 1. Sample determination

Data Collection

The researcher briefed all nurses about the research purpose and procedure. She then sent a link to the data collection forms (Google Forms) via social media platforms (WhatsApp, Instagram). She obtained informed consent from those who agreed to participate in the study. Participants filled out the data collection forms after clicking the checkbox at the beginning of the questionnaire, indicating that they consented to participate in the study. The questionnaire consisted of an informed consent form, a personal information form, the Emotional Intelligence Scale (EIS), the Fear of COVID-19 Scale (FCV-19S), and the Maslach Burnout Inventory (MBI). Each participant filled out the survey only once. All data collection forms were included in the analysis because participants were not allowed to leave the questions blank. The sample consisted of 110 nurses who met the inclusion criteria and completed the data collection forms. The sample size was determined using the formula for a known population: $(n = Nt^2 pq/d^2 (N-1)+t^2pq)$. The results showed that a sample of 197 would be large enough to detect significant differences. However, the researcher could not get a hold of 197 nurses for two reasons. First, the hospital implemented preventive measures due to the COVID-19 pandemic. Second, some nurses were on the sick list, took a leave of absence, or were under quarantine. A power analysis was performed to determine if the sample size ($n = 110$) was adequate. The results showed that the study had an 80% reliability at the 5% error level.

Personal Information Form

The personal information form was based on the researcher's literature review (Balai et al., 2022; Bakioğlu et al., 2020; Galanis et al., 2021; Kamali et al., 2020). The form consisted of seven multiple-choice items (age, gender, marital status, education, work experience, caring for patients who tested positive for COVID-19, and having previously received training in emotional intelligence).

Emotional Intelligence Scale

The Emotional Intelligence Scale (EIS) was developed by Lee and Kwak (2011) and adapted to Turkish by Kayıhan and Arslan (2016). The instrument consists of 20 items rated on a five-point Likert-type scale. The scale has three subscales: emotional recognition (Items 1, 2, 3, 4, 5, and 6), emotional facilitation (Items 7, 8, 9, 10, 11, and 12), and emotional regulation (Items 13, 14, 15, 16, 17, 18, 19, and 20). No items are reverse scored. The total score ranges from 20 to 100, with higher scores indicating higher levels of emotional intelligence. The Turkish version has a Cronbach's alpha of 0.83 (Kayıhan & Arslan, 2016), which was 0.93 in the present study. Moreover, the subscales "emotional recognition," "emotional facilitation," and "emotional regulation" had Cronbach's alpha values of 0.81, 0.87, and 0.86, respectively.

Fear of COVID-19 Scale

The Fear of COVID-19 Scale (FCV-19S) was developed by Ahorsu et al. (2020) and adapted to Turkish by Bakioğlu et al. (2020). The instrument consists of seven items scored on a five-item Likert-type scale ("1=strongly disagree," "2=disagree," "3=neither agree nor disagree," "4=agree," and "5=strongly agree"). The total score ranges from 7 to 35, with higher scores indicating a greater fear of COVID-19. The Turkish version has a Cronbach's alpha of 0.88 (Bakioğlu et al., 2020), which was 0.92 in the present study.

Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) was developed by Maslach and Jackson (1981). The inventory consists of 22 items and three subscales: emotional exhaustion (Items 1, 2, 3, 6, 8, 13, 14, 16, and 20), personal accomplishment (4, 7, 9, 12, 17, 18, 19, and 21), and depersonalization (Items 5, 10, 11, 15, and 22). The items of the subscales "emotional exhaustion" and "depersonalization" are negative statements, while those of the subscale "personal accomplishment" are positive statements. Therefore, higher "emotional exhaustion" and "depersonalization" scores indicate higher burnout levels, whereas higher "personal accomplishment" scores indicate lower burnout levels (Maslach & Jackson, 1981). The original subscales "emotional exhaustion," "depersonalization," and "personal accomplishment" have Cronbach's alpha values of 0.83, 0.65, and 0.72, respectively (Maslach & Jackson, 1981). The Turkish scale has a Cronbach's alpha of 0.82, while the subscales

“emotional exhaustion,” “depersonalization,” and “personal accomplishment” have Cronbach’s alpha values of 0.84, 0.73, and 0.71, respectively. In the present study, the subscales “emotional exhaustion,” “depersonalization,” and “personal accomplishment” had Cronbach’s alpha values of 0.79, 0.84, and 0.93, respectively.

Ethical Considerations

An ethics committee approved the study. Written permission was obtained from the Scientific Research Platform of the Turkish Ministry of Health and the Provincial Health Directorate. Authorization was obtained from the authors who adapted the scales to Turkish. All nurses were briefed about the research purpose and procedure. Informed consent was obtained from those who agreed to participate in the study.

Statistical Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS, v. 23) at a significance level 0.05. Number, percentile, and median were used for descriptive statistics. The Kolmogorov-Smirnov test was used for normality testing. The results showed that the data were nonnormally distributed. Spearman's correlation coefficient was used to determine the relationship between scale scores. The Mann-Whitney U test was used for data comparison between the two groups. The Kruskal-Wallis H was used to compare data between three or more independent groups.

RESULT

Participants had a mean age of 32.48 ± 5.37 years. Most participants were women (72.7%; $n=80$). More than half of the participants were married (55.5%; $n=61$). More than half of the participants had health sciences\ nursing degrees (61.8%; $n=68$). More than a quarter of the participants had health vocational high school degrees (28.2%; $n=31$). Eleven participants had master's degrees in nursing (10%). More than a quarter of the participants had previously received training in emotional intelligence (29.1%; $n=32$). Participants had 9.8 ± 7.14 years of work experience. More than half of the participants stated that they cared for patients who might have COVID-19 or had tested positive for COVID-19 (61.8%) (Table 1).

Table 1. Sociodemographic Characteristics ($n=110$)

Sociodemographic	Characteristics	No	%
Age (year)	23-28	51	46.4
	29-34	17	15.5
	35-40	15	13.6
	≥ 41	27	24.5
	Mean	32.48 ± 5.37	
Gender	Woman	80	72.7
	Man	30	27.3
Marital status	Single	49	44.5
	Married	61	55.5
Education (degree)	Health Vocational High School	31	28.2
	Health Sciences/Nursing Faculty	68	61.8
	Master's Degree in Nursing	11	10.0
Have you ever received training in emotional intelligence before?	Yes	32	29.1
	No	78	70.9
Work experience (year)	0-5	43	39.1
	6-10	26	23.6
	11-15	14	12.7
	16-20	6	5.5
	>20	21	19.1
	Mean	9.8 ± 7.14	
	Always	32	29.1

Sociodemographic	Characteristics	No	%
How often do you care for patients who may have COVID-19 or have tested positive for COVID-19?	Often	36	32.7
	Sometimes	31	28.2
	Never	11	10.0

Participants had a median EIS score of 79, indicating high emotional intelligence levels. They had a median FCV-19S score of 16, indicating a great fear of COVID-19. They had a median MBI score of 71, indicating high burnout levels (Table 2).

Table 2. Emotional Intelligence Scale Scores (n=110)

Scale		Cronbach Alpha (n=110)	Median	Minimum	Maximum
EIS	Emotional recognition	0.81	24	12	30
	Emotional facilitation	0.87	24	14	30
	Emotional regulation	0.86	31	11	40
	EIS Total	0.93	79	53	100
FCV-19S	Fear of COVID-19	0.92	16	7	35
MBI	Emotional exhaustion	0.79	29.5	10	44
	Depersonalization	0.84	12	5	23
	Personal accomplishment	0.93	29.5	15	39

EIS: Emotional Intelligence Scale, FCV-19S: Fear of COVID-19 Scale, MBI: Maslach Burnout Inventory

Table 3 shows the distribution of scale scores by sociodemographic characteristics. Younger participants had a significantly higher median MBI “depersonalization” subscale score than their older counterparts. However, older participants had a significantly higher median FCV-19S score than their younger counterparts ($p>0.05$). Participants with health vocational high school degrees had a significantly higher median MBI “depersonalization” subscale score than those with health sciences/nursing faculty degrees and those with master’s degrees in nursing ($p<0.05$).

Participants who had received training in emotional intelligence before had significantly higher median EIS “emotional recognition” and “emotional facilitation” subscale scores than those who had not ($p<0.05$). However, participants who had received training in emotional intelligence before had significantly lower median MBI “emotional exhaustion” and “depersonalization” subscale scores than those who had not ($p<0.05$). Participants who had never cared for patients who might have COVID-19 or had tested positive for COVID-19 had a significantly higher median EIS total score than others ($p<0.05$).

Gender, marital status, and work experience did not affect participants’ scale scores ($p>0.05$). Age did not affect participants’ EIS total and subscale scores and MBI “emotional exhaustion” and “personal accomplishment” subscale scores ($p>0.05$). Education did not affect participants’ EIS total and subscale scores, FCV-19S scores, and MBI “emotional exhaustion” and “personal accomplishment” subscale scores ($p>0.05$).

There was no significant difference in the EIS “emotional regulation” subscale score, FCV-19S score, and MBI “personal accomplishment” subscale score between participants who had received training in emotional intelligence and those who had not ($p>0.05$). There was no significant difference in EIS and MBI subscale scores and FCV-19 scores between participants who had never cared for patients who might have COVID-19 or who had tested positive for COVID-19 and those who had ($p>0.05$).

Table 3. The Distribution of Scale Scores by Sociodemographic Characteristics (n=110)

		EIS				FCV-19S		MBI		
		N	Emotional recognition	Emotional facilitation	Emotional regulation	EIS Total		Emotional exhaustion	Depersonalization	Personal accomplishment
Age (year)	23-28	51	24	23	31	78	15	29	13	28
	29-34	17	24	24	32	81	14	28	12	30
	35-40	15	24	24	31	78	20	31	14	30
	≥41	27	25	24	31	78	20	31	8	30
	KW		$\chi^2=2.273$	$\chi^2=1.029$	$\chi^2=1.283$	$\chi^2=1.034$	$\chi^2=10.059^*$	$\chi^2=0.956$	$\chi^2=8.949^*$	$\chi^2=1.031$
Education (degree)	Health Vocational	31	24	23	31	78	19	31	15	30
	High School									
	Health Sciences/ Nursing Faculty	68	24	24	31	78.5	16.5	28.5	11	29
	Master's degree in nursing	11	24	24	29	78	14	27	12	29
	KW		$\chi^2=1.14$	$\chi^2=0.71$	$\chi^2=2.815$	$\chi^2=0.181$	$\chi^2=2.244$	$\chi^2=1.69$	$\chi^2=7.043^*$	$\chi^2=0.692$
Have you ever received training in emotional intelligence?	Yes	32	25	25	32	80.5	15	24	10.5	31
	No	78	24	23	31	77.5	16.5	31	13.5	29
	MWU		$Z=-2.072^*$	$Z=-2.712^*$	$Z=-1.393$	$Z=-2.185^*$	$Z=-0.646$	$Z=-2.577^*$	$Z=-1.967^*$	$Z=-1.492$
How often do you care for patients who may have COVID-19 or have tested positive for COVID-19?	Always	32	24	24	31.5	79	17	29.5	12.5	31
	Often	36	24	22	30.5	75	17	31	13.5	27.5
	Sometimes	31	24	24	31	78	16	27	12	30
	Never	11	25	25	31	82	15	23	9	31
	KW		$\chi^2=5.246$	$\chi^2=7.094$	$\chi^2=5.011$	$\chi^2=10.156^*$	$\chi^2=1.112$	$\chi^2=5.153$	$\chi^2=1.623$	$\chi^2=7.099$

*p<0.05

EIS: Emotional Intelligence Scale, FCV-19S: Fear of COVID-19 Scale, MBI: Maslach Burnout Inventory

KW: Kruskal-Wallis H test, MWU: Mann-Whitney U test

Table 4 shows the correlations between scale scores. There was a positive correlation between EIS “emotional recognition” and MBI “personal accomplishment” subscale scores ($r=0.229$; $p<0.01$), suggesting that participants who could recognize their emotions were more likely to attain person accomplishments because people who can recognize their emotions can notice the consequences of their actions and can guide themselves, resulting in them coming to terms with their strengths and weaknesses.

There was a positive correlation between EIS “emotional facilitation” and MBI “personal accomplishment” subscale scores ($r=0.391$). There was also a negative correlation between EIS “emotional facilitation” and MBI “emotional exhaustion” subscale scores ($r=-0.389$; $p<0.01$). This result showed that participants with high emotional facilitation are less likely to suffer from burnout.

Table 4. Correlation between Scale Scores (n=110)

		1	2	3	4	5	6	7	8
EIS	1. Emotional recognition	1							
	2. Emotional facilitation	0.383**	1						
	3. Emotional regulation	0.390**	0.588**	1					
	4. EIS Total	0.635**	0.796**	0.883**	1				
FCV-19S	5. Fear of COVID-19	-0.069	-0.030	-0.077	-0.092	1			
MBI	6. Emotional exhaustion	-0.119	-0.389**	-0.327**	-0.342**	0.104	1		
	7. Depersonalization	-0.128	-0.169	-0.164	-0.177	-0.002	0.544**	1	
	8. Personal accomplishment	0.299**	0.391**	0.481**	.0494**	-0.170	-0.293**	-0.395**	1

** p<0.01

*p<0.05

EIS: Emotional Intelligence Scale, FCV-19S: Fear of COVID-19 Scale, MBI: Maslach Burnout Inventory

There was a negative correlation between EIS “emotional regulation” and MBI “emotional exhaustion” subscale scores ($r = -0.327$; $p < 0.01$). There was also a positive correlation between EIS “emotional regulation” and MBI “personal accomplishment” subscale scores ($r = 0.481$; $p < 0.01$).

There was a negative correlation between EIS total score and MBI “emotional exhaustion” subscale scores ($r = -0.342$; $p < 0.01$). There was also a positive correlation between the EIS total score and the MBI “personal accomplishment” subscale score ($r = 0.494$; $p < 0.01$). These results showed that participants with higher emotional intelligence levels were less likely to suffer from exhaustion and more likely to enjoy personal accomplishments. In other words, the more emotionally intelligent participants were less likely to experience burnout. There was no correlation between FCV-19S and other scale scores ($p > 0.05$).

DISCUSSION

Our participants had high median EIS total and subscales scores. Research also shows that nurses have moderate to high emotional intelligence levels (Oyur Çelik, 2017; Alonazi, 2020; Moradian et al., 2022). Nurses needed more emotional intelligence to cope with fear and stress during the pandemic (Hu et al., 2020). Nurses with high emotional intelligence are better at adapting to new circumstances and coping with stress (Baudry et al., 2018; Cejudo et al., 2018). Therefore, they are expected to be more resilient to mental health problems during the pandemic. Moreover, nurses with high emotional intelligence are more likely to exhibit high job performance (Jang et al., 2016) and collaborate effectively with their colleagues, strengthening nurse-patient communication and, thus, positively affecting the quality of care (Salyers et al., 2017).

Nurses experienced high levels of anxiety, depression, and stress that resulted in burnout because they had to work long hours under strenuous conditions without social support during the COVID-19 pandemic (Sampaio et al., 2020; Galanis et al., 2021). Our participants had median MBI “emotional exhaustion,” “depersonalization,” and “personal accomplishment” subscale scores of 29.5, 12, and 29.5, respectively. Our results showed that nurses had higher burnout levels during the pandemic than before. Many researchers have reported that nurses had high burnout levels during the pandemic (Smallwood et al., 2021; Galanis et al., 2021;). Nurses experienced increased levels of stress and burnout during the pandemic for various reasons (Murat et al., 2021). They cared for many patients who tested positive for COVID-19. They worked day and night under quarantine. They had an increased workload because hospitals were understaffed. They knew little about COVID-19. They worked for pandemic hospitals with inadequate protective equipment and social support (Galanis et al., 2021). Sixth, they suffered from skin lesions caused by protective equipment. Seventh, they had to work shifts in different units (Hu et al., 2020). Eighth, they worried about getting infected with COVID-19 (Galanis et al., 2021).

Bandyopadhyay et al. (2020) conducted a systematic review to investigate the infection and mortality rates among healthcare professionals worldwide from COVID-19. They reported 152.888 infections and 1.413 deaths. They noted that nurses were infected with COVID-19 more often than other healthcare professionals. Preventive measures (social distancing, quarantine), uncertainties in the course of the disease, and disinformation about COVID-19 on social media cause people to

experience panic, fear, anxiety, anger, and guilt (Dubey et al., 2020). Research shows that nurses greatly fear COVID-19 (Hu et al., 2020; Baysal et al., 2022). Our participants also had a high median FCV-19S score. Nurses dealt with heavy workloads, had difficulty obtaining protective equipment (Turkish Nurses Association, 2020), and were discriminated against during the COVID-19 pandemic (Stelnicki et al., 2020). Our participants had a high median FCV-19S score for various reasons. First, there were many COVID-19 cases in the province where the study was conducted. Second, the coronavirus was causing deaths every day. Third, nurses faced the challenges of the pandemic without much professional and social support. Nurses also had post-traumatic stress disorder (PTSD), social stigmatization, depression, sleep disorders, burnout, and suicidal thoughts. They noted that long-term social isolation, economic crisis, difficulties accessing mental health treatment, existing physical and mental illnesses, stigmatization, and being a healthcare professional were risk factors for suicide (Awan et al., 2022). Research has also shown that healthcare professionals experienced burnout, PTSD, and sleep problems during the COVID-19 pandemic, with nurses being twice more likely to present with those symptoms than other healthcare professionals (Balai et al., 2022; Smallwood et al., 2021). Our result shows that nurses need protective measures and initiatives to increase resilience because they are vulnerable to mental health problems in times of crisis.

Our participants who had received training in emotional intelligence before had significantly higher median-EIS "emotional recognition" and "emotional facilitation" subscale scores than those who had not ($p < 0.05$). This result suggests that emotional intelligence can be improved by training. Participants who had always or never cared for patients who might have COVID-19 or who had tested positive for COVID-19 had a significantly higher median EIS total score than those who had often or sometimes cared for patients who might have COVID-19 or who had tested positive for COVID-19 ($p < 0.05$). Research shows a positive correlation between age and emotional intelligence (Aslan & Yağcı Özen, 2021). However, age did not affect our participants' EIS scores, which may have two reasons. First, many factors affect emotional intelligence. Second, almost half of our participants were between 23 and 28 (46%; $n = 51$).

Gender, marital status, work experience, and education did not affect our participants' EIS total scores. The factors affecting nurses' emotional intelligence and reported three findings. First, single nurses had higher emotional intelligence levels than their married counterparts. Second, there was a positive correlation between work experience and emotional intelligence. Third, there was no significant difference in emotional intelligence levels between male and female nurses. Marital status and gender did not affect emotional intelligence. There was a positive correlation between work experience and emotional intelligence. All in all, these results indicate that numerous factors affect emotional intelligence.

Our results pointed to a positive correlation between age and FCV-19S scores. This can be explained by the fact that older nurses are more scared of getting infected with the coronavirus than their younger colleagues because the virus is more deadly for older people (UNICEF, 2022). There was no significant difference in FCV-19S scores between participants who had previously received training in emotional intelligence and those who had not. Nurses who are aware of their feelings, thoughts, and behaviors can better manage their fears.

There was no significant difference in FCV-19S scores between male and female participants. There was no significant difference in FCV-19S scores between single and married participants. There was no significant difference in FCV-19S scores between participants who had never cared for patients who might have COVID-19 or who had tested positive for COVID-19 and those who had ($p > 0.05$). Education and work experience also did not affect our participants' FCV-19S scores. However, researchers have reported a significant difference in FCV-19S scores between men and women (Bakioğlu et al., 2020; Hu et al., 2020; Huang et al., 2020). These results indicated that too many confounding factors affect people's fear of COVID-19.

Age and MBI "depersonalization" subscale scores were negatively correlated. However, there was no correlation between age and MBI "emotional exhaustion" and "personal accomplishment." These results indicate that young nurses are not experienced enough to deal with work stress and pandemic conditions. Therefore, they are vulnerable to depersonalization.

Participants with bachelor's and master's degrees had significantly lower median MBI "depersonalization" subscale scores than those with health vocational high school degrees.

However, there was no significant difference in MBI “depersonalization” subscale scores between participants with bachelor’s and master’s degrees. These results suggest that nurses with health vocational high school degrees are more likely to objectify people and trivialize professional situations because they step into professional life at a young age.

Participants who had received training in emotional intelligence before had significantly lower median MBI “emotional exhaustion” and “depersonalization” subscale scores than those who had not. On the other hand, participants who had received training in emotional intelligence before had a significantly higher median MBI “personal accomplishment” subscale score than those who had not. These results indicate that nurses who receive or have received training in emotional intelligence are less likely to experience burnout. Emotional intelligence can protect against burnout because it helps one cope with stress (Cejudo et al., 2018).

Gender, marital status, and work experience did not affect participants’ MBI subscale scores. Moreover, there was no significant difference in MBI subscale scores between participants who cared for patients who might have COVID-19 or had tested positive for COVID-19 and those who had not. Male nurses had a significantly higher mean MBI “personal accomplishment” subscale score than their female counterparts. They also noted that age, marital status, education, and work experience did not affect nurses’ MBI scores. However, female healthcare professionals had higher burnout levels than their male counterparts. They also added that nurses who often cared for patients who had tested positive for COVID-19 had higher burnout levels than those who had not. However, they also did not detect a relationship between marital status and burnout.

There was a positive correlation between EIS “emotional recognition” and MBI “personal accomplishment” subscale scores. There was a negative correlation between EIS “emotional facilitation” and “emotional regulation” subscale scores and MBI “emotional exhaustion” subscale scores. These results are consistent with the literature (Lampreia et al., 2022). Emotional intelligence may be a protective factor against burnout because people with high emotional intelligence levels are better at coping with stress, managing crises, and adapting to novel situations (Baudry et al., 2018).

People with high emotional intelligence are better at coping with stress and adapting to novel situations (Baudry et al., 2018; Cejudo et al., 2018), whereas people with low emotional intelligence have a greater fear of COVID-19 (Sfeir et al., 2022). Therefore, we expected to find that nurses with higher emotional intelligence would have a more minor fear of COVID-19. However, our results did not indicate a significant relationship between EIS and FCV-19S scores. Moreover, we did not detect a significant relationship between FCV-19S scores and MBI subscale scores, which disagreed with the literature (Hu et al., 2020). We think that these results are due to three factors. First, numerous confounding variables affect how scared nurses are of COVID-19. Second, nurses experience anxiety and depression due to the uncertainties of the pandemic. Third, nurses do not receive adequate moral and financial support.

CONCLUSION

Authorities should enable nurses to access preventive healthcare services and help them develop effective coping strategies. Policymakers should formulate policies to provide nurses with primary preventive initiatives to prepare them for future epidemics and help them identify risk factors early. Researchers should conduct further studies and identify the factors that can promote nurses’ mental health. They should also determine the factors that cause burnout in nurses and provide interventions to help them develop resilience to deal with mental health problems. Universities should offer courses on emotional intelligence and put reward mechanisms into practice. Hospitals should provide nurses with better working conditions and in-service training programs. Hospitals should also have counseling units where nurses can share their problems and emotions with professionals. Universities and hospitals should encourage nursing students and nurses to develop emotional intelligence to help them recognize their emotions and develop critical thinking skills. Universities and hospitals should also allow nursing students and nurses to attend courses, workshops, and symposiums to help them improve themselves personally and professionally.

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