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COVID-19 experiences and fears among nurses: A cross-sectional study Izkušnje in strahovi medicinskih sester v času covida-19: presečna raziskava

Esin Kavuran^{1,*}, Rabia Atli¹

Key words: SARS Coronavirus 2 infection; perception; anxiety; nursing; quantitative study

Ključne besede: koronavirusna bolezen; zaznava; anksioznost; zdravstvena nega; kvantitativna raziskava

- ¹ Atatürk University, Faculty of Nursing, 25240 Erzurum, Turkey
- * Corresponding author/ Korespondenčni avtor: esinkavuran@hotmail.com

ABSTRACT

Introduction: COVID-19 has profoundly affected people's physical and mental health. Nurses, a crucial part of the healthcare workforce, face considerable anxiety due to the risk of infection. The aim of this study was to examine the relationship between COVID-19 fear levels among infected and non-infected nurses and to identify the influencing factors.

Methods: For this cross-sectional study, data were collected through an online survey from 20 to 27 December 2020. A total of 281 nurses in Turkey participated, of whom 95 were COVID-19-positive and 186 were COVID-negative. Data were collected using the Fear of COVID-19 Scale. Descriptive statistics, Kolmogorov-Smirnov test, one-way ANOVA, Mann-Whitney U, and Kruskal-Wallis tests were used. Statistical significance was set at p < 0.05.

Results: The sample consisted of 58.9% women and 41.1% men. Of the participants who tested positive, 42.1% had cared for COVID-19 patients on the night shift, compared to 35.5% of those who tested negative. Both groups reported using inadequate protective equipment. COVID-19-positive nurses reported an anxiety score of 22.89 (s = 8.97), while COVID-19-negative nurses reported an anxiety score of 21.10 (s = 7.11).

Discussion and conclusion: Higher anxiety levels were observed among nurses who tested positive for COVID-19. These results emphasise the need for more support and resources for nurses. It is important to address nurses' anxiety and take appropriate measures, including reasonable shift schedules and psychological support.

POVZETEK

Uvod: Covid-19 močno vpliva tako na posameznikovo telesno kot tudi na duševno zdravje. Medicinske sestre kot ključna skupina zaposlenih v zdravstvu doživljajo precejšnjo zaskrbljenost zaradi tveganja okužbe. Namen raziskave je bil preučiti razmerje med stopnjo strahu zaradi virusa covid-19 med okuženimi in neokuženimi medicinskimi sestrami ter opredeliti dejavnike, ki na to vplivajo.

Metode: Podatki za presečno raziskavo so bili zbrani s spletno anketo, ki je potekala med 20. in 27. decembrom 2020. Sodelovalo je 281 medicinskih sester iz Turčije, od katerih je bilo 95 pozitivnih in 186 negativnih na koronavirusno bolezen. Podatke smo zbrali z *Lestvico strahu zaradi covida-19* (angl.: *Fear of COVID-19 Scale*). Za analizo podatkov smo uporabili opisno statistiko, Kolmogorov-Smirnov test, enosmerni test ANOVA, Mann-Whitneyjev U-test in Kruskal-Wallisov test. Statistična pomembnost je bila določena s p < 0,05.

Rezultati: Vzorec sestavlja 58,9 % žensk in 41,1 % moških. Med udeleženci, ki so bili pozitivni na testu, je 42,1 % skrbelo za paciente s koronavirusno boleznijo med nočno izmeno v primerjavi s 35,5 % tistih, ki so bili pri testiranju negativni. Obe skupini sta poročali o uporabi neustrezne zaščitne opreme. Medicinske sestre, pozitivne na covid-19, so izrazile višjo stopnjo zaskrbljenosti (22,89, s = 8,97) kot tiste, ki so bile negativne (21,10, s = 7,11).

Razprava in zaključek: Med medicinskimi sestrami in zdravstveniki, pozitivnimi na covid-19, je bila opažena višja stopnja zaskrbljenosti. Te ugotovitve poudarjajo potrebo po povečanju sredstev, namenjenim zdravstvenim delavcem. Bistveno je, da se strahovi zaposlenih primerno obravnavajo in se zagotovi izvajanje ustreznih ukrepov, vključno z učinkovitim načrtovanjem delovnih izmen in nudenjem psihološke podpore.



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Introduction

The SARS-CoV-2 virus, which causes pneumonia, first appeared in Wuhan, China, in 2019 (Karakoç et al., 2020). As the virus spread rapidly to almost every country in the world, the World Health Organization (WHO) declared the outbreak a pandemic (Kiyat et al., 2020). With the rapid increase in cases worldwide, healthcare professionals, especially the high-risk groups for COVID-19, were the most severely affected occupational group during the pandemic (Oyur et al., 2020).

During the COVID-19 pandemic, healthcare professionals often accepted the increased risk of infection as part of their profession. Nevertheless, they were particularly concerned and anxious about family transmission, including their elderly, debilitated or chronically ill family members (Baki & Piyal, 2020). The WHO stated that the COVID-19 disease could not be stopped without the protection of healthcare professionals. Therefore, it was imperative to ensure the safety and mental and physical well-being of health professionals on the frontline of the fight against the pandemic to cope with its challenges (Yücel & Koç, 2020).

The uncertainty about COVID-19 put a psychological strain on people. People were worried about whether they would get sick, how long the pandemic would last and what the future would bring (Pietrabissa & Simpson, 2020). From the outbreak of the pandemic, stockpiling of food, closing homes, perceiving every physical symptom as a symptom of COVID-19 disease, polluting social media and people's minds, reports about the pandemic on the Internet and television caused persistent fear and panic (Aşkın et al., 2020).

Due to its high infection rate and the associated high mortality rate, COVID-19 naturally caused great concern among people and caused fear of contact with people infected with COVID-19 (Hatun et al., 2020). Health professionals had to control the risk of transmission to themselves, the patients they cared for, and their family members. In addition, difficult working conditions such as isolation, working in high-risk areas, and contact with infected people caused trauma and anxiety among nursing staff (Polat & Coşkun, 2020).

Fear was closely related to the frequency and setting of transmission, mortality and morbidity (Metin & Çetinkaya, 2020). A study by Hatun et al. (2020) reported that infection with COVID-19 was initially not considered to be of great importance. Once the severity of the incident was understood, there was a sense of panic among the population, as people feared infecting themselves, their family members or those around them (Hatun et al., 2020). Health professionals were under considerable physical and psychological pressure from this large-scale infectious public health event (Chen et al., 2020).

The aim of this study was to assess the level of COVID-19-related fear among nurses, comparing those infected with the virus with those not infected, and to identify the factors contributing to their increased fear during the pandemic.

Method

We conducted a descriptive cross-sectional study using the questionnaire method. This method allowed us to measure the relationship between COVID-19 fear levels among nurses infected with COVID-19 and those not infected, as well as the influencing factors. We followed the STROBE checklist for cross-sectional studies (von Elm et al., 2007).

Description of the research instrument

The research data were collected using the *Fear of COVID-19 Scale* (Ahorsu et al., 2020) to assess nurses' COVID-19 fear levels and a sociodemographic characteristics form, which consists of 14 researcher-prepared questions about nurses' sociodemographic characteristics and their thoughts on COVID-19.

The Fear of COVID-19 Scale was developed by Ahorsu et al. (2020), and the Turkish validity and reliability study was conducted by Satici et al. (2021). The scale can be applied to a wide age range, including university students and adults. All items of the scale, which consists of seven questions, are scored positively and there are no reverse-scored items. The items of the scale were rated on a five-point Likert scale (from 1 "strongly disagree" to 5 "strongly agree"). The resulting scale scores ranged from 7 to 35, with a high score indicating a high level of COVID-19 pandemic fear. In this study, the Cronbach alpha value of the scale was found to be 0.76.

Description of the research sample and data collection

The study population consisted of 1607 nurses working in a pandemic hospital in eastern Turkey. In the study, without going into the sampling procedure, the formula $(n = (Z \ 1-\alpha/2)2^*(p)(q)/d2)$ $(n = desired sample size, Z \ 1-\alpha/2 = critical value and the standard value for the corresponding confidence level (at 95% CI or 5% significance level (type I error), it was 1.96. At 99% CI, it was 2.58), <math>P = expected prevalence - based on previous research, <math>q = 1-p$, d = margin of error or precision) was used to determine the number of people to be included in the sample for cases where the population used to determine the sample size is known. The calculated sample size was 272 (Sharma et al., 2020).

The inclusion criteria for the sample were: 1) nurses working in the pandemic hospital, 2) nurses caring for COVID-19-positive patients, and nurses

Table 1: *Demographic characteristics of the participants*

Characteristics	COVID-19(+) (n = 95)		COVID-19 (-) (n = 186)	
	n	%	n	%
Gender				
Female	56	58.9	142	76.3
Male	39	41.1	44	23.7
Marital Status				
Married	34	35.8	95	51.1
Single	61	64.2	91	48.9
Age				
20-less	7	7.4	7	3.8
21-29	32	33.7	102	55.8
30-39	29	30.5	45	24.2
40-49	15	15.8	24	12.9
50-more	12	12.6	8	4.3
Educational Level				
High School	34	35.8	76	40.9
Undergraduate/Graduate	61	64.2	110	59.1
Years of service				
Less than five years	10	10.5	13	7.0
5-10 years	40	42.1	106	57.0
11-16 years	18	18.9	41	22.0
16-20 years	9	9.5	10	5.4
20 years and more	18	18.9	16	8.6
Units	22	24.2	20	15.6
Internal Medicine Unit	23	24.2	29	15.6
Surgical Unit	31	32.6	35	18.8
Emergency Intensive Care Unit	15 11	15.8 11.6	45 46	24.2 24.7
Operating Theatre	6	6.3	12	6.5
COVID-19 Unit	9	9.5	19	10.2
COVID-19 Training	<u> </u>	9.3	19	10.2
Yes	42	44.2	87	46.8
No	53	55.8	99	53.2
Frequency of care for COVID-19-positive patients		33.0		33.2
Always	27	28.4	29	15.6
Sometimes	40	42.1	66	35.5
Rarely	28	29.5	91	48.9
Adequacy of protective equipment condition in the unit of work		27.0		10.7
Adequate	48	50.5	87	46.8
Inadequate	47	49.5	99	53.2
Regularly tracking COVID-19 news updates		-2.00		
Yes	50	52.6	92	49.5
No	45	47.4	94	50.4
Spending more time with family during the pandemic				·
Yes	39	41.1	62	33.3
No	56	58.9	124	66.7
Taking the maximum necessary precautions				
Yes	36	37.9	90	48.4
No	59	62.1	96	51.6
Belonging to the risk group triggers fear				
Yes	43	45.3	99	53.2
No	52	54.7	87	46.8
Providing care for a family member				
Yes	42	44.2	89	47.8
No	53	55.8	97	52.2

Legend: n – number; % – percentage

Table 2: Comparison of COVID-19 Fear Scale total scores for COVID-19 positive nurses and COVID-19 negative nurses

Scale	$COVID-19 (+)$ $\bar{x} \pm s$	COVID-19 (-) $\bar{x} \pm s$	p
Total	22.89±8.97	21.10±7.11	< 0.001

Legend: \overline{x} – average; s – standard deviation; p – statistical significance

volunteering to participate in the study. The exclusion criteria were the opposite of the inclusion criteria. The online data collection tools were distributed to 374 nurses. However, 21 did not agree to participate in the study, and 48 did not complete the form. The online questionnaire was completed by 281 nurses, 95 of whom were infected with SARS-CoV-2 and 186 of whom were not infected, between 20 and 27 December 2020.

Description of the research procedure and data analysis

Before the start of the study, permission to use the scale was obtained from its author via e-mail. The ethical approval required to conduct the study was granted by the Ethics Committee of Atatürk University Faculty of Nursing, as well as the approval of the public hospitals. An electronic consent form was displayed on the first page of the online survey, informing nurses that their participation was voluntary and that they could withdraw from the survey at any time.

The first part of the questionnaire contained a text with information about the study. Before participating in the online questionnaire, participants were asked to give their informed consent to participate and to have their data collected and analysed by ticking the "Yes, I agree and I hereby give my informed consent" box on the online form, rather than the "No, thank you, I do not give my consent" box. The survey took about 5-10 minutes to complete.

The research data were analysed using the SPSS V. 21 statistical software package (SPSS Inc., Chicago, IL, USA). The normality assumptions of the continuous variables were tested using the Kolmogorov-Smirnov test. For independent samples, the one-way ANOVA tests were used for variables with normal distribution. Mann Whitney U and Kruskal Wallis tests were used for variables which did not have a normal distribution. The observed difference between the two groups was statistically significant at p < 0.05.

Results

Our study found that 33.8% of participating nurses were COVID-19 positive, 66.2% were COVID-19 negative, and 64.2% of COVID-19 positive nurses were single. In terms of their length of service, 42.1% of nurses between 5–10 years of service were COVID-19 positive and 57.0% were negative. Overall, a total of

32.6% of COVID-19-positive nurses and 18.8% of COVID-19-negative nurses reported working on the surgical ward. In terms of their training status, 44.2% of trainee nurses were COVID-19 positive, and 55.8% were COVID-19 negative. The results showed that 42.1% of nurses who tested positive for COVID-19 and 35.5% of nurses who tested negative reported caring for a COVID-19-positive patient on each shift. In addition, 49.5% of positive and 53.2% of negative nurses reported using inadequate protective equipment in their work unit (Table 1).

The results of the Fear Scale assessment showed a statistically significant difference (p < 0.001) between the nurses who tested positive and those who tested negative for COVID-19. The Fear Scale's total score for the COVID-19-positive nurses was 22.89 (s = 8.97), compared to 21.10 (s = 7.11) for the COVID-19-negative nurses. These observations indicate that COVID-19 had a significant impact on the level of fear experienced by the nurses (Table 2).

Table 3 compares the total Fear of COVID-19 Scale scores and the socio-demographic characteristics of infected and non-infected nurses. The table shows that male nurses infected with the disease had a higher mean score ($\bar{x} = 23.87$, s = 8.42, p = 0.013) than male nurses who were not infected with the disease. In addition, the mean score of male nurses not infected with the disease ($\bar{x} = 19.09$, s = 8.59) was lower than that of female nurses ($\bar{x} = 21.72$, s =6.49, p = 0.026). These differences were found to be statistically significant. Nurses in the 21-29 age group who were not infected with COVID-19 had the lowest score (\overline{x} = 20.45, s = 6.62), while in this age group the score of those infected was 24.34 (s = 8.44), with the difference being statistically significant. Nurses who occasionally cared for COVID-19-positive patients and had contracted the disease reported a higher total scale score (M = 24.45, SD = 7.71) than nurses who had not contracted the disease but also cared for COVID-19-positive patients (M = 21.90, SD =7.20). This difference was statistically significant (p <0.001). Nurses who were infected with COVID-19 and considered their department's protective equipment to be inadequate scored 23.82 (s = 8.86), while nurses who were not infected with the virus and held the same view scored 20.46 (s = 7.17). This difference was statistically significant (p = 0.018) and indicates that inadequate protective equipment is a serious problem that needs to be addressed immediately. The mean score of nurses who regularly followed the news about **Table 3:** Comparison of COVID-19 Fear Scale total scores between COVID-19(+) and COVID-19(-) nurses by their socio-demographic characteristics

Characteristics	$COVID 19 (+)$ $\bar{x} \pm s$	$COVID 19(-)$ $\overline{x} \pm s$	p
Gender			
Female	22.21±9.35	21.72±6.49	0.408
Male	23.87±8.42	19.09±8.59	0.013
p	0.430	0.026	/
Marital Status			
Married	22.35±8.87	20.74±6.94	0.293
Single	23.19±9.08	21.47±7.29	0.140
p	0.524	0.506	/
Age			
20-less	25.28±10.27	26.42±8.12	0.949
21-29	24.34±8.44	20.45±6.62	0.005
30-39	22.93±9.97	21.02±6.24	0.292
40-49	20.86±8.55	21.20±9.45	0.851
50-more	20.08±7.68	24.87±7.52	0.216
Þ	0.441	0.189	/
Educational Level			
High School	22.88±9.83	21.21±7.71	0.317
Undergraduate/ Graduate	22.90±8.54	21.02±6.69	0.113
D	0.858	0.782	1
Years of Service			•
Less than five years	20.00±4.59	20.69±4.73	0.618
5-10 years	20.90±9.07	20.73±6.64	0.895
11-16 years	26.27±7.96	21.02±7.05	0.016
16-20 years	28.88±5.37	26.60±9.26	0.805
20 years and more	22.55±11.08	20.62±9.50	0.567
p	0.032	0.182	0.507
Working Units	0.032	0.102	ı
Internal Medicine Unit	23.25±9.13	24.03±5.54	0.897
Surgical Unit	23.22±8.67	22.37±6.77	0.463
Emergency	20.80±10.08	18.82±6.87	0.483
Intensive Care Unit	24.90±6.99	20.73±8.50	0.105
Operating Theatre	22.00±10.00	17.08±6.28	0.103
COVID-19 Unit	22.00±10.00 21.77±10.74	23.10±4.38	0.882
COVID-19 UIII	0.935	0.007	0.862
<u>P</u> COVID-19 Training	0.933	0.007	1
e e	22 10 10 24	21.9616.02	0.217
Yes No	22.19±9.34	21.86±6.93	0.317
	23.45±8.72	20.43±7.22	0.113
p	0.533	0.229	
Frequency of care for COVID-19-positive	•	22.02.7.52	0.020
Always	22.37±9.82	22.82±7.52	0.928
Sometimes	24.45±7.71	21.90±7.20	0.042
Rarely	22.34±9.94	19.48±7.21	0.247
Never	15.80±7.04	21.11±5.61	0.107
<i>p</i>	0.239	0.043	/
Adequacy of protective equipment condit		21.02.7.00	0 =
Adequate	21.97±9.07	21.82±7.00	0.716
Inadequate	23.82±8.86	20.46±7.17	0.018
p	0.349	0.172	
Regularly tracking COVID-19 news upda			
Yes	23.94±8.30	20.91±6.32	0.016
No	21.73±9.62	21.28±7.83	0.670
6	0.117	0.788	1

Continues

Characteristics	<u>C</u> OVID 19 (+)	COVID 19(-)	p
	$\overline{x}\pm s$	$\overline{X} \pm s$	
Spending more time with family			
Yes	24.23±9.49	4.23±9.49 21.17±6.64	
No	21.96±8.55	21.06±7.35	0.476
P	0.161	0.904	/
Taking the maximum necessary precautions			·
Yes	23.36±9.52	21.28±6.91	0.047
No	22.61±8.69	20.92±7.32	0.247
P	0.615	0.823	/
Belonging to the risk group triggers fear			
Yes	21.79±9.70	21.29±5.94	0.626
No	23.80±8.30	20.88±8.26	0.044
P	0.326	0.833	/
Providing care to a family member			
Yes	24.28±9.00	21.25±6.47	0.031
No	21.79±8.87	20.95±7.67	0.456
P	0.172	0.658	/

Legend: \bar{x} – average; s - standard deviation; p – statistical significance (<0.05)

COVID-19, those who started spending more time alone and with their loved ones, and those who were taking the necessary precautions at the highest level, and who had had the disease before was higher than the score of nurses in the same categories who had not yet had the disease. The differences were statistically significant (Table 3).

Discussion

The aim of this study was to determine the fear levels in nurses with and without the COVID-19 disease. When examining COVID-19-related fear levels by gender, mean scores were higher in COVID-19-positive (female and male) nurses than those in COVID-19-negative nurses. Fear levels were also found to be higher in women than men in both groups. These results were similar to the authors' previous research findings (Emiral et al., 2020; Stein et al., 2020). In their study on 960 adults, Bakioğlu et al. (2020) found that fear of COVID-19 was significantly higher in women. It has been assumed that women are more sensitive to fear reactions than men. This can be explained by the fact that women are often more stressed than men during a pandemic due to factors such as housework, their role as a caregiver, or domestic violence. In addition, women may be constantly exposed to more stressful life events than men (Baki & Piyal, 2020). We believe that women should receive more support during a pandemic.

When investigating the adequacy of protective equipment, the average score of COVID-19-positive nurses who considered it inadequate, was higher than those who were not infected by COVID-19. Hendy et al. (2021) found that nurses who had difficulty obtaining personal protective equipment (PPE) experienced more stress. Similarly, Luceño-Moreno et al. (2020)

found that access to PPE influenced anxiety levels. Pouralizadeh et al. (2020) identified PPE deficiency as the most important factor influencing anxiety during the COVID-19 pandemic. In a study by Halcomb et al. (2020), it was reported that 40% of participating nurses did not have access to protective gowns, 45.4% did not have access to P2/N95 masks, 22.1% did not have access to surgical masks, and 28.6% did not have access to protective eyewear. PPE is crucial in residential care, and the lack of this safety equipment causes fear among health professionals (Shanafelt et al., 2020). It can be concluded that nursing staff feel safer when using protective equipment during the pandemic. Staff should also be trained in the correct use of protective equipment.

While the media is instrumental in providing the public with timely and accurate information, including information on hygiene and isolation, it can cause anxiety and stress among impressionable social groups if the reporting of negative news, such as the number of deaths and the progression of the disease among infected individuals is not handled with the necessary sensitivity (Emiral et al., 2020). During the pandemic, social distancing regulations required people to keep a specific distance from others. As a result, people were more connected to each other through social media instead of meeting in person, communicating and enjoying social activities such as shopping (Coşkun & Çepni, 2020). The media served the purpose of entertaining people and keeping them informed on COVID-19related developments. Since the news delivered by the media is not always accurate and reliable, the spread of inaccurate, unreliable, negative and fake news deepened the psychological impact on people (Emiral et al., 2020). Due to the news on social media, people's health anxiety increased (Kılınçel et al., 2020). When examining the status of tracking COVID-19-related news, the average score was higher in nurses infected with the disease.

In our study, tracking news about the pandemic and infection with the disease proved to be beneficial. Tayyib & Alahosatimi (2020) found that nurses' anxiety and stress due to following the news on social media were predictive (Tayyib & Alahosatimi, 2020). In another study, disinformation spread via social media was found to cause anxiety in society, with panic manifesting during the pandemic (Islam et al., 2020). It can be concluded that the news about COVID-19 on social media had a psychological impact on both nursing staff and society in general. A study conducted in Mexico found that people's risk perception and anxiety levels increased significantly, and their quality of life decreased in the face of impending uncertainty after the pandemic was widely reported in the media (Aşkın et al., 2020). Access to information from trusted sources such as the World Health Organization is recommended to obtain accurate information (Iqbal & Tayyab, 2020).

When analysing the differences in terms of the maximum precautions taken, it was found that the nurses infected with COVID-19 scored higher than those who were not infected. The fact that they had contracted the disease led the nurses to believe that maximum precautions should be taken. Cao et al. (2020) found that the transmission of the SARS-CoV-2 virus between family members, relatives or acquaintances increases people's anxiety. Anxious and stressed health professionals were more likely to take the necessary precautions (such as social distancing and protective equipment). Studies reporting significant correlations between the use of protective equipment and anxiety and stress levels also support this statement (Polat & Coşkun, 2020). Health professionals were among the groups at the highest risk of infection during the pandemic. It has been noted that health professionals dealing with COVID-19 were at risk and that protecting their health and lives while fighting the virus caused stress (Yüncü & Yılan, 2020).

In response to whether belonging to the risk group caused fear, more negative responses were recorded among nurses infected with COVID-19 than among noninfected nurses. The study conducted in a COVID-19 pandemic hospital in China reported high levels of anxiety among nurses who were in direct contact with patients (Xiang et al., 2020). Another study conducted in China which examined the psychosocial impact of the pandemic on health professionals shows that insomnia, anxiety and depression are among the greatest risk factors for health professionals (Artan et al., 2020). Hu et al. (2020) found that nurses were afraid of losing their lives to the disease. Another study reported that nurses feared death throughout the pandemic (Karasu & Çapur, 2020). Yifan et al. (2020) found that 31.4% of ICU nurses experienced increased angina and elevated heart rate during the pandemic, and 30.7% reported dyspnea. Sunjaya et al. (2020) found that health professionals showed symptoms of depression such as loneliness, insomnia and difficulty concentrating (Sunjaya et al., 2020). Elevated heart rate, sweating, tension, and a sense

of impending doom are common symptoms of anxiety. These symptoms are usually temporary and disappear when the associated event ends.

The results of this study showed that nurses who had contracted COVID-19 and reported it at work had a higher average score than those who had not been infected. This suggests that the experience of COVID-19 may be associated with increased levels of stress and anxiety among nurses. In addition, the results show that nurses experienced significant stress and anxiety during their working hours due to various factors such as inadequate protective equipment and extended working hours. In addition, the presence of patients' relatives was identified as another factor contributing to increased anxiety among nurses. In this context, it is necessary to help health professionals to protect themselves, their relatives and their health services (Ataç et al., 2020; Sakaoğlu et al., 2020). No significant difference was found between those who had or had not received COVID-19-related training and infection.

A limitation of this study is that it was conducted in a single hospital, and different conditions prevailed in different parts of the study (physical characteristics, condition of equipment, patient population, etc.). Therefore, its results should not be generalised to all nurses and should be interpreted against this background.

Conclusion

This study provides important insights into nurses' experiences during the COVID-19 pandemic and demonstrates the profound impact of the disease on their professional and emotional well-being. It is important to take into account the fears of medical staff, create an appropriate working environment, regulate working hours, and provide them with the necessary protective equipment. The experiences of nurses who had been infected with the virus and survived this pandemic should be taken into account. The results of this study are important to understand the fears of nurses during the pandemic and to provide data for the application of appropriate measures. Moreover, nurses working in Turkey needed more attention and support from policy makers during the COVID-19 pandemic. These findings point to the urgent need for targeted measures to increase workplace safety, improve access to protective equipment and provide psychological support to alleviate nurses' anxiety and stress. Investment in these measures is essential to safeguard the wellbeing of health professionals and ensure the resilience of the healthcare system in the face of current and future challenges.

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Author contributions/Prispevek avtorjev

Concept/koncept – EK; Design/zasnova – EK; Materials/materiali – EK; Data collection and processing/zbiranje in obdelava podatkov – RA; Supervision/nadzor – EK, RA; Resources/sredstva – RA; Analysis and interpretation/analiza in interpretacija – EK; Literature search/iskanje literature – RA; Manuscript writing/pisanje članka – EK, RA; Critical review/kritični pregled – EK, RA.

Literature

Ahorsu, D. K., Lin, C.-Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 20(3), 1537–1545.

https://doi.org/10.1007/s11469-020-00270-8 PMid:32226353; PMCid:PMC7100496

Artan, T., Karaman, M., Arslan, İ., & Cebeci, F. (2020). The reliability and validity of perceptions and attitudes towards Covid-19 Pandemic Questionnaire. *Turkish Journal of Social Work*, 4(2), 101–107.

https://doi.org/10.5152/pcp.2022.21264 PMid:38764900; PMCid:PMC11099622

Aşkın, R., Bozkurt, Y., & Zeybek, Z. (2020). Covid-19 pandemic: Psychological effects and therapeutic interventions. *Istanbul Commerce University Journal of Social Sciences*, 19(37), 304–318.

https://doi.org/10.51972/tfsd.1027903

Ataç, Ö., Sezerol, M., Taşçı, Y., & Hayran, O. (2020). Anxiety and insomnia among healthcare workers during the Covid-19 pandemic. *Turkish Journal of Public Health*, 18, 47–57. https://doi.org/10.20518/tjph.767187

Baki, S., & Piyal, B. (2020). Work-family conflict as regard to healthcare workers in extraordinary situations such as Covid-19 pandemic. *Journal of Health and Society,* 14, 119–123. https://doi.org/10.2147/PRBM.S333070
PMid:34815724; PMCid:PMC8604632

Bakioğlu, F., Korkmaz, O., & Ercan H. (2020). Fear of COVID-19 and positivity: Mediating role of intolerance of uncertainty, depression, anxiety, and stress. *International Journal of Mental Health and Addiction*, 19, 2369–2382.

https://doi.org/10.1007/s11469-020-00331-y PMid:32837421; PMCid:PMC7255700

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the Covid-19 pandemic on college students in China. *Psychiatry Research*, 287, Article 112934.

https://doi.org/10.1016/j.psychres.2020.112934 PMid:32229390; PMCid:PMC7102633

Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L., He, L., Sheng, C., Cai, Y., Li, X., Wang, J., & Zhang, Z. (2020). Mental health care for medical staff in China during the COVID-19 outbreak. *Lancet Psychiatry*, 7(4), 15–16.

https://doi.org/10.1016/S2215-0366(20)30078-X PMid:32085839

Coşkun, E., & Çepni Şener, B. (2020). Social media marketing in COVID-19 process in Turkey: Pegasus and BIM sample. *İnif E–Journal*, 5(2), 27–42.

https://doi.org/10.47107/inifedergi.811041

Demir, M., Günaydın, Y., & Şen Demir, Ş. (2020). The evaluation of the antecedents, effects, and consequences of the Coronavirus (COVID-19) pandemic on tourism in Turkey. *International Journal of Social Sciences and Education Research*, 6(1), 80–107.

https://dergipark.org.tr/en/download/article-file/1097284

Emiral, E., Gülümser, Ş., & Arslan, Z. (2020). Covid-19 pandemic and suicide. *Estüdam Journal of Public Health*, 5, 138–147.

https://doi.org/10.35232/estudamhsd.762006

Halcomb, E., McInnes, S., Williams, A., Ashley, C., James, S., Fernandez, R., Stephen, C., & Calma, K. (2020). The experiences of primary healthcare nurses during the COVID-19 pandemic in Australia. *Journal of Nursing Scholarship*, 52(5), 553–563. https://doi.org/10.1111/jnu.12589

PMid:32735758; PMCid:PMC7436753

Hatun, O., Dicle, A., & Demirci, İ. (2020). Psychological Reflections of the Coronavirus Pandemic and Coping with Pandemic. *Electronic Turkish Studies*, 15(4), 531–554. https://doi.org/10.7827/TurkishStudies.44364

Hendy, A., Abozeid, A., Sallam, G., Fattah, H. A. A. & Reshia, F. A. A. (2021). Predictive factors affecting stress among nurses providing care at COVID-19 isolation hospitals at Egypt. *Nursing Open*, 8, 498–505.

https://doi.org/10.1002/nop2.652 PMid:33230420; PMCid:PMC7675417

Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., Wan, S. W., Liu, Z., Shen, Q., Yang, J., He, H.-G., & Zhu, J. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *eClinicalMedicine*, 24, Article 100424.

https://doi.org/10.1016/j.eclinm.2020.100424 PMid:32766539; PMCid:PMC7320259

Iqbal, S. A., & Tayyab, N. (2020). Covid-19 and children: The mental and physical reverberations of the pandemic. *Child: Care, Health and Development,* 47(1), 136–139.

https://doi.org/10.1111/cch.12822

PMid:33140494

Islam, S., Sarkar, T., Khan, S. H., Kamal, A. H. M., Hasan, S. M. M., Kabir, A., Yeasmin, D., Islam, M. A., Chowdhury, K. I. A., Anwar, K. S., Chughtai, A. A., & Seale, H. (2020). COVID-19–related infodemic and its impact on public health: A global social media analysis. *American Journal of Tropical Medicine and Hygiene*, 103(4), 1621–1629.

https://doi.org/10.4269/ajtmh.20-0812 PMid:32783794; PMCid:PMC7543839

Karakoç, A., Erdoğan, N., Sarıgöl Ordin, Y., Nasuhbeyoğlu, G., Ersoy, F., & Pehlivan, G. (2020). The Covid-19 Coronavirus disease guidelines of the Covid-19 commission of Turkish nephrology, dialysis, and transplantation nurses association. *Journal of Nephrology Nursing*, 15(2), 131–203.

https://doi.org/10.47565/ndthdt.2020.15

Karasu, F. & Çapur, E. Ö. (2020). An intensive care nurse in the forefront of the epidemic while increasing cases of Covid-19: "Heroes in frontline". *Yoğun Bakım Hemşireliği Dergisi*, 24(1), 11–14.

Kılınçel, Ş., Tuncer Issı, Z., Kılınçel, O., Akpınar Aslam, E., Erzin, G., Çelikbaş, Z., & Akkaya, C. (2020). Effects of coronavirus (Covid-19) pandemic on health anxiety levels of healthcare professionals. *Journal of Contemporary Medicine*, 10(3), 312–318. https://doi.org/10.16899/jcm.767377

Kiyat, İ., Karaman, S., İşcan Ataşen, G., & Elkan Kiyat, Z. (2020). Nurses in the fight against the Novel Coronavirus (Covid-19). *Journal of Turkish Nurses Association*, 1(1), 81–90. https://dergipark.org.tr/en/download/article-file/1033700

Luceño-Moreno, L., Talavera-Velasco, B., García-Albuerne, Y., & Martín-García, J. (2020). Symptoms of posttraumatic stress, anxiety, depression, levels of resilience and burnout in Spanish Health Personnel during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 17, Article 5514.

https://doi.org/10.3390/ijerph17155514 PMid:32751624; PMCid:PMC7432016

Metin, A., & Çetinkaya, A. (2020). According to cognitive model possible effects of coronavirus pandemic on human psychology. *Journal of Current Researches on Social Sciences*, 10(1), 231–244.

https://doi.org/10.26579/jocress.357

Oyur Çelik, G., Evkaya, N., Eskidemir, S., Dalfidan, B. & Tuna A. (2020). Surgery in the Covid-19 outbreak: An overview of the surgical process and nursing care/management. *İzmir Katip Çelebi University Faculty of Health Science Journal*, 5(2), 221–227.

https://dergipark.org.tr/en/download/article-file/1186244

Pietrabissa, G., & Simpson, S. G. (2020). Psychological consequences of social isolation during COVID-19 outbreak. *Frontiers in Psychology*, 11, Article 2201.

https://doi.org/10.3389/fpsyg.2020.02201 PMid:33013572; PMCid:PMC7513674

Polat, Ö., & Coşkun, F. (2020). Determining the relationship between personal protective equipment uses of medical healthcare workers and depression, anxiety and stress levels in the Covid-19 pandemic. *Medical Journal of Western Black Sea*, 4(2), 51–58.

https://doi.org/10.29058/mjwbs.2020.2.3

Pouralizadeh, M., Bostani, Z., Maroufizadeh, S., Ghanbari, A., Khoshbakht, M., Alavi, S. A., & Ashrafi, S. (2020). Anxiety and depression and the related factors in nurses of Guilan University of Medical Sciences hospitals during COVID-19: A web-based cross-sectional study. *International Journal of Africa Nursing Sciences*, 13, Article 100233.

https://doi.org/10.1016/j.ijans.2020.100233 PMid:32837911; PMCid:PMC7417274

Sakaoğlu, H., Orbatu, D., Emiroğlu, M., Çakır, Ö. (2020). Spielberger state and trait anxiety level in healthcare professionals during the Covid-19 outbreak: A case of Tepecik hospital. *The Journal of Tepecik Education and Research Hospital*, 30, 1–9.

https://doi.org/10.5222/terh.2020.56873

Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2021). Adaptation of the fear of Covid-19 scale: Its association with psychological distress and life satisfaction in Turkey. *International Journal of Mental Health and Addiction*, 19(6), 1980–1988.

https://doi.org/10.1007/s11469- 020-00294-0 PMid:32395095; PMCid:PMC7207987 Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA*, 323(21), 33–34. https://doi.org/10.1001/jama.2020.5893
PMid:32259193

Sharma, S. K., Mudgal, S. K., Thakur, K., & Gaur, R. (2020). How to calculate sample size for observational and experimental nursing research studies. *National Journal of Physiology*, *Pharmacy and Pharmacology*, 10(1), 1–8.

https://doi.org/10.5455/njppp.2020.10.0930717102019

Stein-Zamir, C., Abramson, N., Shoob, H., Libal, E., Bitan, M., Cardash, T., Cayam, R., & Miskin, I. (2020). A large Covid-19 outbreak in a high school 10 days after schools' reopening, Israel, May 2020. *Eurosurveillance*, 25(29), Article 2001352. https://doi.org/10.2807/1560-7917.ES.2020.25.29.2001352 PMid:32720636; PMCid:PMC7384285

Sunjaya, D. K, Herawati, D. M. D., & Siregar, A. Y. M. (2020). Depressive, anxiety, and burnout symptoms on health care personnel at a month after COVID-19 outbreak in Indonesia: A documentary research using rasch model analysis. *BMC Public Health*, 21, Article 227.

 $\underline{https://doi.org/10.21203/rs.3.rs-45413/v1}$

Tayyib, N., & Alsolami, F. (2020). Measuring the extent of stress and fear among Registered Nurses in KSA during the COVID-19 Outbreak. *Journal of Taibah University Medical Sciences*, 15(5), 410–416.

https://doi.org/10.1016/j.jtumed.2020.07.012 PMid:32905033; PMCid:PMC7462892 von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *The Lancet*, 370(9596), 1453–1457.

https://doi.org/10.1016/S0140-6736(07)61602-X PMid:18064739

Xiang, Y. T., Zhao, Y. J., Liu, Z. H., Li, X. H., Zhao, N., Cheung, T., Chee H. N. (2020). The Covid-19 outbreak and psychiatric hospitals in China: Managing challenges through mental health service reform. *International Journal of Biological Sciences*, 16(10), 1741–1744.

https://doi.org/10.7150/ijbs.45072 PMid:32226293; PMCid:PMC7098035

Yifan, T., Ying, L., Chunhong, G., Jing, S., Rong, W., & Zhenyu, L. (2020). Symptom cluster of ICU nurses treating COVID-19 pneumonia patients in Wuhan, China. *Journal of Pain and Symptom Management*, 60(1), e48–e53.

https://doi.org/10.1016/j.jpainsymman.2020.03.039 PMid:32276095; PMCid:PMC7141465

Yücel, Ç., & Koç, G. (2020). Covid-19 Infection management in perinatal period: Recommendations to healthcare professionals. *Journal of Hacettepe University Faculty of Nursing*, 7, 25–33. https://doi.org/10.31125/hunhemsire.775670

Yüncü, V., & Yılan, Y. (2020). Investigating the impacts of Covid-19 pandemic on healthcare staff: A case study. *Igdır University Journal of Social Sciences*, 1, 373–401.

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