

ORIGINAL ARTICLE

The effect of viral anxiety experienced by nurses working in pediatric service on psychological factors during Covid-19 period

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Abstract

During the Covid-19 period, nurses, as healthcare professionals, have been under a great workload, and their anxiety levels have also increased their psychological effects. Therefore, this study was conducted to examine the effect of viral anxiety experienced by nurses working in the pediatric ward during the Covid-19 period on psychological factors. This is a descriptive study. Permission was obtained from Hakkari University Scientific Research and Publication Ethics Committee for research permission. Sociodemographic data were collected online from 1200 nurses working in the pediatric service who voluntarily participated in the study between October 13, 2023 and December 25, 2023 using the sociodemographic data collection form and the stress and anxiety scale for health workers due to virus epidemic-9 items (SAVE-9), Patient health questionnaire-9 (PHQ-9), Obsession with Covid-19 Scale (OCS), Reassurance-seeking behavior scale against coronavirus (CRBS). In order to compare SAVE, PHQ, OCS and CRBS scale scores according to sociodemographic information and vaccination status variables, independent groups t test one-way variance analysis Levene's F test was applied and data were analyzed using a statistical package program. It is understood that 59.9% of the participants are male and 40.1% are female. The proportion of married participants was 95.4%. The results of the scores obtained from the SAVE and PHQ scales show that the stress and anxiety related to the virus epidemic are above the middle level, the result of the OCS scale score shows that the dysfunctional thoughts associated with the coronavirus, and the scores obtained from the CRBS Total scale show that the assurance-seeking behavior is exhibited according to the results. The effect of viral anxiety on the psychological factor according to sociodemographic characteristics (gender, age, marital status, socioeconomic status, educational status, working area in pediatric service, vaccination status) showed significant and different results according to scale scores. It was concluded that the viral anxiety experienced by the nurses working in the pediatric service during the Covid-19 period showed different characteristics in terms of psychological factors and sociodemographic characteristics, and the nurses were not very effective due to the decrease in the effect of Covid-19.

Keywords: Nurses, pediatric service, Covid-19, anxiety, psychology

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Introduction

Anxiety is the individual's perception of danger from the situation in which he/she is in and perceiving himself/herself as powerless against that situation [1]. There are many definitions of anxiety in the literature. According to Freud, anxiety defines a function of the ego required to protect one's integrity, and according to Karen Horney, it defines the feeling of loneliness and helplessness in the face of a situation that the individual cannot cope with. Studies conducted in past epidemic periods show that the anxiety of the public and healthcare professionals increases during epidemics [2-4]. In addition, there are also studies showing that the anxiety levels of individuals increased with the Covid-19 pandemic [5,6]. Individuals who feel anxious feel that their present and future are in danger and question their lives intensely. It is meaningless for the individual to acquire a value that will not be realized and to pursue it. This decreases the individual's motivation and prevents self-realization.

Psychological resilience and psychological factors are defined as the ability of an individual to adapt to adverse conditions, maintain balance, and continue living without losing the sense of control over events [7]. Fredrickson stated that individuals with a high perception of psychological resilience are protected from depression and anxiety through positive emotions and that they develop with positive emotions [8]. Psychological resilience and psychological factors are expressed as a set of characteristics and protective mechanisms that facilitate the individual's successful adaptation to challenging conditions [9].

Since the first days of 2020, there has been an outbreak worldwide. The fact that the Covid-19 virus is very easy to transmit during the pandemic and that there is no treatment, medication or vaccine yet may arouse anxiety in people [10]. In this period, internal and external protective factors of individuals against risk factors become more important for healthcare professionals, especially for nurses working in the field of pediatrics. In addition to being a vulnerable group, it was determined that nurses

working in the field of pediatrics were affected psychologically (tired, blaming themselves, questioning, etc.) after the pandemic period and that the pediatric group patients they care for were affected (late mobilization, prolongation of the disease process, fear, anxiety and stress) [11]. The importance of the study is that the viral anxiety they experienced during the Covid-19 period also affects psychological factors in the following processes.

Nurses are under psychological pressure during the Covid-19 period, which has caused their anxiety, especially due to the virus, to increase. For this reason the aim of this study was to examine the effect of viral anxiety experienced by nurses working in the pediatric ward during the Covid-19 period on psychological factors.

Research Question

Does the effect of viral anxiety experienced by nurses working in the pediatric ward during the Covid-19 period on the psychological factor differ significantly according to sociodemographic variables?

Materials and Methods

Type of Research: This study is descriptive in nature.

Place and Time of Research: An online questionnaire (Google Form) was collected from the nurses who voluntarily participated in the study and completed the informed consent form between October 13, 2023, and December 25, 2023. The sociodemographic data form created online in the Google form and the stress and anxiety scale due to the virus epidemic for health workers-9 items (SAVE-9), Patient health questionnaire-9 (PHQ-9), Obsession scale with Covid-19 (OCS), the informed consent form added online before the obsession scale (OCS), the Reassurance-seeking behavior scale against coronavirus (CRBS), were added and the informed consent form in which the nurses participating in the study clearly stated that they accepted the study was accepted and their consent was obtained by accepting and marking the informed consent form. It took an average of 5 minutes for the nurses participating in the study to answer the questions.

Population and Research Sample: The population of the study was planned to consist of nurses working in the field of pediatrics in Türkiye who voluntarily participated in the study and completed the informed consent form. However, since it was not possible to reach all nurses in Türkiye, the study was conducted online. Online survey (Google Forms) and social networks and social media were used. The sample size was 1200 nurses working in the field of pediatrics who met the participation conditions according to the number of variables used in multivariate data selected by simple sampling method.

Variables of the Study

Independent Variables: Gender, age, marital status, socioeconomic status, educational status, working area in pediatric service, vaccination status.

Dependent Variable: Viral anxiety and psychological factor.

Inclusion and Exclusion Criteria

Inclusion

Nurses who voluntarily agreed to participate in the study.

Nurses working in pediatric ward.

Exclusion

Nurses who did not voluntarily agree to participate in the study.

Nurses not working in the pediatric ward.

Data Collection Tools

The research data will be collected with the following data collection forms:

Socio-demographic questionnaire

Virus epidemic-related stress and anxiety scale for health workers-9 items (SAVE-9)

Patient health questionnaire-9 (PHQ-9)

Obsession Scale (OCS) with Covid-19

Reassurance-seeking behavior scale against coronavirus (CRBS).

Sociodemographic Data Form: This form comprised eight questions on gender, age, marital status, socioeconomic status, educational

status, working years, working area in pediatric service, vaccination status.

Virus Epidemic Related Stress and Anxiety Scale for Healthcare Workers-9 Items (SAVE-9): SAVE-9 was developed by Chung et al. in 2020 [12]. Its Turkish validity and reliability was conducted by Uzun et al. in 2021 [13]. The scale consists of 9 questions. The questions are in the form of a 5-point Likert scale (never: 0, rarely: 1, sometimes: 2, often: 3, always: 4). The scale provides a psychological evaluation of the stress and anxiety of healthcare workers due to the virus epidemic. It is a 2-factor scale; factor 1 (1,2,3,4,5,8 items) and factor 2 (6,7 and 9 items). The scale score is obtained by summing the item scores and there are no reverse items. The Cronbach Alpha value of SAVE-9 was calculated as 0.79 in the original study and 0.77 in the Turkish validity and reliability study and was found to be valid and reliable [13].

Patient health questionnaire-9 (PHQ-9): The Patient Health Questionnaire-9 (PHQ-9) was developed by Kronke et al. (2001) [14] and translated into all languages with a training grant provided by Pfizer Inc. Column scores are summed to obtain the total score. 1, very difficult: 2, extremely difficult: 3) is selected and the total score is summed. As a result of total scoring, 1-4 points are considered as minimal depression, 5-9 points as mild depression, 10-14 points as moderate depression, 15-19 points as moderately severe depression, 20-27 points as severe depression.

Obsession Scale (OCS) with Covid-19: It was created by Lee (2020) [15]. Kurt et al. (2021) [16] conducted the Turkish validity and reliability of the Obsession Scale with Covid-19. It is a usable scale with a sensitivity of 81% to 93% and a specificity of 73% to 76%. It consists of a total of 4 questions. The scale is internally consistent with a *Cronbach's alpha* of 0.80. Each item of the scale is rated on a 5-point scale from 0 (not at all) to 4 (almost every day) based on experiences over the past two weeks. This scaling format is consistent with the DSM-5 intersectional symptom scale. An OCS total score ≥ 7 indicates coronavirus-related dysfunctional thinking. High scores on a particular item or a high total scale score (≥ 7)

may indicate problematic symptoms that may require further assessment and/or treatment.

Reassurance-seeking behavior scale against coronavirus (CRBS): It was created by Lee (2020) [17]. It consists of a total of 4 questions. It is a reliable tool ($\alpha = .90$) with robust factorial (single factor) and construct (related to dysfunctional coronavirus anxiety, generalized anxiety, depression, and health anxiety) validity ($\alpha = .90$). The Turkish validity and reliability study was conducted by Kiraç et al. [18] Cronbach's alpha reliability coefficient was calculated as 0.790. Each item is rated on a 5-point scale ranging from 0 (not at all) to 4 (almost every day) based on experiences in the last 2 weeks. This scaling format is consistent with the DSM-5 intersectional symptom measure. Severity scores are obtained by summing responses to all items, with total scores ranging from 0 to 20 ($M = 6.23$; $SD = 5.51$). Although clinical cut-off scores have not yet been determined, total scores ≥ 12 and above indicate above-average reassurance-seeking behavior.

Data Analysis: Independent samples t-test was used to compare the SAVE, PHQ, OCS, and CRBS scale scores according to the variables of gender, marital status, socioeconomic status, educational status, and vaccination status. One-way analysis of variance was used to compare the scale scores according to the field of study in the pediatric service. Levene's F test was applied to test the homogeneity of variances. Pearson correlation coefficients were calculated to determine the relationship between age and working time with the scale scores. Data were analyzed using SPSS 25.0 statistical package program.

Ethical Consideration: The study was conducted in accordance with the Declaration of Helsinki. It was approved by Hakkari University Scientific Research and Publication Ethics Committee (Date: 12.01.2023, Decision No: IRB: 2023/114-1) and informed consent was obtained from the nurses.

Results

Table 1 shows is analyzed, 59.9% of the nurses were male, 40.1% were female and 95.4% were married. 70% of the participants stated that their socioeconomic status was at the middle level and the rate of participants with associate degree was 20%. 20% of the nurses work in the field of infection, 29.9% in general pediatric, 20% in oncology and 30.1% in pediatric intensive care. The rate of nurses who stated that they were vaccinated was 80%.

Table 2 shows that the skewness ($Sh=0.07$) and kurtosis ($Sh=0.14$) values calculated for the scale scores did not exceed the reference range. These results indicated that the assumption of normal distribution was not violated. It is understood that the scores obtained from the SAVE scale ranged between 17 and 32 and the mean score was calculated as 26.19 ($SD=4.08$). According to the calculated mean score, in general, the stress and anxiety of the participants due to the virus epidemic is above the medium level. It is understood that the scores obtained from the PHQ Total scale ranged between 11 and 22 and the mean score was calculated as 17.61 ($SD=3.38$). According to the mean score, in general, the participants had moderately severe depression. It was observed that the scores obtained from the OCS Total scale ranged between 4 and 16 and the mean score was calculated as 11.70 ($SD=3.69$). The mean score showed that the participants had dysfunctional thoughts related to the coronavirus (Scale score ≥ 7). CRBS Total scale ranged between 7 and 19 and the mean score was calculated as 11.40 ($SD=3.67$). A mean score of 12 and higher indicates that reassurance seeking behavior is exhibited. The mean score of the participants is quite close to this value (Table 2).

Table 3 the table is analyzed; the mean OCS Total scores did not show a significant difference according to gender ($p>0.05$). However, SAVE PHQ showed a significant difference between CRBS total score averages ($p<0.05$). It was determined that men's perceptions of stress, anxiety and depression due to the virus outbreak were higher, and women's tendency to exhibit reassurance-seeking behavior was higher. Table

3 continued shows that there is no significant relationship between age and SAVE, PHQ, OCS and CRBS Scale Scores. However, there are low and moderate negative relationships between working time and SAVE, OCS and CRBS scores ($p < 0.01$). As age increases, participants' stress and anxiety levels due to the virus epidemic, their perceptions of depression, dysfunctional thoughts related to coronavirus, and their tendency to exhibit reassurance-seeking behavior decrease (Table 3).

Table 4 is analyzed, SAVE, PHQ, OCS, CRBS total mean scores did not show a significant difference according to marital status ($p > 0.05$). It was

observed that married and single participants' stress and anxiety related to the virus epidemic, depression levels, dysfunctional thoughts related to coronavirus, and reassurance-seeking behavior were similar (Table 4).

Table 5 is analyzed, the mean PHQ total scores did not show a significant difference according to socioeconomic status ($p > 0.05$). However, SAVE, OCS, CRBS total mean scores showed a significant difference ($p < 0.05$). Participants with high socioeconomic status were more likely to have stress and anxiety related to the virus epidemic, while participants with medium socioeconomic status were more likely to have dysfunctional

Table 1. Distribution of participants according to diagnostic characteristics.

		f	%
Gender	Male	719	59.9
	Female	481	40.1
Marital status	Single	55	4.6
	Married	1145	95.4
Socioeconomic status	Middle	840	70
	High	360	30
Education status	Associate degree	240	20
	Undergraduate and above	960	80
In which area do you work in the pediatric service?	Infection	240	20
	General pediatric	359	29.9
	Oncology	240	20
	Pediatric intensive care	361	30.1
Have you had contact with Covid-19?	Yes	1200	100
Have you been infected with Covid-19?	Yes	1200	100
Have you been vaccinated?	Yes	960	80
	No.	240	20

Table 2. Skewness and Kurtosis Coefficients and descriptive values of the Scores Obtained from SAVE, PHQ, OCS and CRBS Scales.

Variables	Skewness		Kurtosis	
	z	Sh	z	Sh
SAVE Total	-0.79	0.07	0.19	0.14
PHQ Total	-0.37	0.07	-0.71	0.14
OCS Total	-0.85	0.07	-0.52	0.14
CRBS Total	0.72	0.07	-0.59	0.14
Variables	Min.	Maks.	Med.	Ss
SAVE Total	17	32	26.19	4.08
PHQ Total	11	22	17.61	3.38
OCS Total	4	16	11.70	3.69
CRBS Total	7	19	11.40	3.67

thoughts related to the coronavirus and to exhibit reassurance-seeking behaviors. The mean scores of SAVE and CCRBS total scores did not show a significant difference according to educational status ($p>0.05$). However, the mean total scores of PHQ and OCS showed a significant difference ($p<0.05$). Participants with undergraduate and graduate education had higher perceptions of depression and tendency to have dysfunctional thoughts related to coronavirus than participants with associate degree.

Table 6 is analyzed, the mean scores of SAVE, PHQ total, OCS and CGADS total scores showed a significant difference according to the area of work in the pediatric service ($p<0.05$). According to the Scheffe Test results, the stress and anxiety scores of the participants working

in the pediatric intensive care unit due to the virus epidemic were significantly higher than the scores of the participants working in other departments. Participants working in the infection department had the highest level of depression perception and coronavirus-related dysfunctional thinking. These participants were followed by participants working in oncology, pediatric intensive care and general pediatric care departments, respectively. Participants working in the infection department had the highest level of reassurance-seeking behaviors against coronavirus, while participants working in the pediatric intensive care department had the lowest level of reassurance-seeking behaviors against coronavirus. Examined, SAVE, PHQ, OCS, and CRBS total mean scores showed a significant difference according to vaccination

Table 3. Mean, standard deviations and Independent Groups T-Test Results of SAVE, PHQ, OCS and CGAD Scale Scores by Gender and Means, Standard Deviations and Independent Groups T-Test Results of SAVE, PHQ, OCS and CRBS Scale Scores.

Variables	Gender	N	Med	Ss	t(1200)	p
SAVE Total	Female	481	25.48	4.99	-4.99	0.00*
	Male	719	26.67	3.25		
PHQ Total	Female	481	16.25	1.79	-12	0.00*
	Male	719	18.51	3.86		
OCS Total	Female	481	11.74	3.83	0.37	0.71
	Male	719	11.66	3.59		
CRBS Total	Female	481	12.74	2.49	10.87	0.00*
	Male	719	10.5	4.04		
Variables		Age		Working time (years)		
SAVE Total		0.014		-.242**		
PHQ Total		0.011		-.501**		
OCS Total		-0.005		-.366**		
CRBS Total		-0.010		-.397**		

* $p<0.05$, ** $p<0.01$; N=1200

Table 4. Means, standard deviations and Independent Groups T-Test Results of SAVE, PHQ, OCS and CRBS Scale Scores according to marital status.

Variables	Marial Status	N	Med	Ss	t(1200)	p
SAVE Total	Married	1145	26.2	4.09	0.09	0.93
	Single	55	26.15	3.92		
PHQ Total	Married	1145	17.6	3.38	-0.23	0.82
	Single	55	17.71	3.34		
OCS Total	Married	1145	11.66	3.7	-1.37	0.17
	Single	55	12.36	3.47		
CRBS Total	Married	1145	11.39	3.66	-0.60	0.55
	Single	55	11.69	3.89		

* $p>0.05$

Table 5. Means, standard deviations and Independent Groups T-Test results of SAVE, PHQ, OCS and CRBS Scale Scores according to socioeconomic status and means, standard deviations and Independent Groups T-Test results of SAVE, PHQ, OCS and CRBS Scale Scores according to educational status.

Variables	Socioeconomic status	N	Med	Ss	t(1200)	p
SAVE Total	Middle	840	25,71	4,35	-6,44	0,00*
	High	360	27,33	3,10		
PHQ Total	Middle	840	17,72	3,57	1,83	0,07
	High	360	17,33	2,87		
OCS Total	Middle	840	11,85	3,91	2,23	0,03*
	High	360	11,33	3,10		
CRBS Total	Middle	840	12,00	3,55	8,93	0,00*
	High	360	10,00	3,56		

Variables	Education status	N	Med	Ss	t(1200)	p
SAVE Total	Associate degree	240	26,00	3,01	-0,82	0,41
	Undergraduate and above	960	26,24	4,31		
PHQ Total	Associate degree	240	15,50	1,50	-11,36	0,00*
	Undergraduate and above	960	18,13	3,51		
OCS Total	Associate degree	240	10,00	3,01	-8,17	0,00*
	Undergraduate and above	960	12,12	3,73		
CRBS Total	Associate degree	240	11,50	3,51	0,48	0,63
	Undergraduate and above	960	11,37	3,71		

*p<0.05

Table 6. Means, standard deviations and ANOVA results of SAVE, PHQ, OCS and CRBS Scale Scores according to the area of work in pediatric service and mean, standard deviations and Independent Groups T-Test results of SAVE, PHQ, OCS and CRBS Scale Scores according to vaccination status.

Değişkenler	Area worked in pediatrics service	N	Med	Ss	F(3;1196)	p	Scheffe Post-Hoc
SAVE Total	Infection ^a	240	27.5	2.51	145.3	0.00*	a>d, b>d, c>d,
	General pediatric ^b	359	27.68	3.3			
	Ontology ^c	240	27.5	1.5			
	Pediatric intensive care ^d	361	22.98	4.91			
PHQ Total	Infection ^a	240	21.5	0.5	690.43	0.00*	a>b, a>c, a>d c>b, c>d b>d
	General pediatric ^b	359	14.68	2.87			
	Ontology ^c	240	20	2			
	Pediatric intensive care ^d	361	16.34	1.7			
OCS Total	Infection ^a	240	14	0.00	97.91	0.00*	a>b, a>c, a>d c>b, c>d d>b
	General pediatric ^b	359	11.33	5.26			
	Ontology ^c	240	13	2			
	Pediatric intensive care ^d	361	9.66	2.49			
CRBS Total	Infection ^a	240	13	6.01	22.73	0.00*	a>b, a>c, a>d c>d
	General pediatric ^b	359	11	2.95			
	Ontology ^c	240	11.5	0.5			
	Pediatric intensive care ^d	361	10.66	3.09			

Variables	Have you been vaccinated?	N	Med	Ss	t(1200)	p
SAVE Total	Yes	960	24.99	3.65	-25.25	0.00*
	No	240	31	1		
PHQ Total	Yes	960	17.13	3.55	-10.11	0.00*
	No	240	19.5	1.5		
OCS Total	Yes	960	12.37	2.92	13.58	0.00*
	No	240	9	5.01		
CRBS ToTAL	Yes	960	12.37	3.46	21.73	0.00*
	No	240	7.5	0.5		

*p<0.05

status ($p < 0.05$). Participants who stated that they were not vaccinated had higher stress and anxiety and depression perceptions related to the virus epidemic, while participants who stated that they were vaccinated had a higher tendency to have dysfunctional thoughts related to the Reassurance-seeking behavior scale against coronavirus.

Discussion

Pediatric nurses who participated in the research; The rate of married people is 95.4%, of which 59.9% are men and 40.1% are women. It was determined that 70% of the nurses had a moderate socioeconomic status, 20% worked in the field of Infection, 29.9% worked in General Pediatrics, 20% worked in Oncology and 30.1% worked in pediatric intensive care. Our findings; the results of Zheng et al.'s cross-sectional study [19]: Prevalence of depression and anxiety among nurses during the Covid-19 epidemic in China and associated factors are similar. Azizpour et al.'s study titled "The effect of psychological factors on grief in front-line nurses fighting Covid-19" [20] and Del Pozo-Herce et al.'s study on the psychological impact on nursing professionals in the Rioja health service (Spain) due to the SARS-CoV-2 virus. The results of the study are consistent with [21].

According to the gender variable of the pediatric nurses who participated in the research; There was no difference between the OCS total scores, but there were significant differences between the total score averages of the other scales. Male nurses had higher levels of stress and anxiety than female nurses. Our findings; In the study of McAlonan et al., on the immediate and continuous psychological impact of the emerging infectious disease epidemic on healthcare workers, it was concluded that male nurses were more stressed and had higher anxiety levels [22]. In Sampai et al.'s study titled The effect of the Covid-19 epidemic on the mental health of nurses: A prospective cohort study, it was found that women had lower levels of anxiety in epidemic situations than male nurses [23]. Alwani et al.'s study evaluating nurses' knowledge, practices, attitudes and concerns about Covid-19 during the current epidemic in Karachi, Pakistan, found

that male nurses had higher anxiety and stress levels, according to the score results of the scales used [24].

It was concluded that as the age of the pediatric nurses participating in the study increases, the participants' stress and anxiety levels due to the virus epidemic, their perception of depression, their dysfunctional thoughts related to coronavirus and their tendency to exhibit reassurance-seeking behavior decrease. Our finding result; In Robert et al.'s study on endurance, anxiety and depression levels of nurses working in respiratory clinical areas during the COVID epidemic, nurses who were older in biological age had lower levels of anxiety and stress during the epidemic [25]. Similarly, Mosolova et al.'s study on the endurance, anxiety and depression levels of nurses working in respiratory clinical areas during the Covid-19 epidemic in Russia. In a study on stress and anxiety among healthcare professionals [26], it was stated that nurses who were older were more likely to be infected with the virus. Likewise, the results of Ali et al.'s investigation of psychological stress, anxiety factors and coping mechanisms of intensive care unit nurses during the Covid-19 epidemic in Saudi Arabia are also parallel [27].

According to the marriage status of the pediatric nurses who participated in the study, the total score averages of the scales did not show a significant difference in our findings. It was concluded that the stress and anxiety behaviors of married and single people were similar. This is our finding. In a cross-sectional study by Marthoenis et al., investigating the burden of mental distress among nurses in a Covid-19 referral hospital in a province in Indonesia, it was concluded that the anxiety levels of nurses were similar according to their marital status and were affected by each other [28]. The results of Alwani et al.'s study evaluating the knowledge, practices, attitudes and concerns of Pakistani nurses towards Covid-19 during the current epidemic in Pakistan and Lyu et al.'s study on the risk perception and prevention of hospital infections of frontline nurses during the Covid-19 epidemic [29]. The results of the study titled Factors Affecting Applications are compatible with our findings [30].

According to the socioeconomic levels of pediatric nurses, except for the total score averages of the PHQ scale, the total score averages of other scales show significant differences, and psychologically the viral anxiety of nurses with high and medium socioeconomic levels was found to be higher. This finding was found in König et al.'s German translation of the Stress and anxiety to viral epidemics-9 (SAVE-9) scale: Outcomes of healthcare workers during the second wave of Covid-19 in which healthcare workers with an economically lower budget reported less anxiety at the time of the epidemic [31]. It was found that the results of Chen et al.'s study on the psychological distress of nurses working during the SARS epidemic in Taiwan and Awona et al.'s study on the anxiety, depression and resilience of healthcare workers during the 2019 coronavirus disease epidemic in Japan were similar to our findings [32,33].

According to the educational status of the participating nurses; SAVE and CRBS scale total score averages did not show a significant difference, but a significant difference was found between PHQ and OCS total score averages. According to our findings, as the educational level increases, viral anxiety that may occur due to Covid-19 will have a greater impact on the psychological factor, which may suggest that coping processes are ineffective. This finding was found in Nobahar et al.'s study of depression, death anxiety and related factors in nurses caring for Covid-19 patients at the Kosar hospital in Semnan, Iran [34]. Nurses with a higher level of professional education had higher levels of anxiety and their anxiety increased during Covid-19. conclusion has been reached. As a result of Savitsky et al.'s study on anxiety and coping strategies in nursing students during the Covid-19 epidemic, it was determined that students in the lower grades coped better with viral anxiety [35]. In the study of Sinichi et al., on the psychological symptoms and coping strategies of nurses caring for patients with Covid-19 pneumonia, the nurses' professional experience rather than their educational status describes the Covid-19 process in a healthier way [36].

The total score averages of all scales showed significant differences according to the area where the participating pediatric nurses worked in the pediatric service, and the stress and anxiety levels of nurses working in pediatric intensive care were higher than those working in other services, followed by infectious oncology, pediatric intensive care and general pediatric care. This finding is supported by Fang et al.'s study: Causes and mediators of healthcare workers' anxiety in one of the hospitals most affected by Covid-19: in a qualitative analysis study, where nurses working in intensive care had high levels of anxiety, Ramadhana et al.'s Covid-19 in Patient Nursing Care Services Hospitals in the Hospital Zone [37]. Study results concluded that nurses working in the infection ward had high levels of depression and anxiety during the Covid-19 process [38]. According to the results of Şahin et al.'s study on the prevalence of depression, anxiety, distress and insomnia and related factors in healthcare workers during the Covid-19 epidemic in Türkiye, it is parallel to our findings [39].

Results according to vaccination status; the mean scores of all scales showed a significant difference, and those who were vaccinated were found to have higher levels of virus-related stress, anxiety and depression perceptions than those who were not vaccinated, and those who were vaccinated tended to feel insecure due to the virus. In Olashore et al.'s study titled "The psychological impact of Covid-19 on healthcare workers in African Countries: A systematic review" [40], it was determined that vaccinated people were comfortable with negative psychological situations that may occur as a result of virus anxiety. In Shahrour et al.'s study on acute stress disorder, coping self-efficacy and subsequent psychological distress among nurses amid Covid-19 [41], it was stated that vaccinated nurses had lower anxiety levels, but they still did not feel comfortable against the virus. The results of Branjerdporn et al.'s study of the interventional response of hospitals and healthcare services to the mental health effects of viral outbreaks on healthcare workers [42] are similar. One of the healthcare professionals who had to struggle the most with the epidemic

during the pandemic and who are at high risk of catching the epidemic is nurses [43]. These have caused nurses to become depressed, have sleep problems, have difficulty concentrating, and work in the field as anxious, hopeless and stressed individuals[43]. In a study conducted to determine the anxiety levels of individuals living in Türkiye during the Covid-19 pandemic, it was determined that single people had higher anxiety levels than married people [44]. In the study conducted by Karaveli and Kukul Güven in Türkiye titled evaluation of occupational anxiety in emergency service workers in the Covid-19 Pandemic, 90.4% of the participants stated that they had anxiety about work during the pandemic period. Our research findings are similar to studies conducted in Türkiye [45].

Conclusion

It has been concluded that the results of pediatric nurses working in the ward regarding the possible psychological impact of Covid-19 and quarantine viral anxiety during the pandemic period differ according to some socio-demographic information and affect them directly and indirectly. In order to obtain more comparable results on this issue, studies conducted on large sample groups are needed. In addition, in line with the results obtained, it is important to reduce stress related to viral anxiety, relax techniques, awareness, self-compassion, and group and individual interventions to ensure psychological well-being of healthcare professionals, especially nurses, who are at the forefront of the fight against the pandemic. In addition, it may be useful to plan trainings that will reduce professional anxiety and increase professional self-confidence for this group, which is likely to experience future professional anxiety. In line with these results, it is suggested that it would be beneficial to establish psychological counseling units by determining the psychological behaviors of nurses and their fears and anxieties regarding processes such as pandemics, and to take into account the risk that their health anxiety levels may be high and to provide in-service training to reduce their anxieties on this issue. In addition; it is understood that the anxiety levels of nurses are high during the pandemic process we are

experiencing. In order to achieve this, in addition to increasing economic support, there should be activities and plans that will motivate them. It is recommended that studies be planned to ensure that nurses can continue their professions with love and motivation, and that similar studies be repeated in larger sample groups.

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Conflict of interest

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