

# Burnout and job satisfaction among nurses during the COVID-19 pandemic: comparison of pediatric and adult clinics\*

## Covid-19 salgını sırasında hemşirelerde tükenmişlik ve iş doyumunu: Pediatri ve erişkin kliniklerinin karşılaştırılması

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### ABSTRACT

**Introduction and Objective:** This descriptive study aimed to evaluate nurse burnout and job satisfaction during the pandemic, compare the burnout and job satisfaction of nurses working in pediatric and adult clinics, and examine associated factors. **Material and Methods:** The study sample consisted of 384 nurses working in 3 hospitals. A demographic information form, the Burnout Measure, and the Minnesota Job Satisfaction Questionnaire were used for data collection. Data analysis was performed in NCSS 2007 program (significance level  $p < 0.05$ ). **Results and Conclusion:** Only 8.6% of the nurses had no burnout and 32.1% had high job satisfaction. No difference in burnout or job satisfaction was observed between nurses working in pediatric and adult clinics. Our findings showed that nurses experienced high levels of burnout and widespread low job satisfaction during the pandemic. This can lead to negative consequences in terms of the quality of patient care, patient outcomes, and the mental health of nurses. Support programs should be developed and working conditions improved in the post-COVID era to mitigate the high level of burnout and low job satisfaction.

### ÖZ

**Giriş ve Amaç:** Tanımlayıcı tipteki bu çalışmanın amacı, pandemi döneminde hemşirelerdeki tükenmişlik ve iş doyumunu değerlendirmek, pediatri ve erişkin kliniklerinde çalışan hemşirelerin tükenmişlik ve iş doyumlarını karşılaştırmak ve ilişkili faktörleri incelemektir. **Gereç ve Yöntem:** Araştırmanın örneklemini 3 hastanede görev yapan 384 hemşire oluşturmuştur. Verilerin toplanmasında demografik bilgi formu, Tükenmişlik Ölçeği ve Minnesota İş Doyumu Anketi kullanıldı. Veri analizi NCSS 2007 programında yapıldı (anlamlılık düzeyi  $p < 0,05$ ). **Bulgular ve Sonuç:** Hemşirelerin yalnızca %8,6'sında tükenmişlik olmadığı ve sadece %32,1'inin iş doyumunun yüksek olduğu saptandı. Pediatri ve erişkin kliniklerinde çalışan hemşireler arasında tükenmişlik ve iş doyumunun fark gözlenmedi. Bulgularımız, hemşirelerin pandemi sırasında yüksek düzeyde tükenmişlik yaşadığını ve çoğunluğunun iş doyumunun düşük olduğunu gösterdi. Bu durum hasta bakımının kalitesi, hasta sonuçları ve hemşirelerin ruh sağlığı açısından olumsuz sonuçlara yol açabilir. Bu nedenle, içinde bulunduğumuz COVID-19 sonrası dönemde yüksek düzeydeki tükenmişliği ve düşük iş tatminini azaltmak için destek programları geliştirilmeli ve çalışma koşulları iyileştirilmelidir.

**Key Words:**  
Burnout, Job Satisfaction,  
Nurse, Pediatric Nursing

**Anahtar Kelimeler:**  
Çocuk Hemşireliği, Hemşire, İş  
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### INTRODUCTION

COVID-19 first appeared in Wuhan, China in December 2019 and became a global health disaster because of its high morbidity and mortality. The World Health Organization (WHO) declared on March 11, 2020 that COVID-19 and the first cases in Turkey were also detected on this date (Dinçer & İnangil, 2021; World Health Organization, 2020). The COVID-19 pandemic seriously disrupted health services all over the world and nurses working on the front lines bore the greatest burden during the pandemic (Çevirme & Kurt, 2020).

Furthermore, many health professionals and nurses contracted COVID-19 and some lost their lives (Yayla & Eskici İlgin, 2021). During the pandemic, nurses experienced increased workload, difficulty working in protective equipment, fear of being infected and infecting their families, concern about not being able to help patients enough, and problems such as fatigue, exhaustion, social isolation, and stigma (Kackin et al., 2021; Akkuş et al., 2021). In a study conducted by Kackin (2021), nurses stated that they avoided social environments because of societal stigmatization and the risk of disease transmission, leading them to feel

isolated and alone. Nurses stated that they were both worried about the deterioration of their physical and psychological health, and afraid of infecting their families, friends, and other people around them. Stress has a negative impact on sleep and mental health, and sleep disorders experienced by nurses pose a risk for later psychological problems. Insomnia during the pandemic was reported to reduce nurses' quality of life and contribute to burnout (Barr, P. 2024; Nguyen et al. 2024; Sayilan et al., 2021).

During the COVID-19 pandemic, nurses took an active role in all hospital units, including pediatric clinics. Caring for children who are ill or at the end of life is more difficult and traumatic, and their treatment requires extra care. In addition, pediatric nurses must also deal with the parents' emotional responses to their children's condition. Because of these different working conditions, it is expected that levels of job satisfaction and burnout and the factors associated with these parameters may differ for pediatric nurses compared to nurses working in adult clinics (Polat, 2021). However, the literature evidence is sparse and contradictory. Davis et al. (2013) determined that pediatric oncology nurses had a lower level of personal accomplishment than nurses caring for adults. In an earlier study by Sun et al. (1996), it was found that nurses working in gynecology and obstetrics clinics experienced more burnout compared to nurses working in pediatric clinics.

Studies on job satisfaction and burnout among nurses in Turkey have generally included nurses working in adult clinics (Yüksel Kaçan & Örsal, 2018; Baran Camcı & Kavuran, 2021). In the limited number of pre-pandemic studies of nurses working in pediatric clinics in different cities in Turkey, Aytakin & Yılmaz Kurt (2014) and Güdücü Tüfekçi et al. (2015) reported moderate job satisfaction among pediatric nurses. Torun (2016) examined the factors associated with burnout and job satisfaction among pediatric nurses working in three hospitals in Ankara and found that levels of emotional exhaustion were higher and job satisfaction was lower among nurses who had less experience working in a pediatric clinic, worked night shift, were not able to take regular weekly leave, and had to sell their accumulated days of leave for a fee because they were unable to use them. However, the situation in the clinics is unknown because there are no studies in the literature on the burnout and job satisfaction levels of nurses working in pediatric and adult clinics during the COVID-19 pandemic in Turkey. COVID-19 has had different physiological, psychological, and social impacts on children and adults (Sargın & Kutluca, 2020). As COVID-positive children and parents were treated together in the same clinics during the pandemic,

pediatric nurses had to simultaneously care for adult patients at the same time while adult nurses had to simultaneously care for pediatric patients (Akkuş at al. 2021). Therefore, we believe the complex nature of pandemic health care provision may have created different conditions in pediatric and adult clinics. This study was planned to address this literature gap and aimed to evaluate the burnout and job satisfaction of nurses during the pandemic, compare these parameters between nurses working in pediatric and adult clinics, and examine the associated factors.

## **METHODS**

### **Study Location and Sample**

This descriptive study was conducted between September 1 and November 29, 2021 in three training and research hospitals of the Ministry of Health in Istanbul. The study population consisted of a total of 1418 nurses, 1091 in adult clinics and 327 in pediatric clinics. The study sample was determined using a sample size estimation formula and stratified simple random sampling. Accordingly, 81 adult and 27 pediatric nurses from the first hospital, 124 adult and 9 pediatric nurses from the second hospital, and 44 adult and 99 pediatric nurses from the third hospital were included in the study. The resulting sample comprised 384 nurses in total, 249 from adult clinics and 135 from pediatric clinics.

### **Ethics committee approval**

This study was conducted in accordance with the Helsinki Declaration principles, received ethical committee approval from the ethics committees of our institution (Number: 19/24), and had "Informed consent" from the nurses who participated in the study. The study was approved by the Health Sciences University Hamidiye Noninvasive Clinical Research Ethics Committee (Number: 19/24) and research permission was obtained from the Provincial Health Directorate of Istanbul.

### **Assessment Tools**

**Information form:** This form was developed in line with the literature and included questions about nurse characteristics such as age, gender, marital status, number of children, years of experience, whether they willingly chose the nursing profession (as opposed to choosing the career based on extrinsic factors such as parental preference, expected employment opportunities, or university entrance exam score), and whether they chose the clinic in which they work.

**Burnout Measure (BM):** The BM, developed by Pines and Aronson (1988), consists of 21 items rated on a 7-point

scale to evaluate the physical, emotional, and mental burnout levels of individuals based on their self-report. The Turkish adaptation, validity, and reliability studies of the BM were conducted by Çapri (2006).

The items are scored from 1 (“never”) to 7 (“always”) and the highest score from this scale can be “7” and the lowest score can be “1”. A score of 1 or 2 is interpreted as no burnout, a score of 3 is a warning sign of burnout, 4 indicates the presence of burnout, and 5 indicates a crisis. Scores of 5 or higher are considered burnout that requires immediate assistance (Çapri, 2006).

Minnesota Job Satisfaction Questionnaire (MSQ): The MSQ is a 5-point Likert-type measurement tool consisting of 100 items in the long form and 20 items in the short form. The short form of the scale was used in this study. Respondents are asked to choose one of five response options for each statement: “very dissatisfied” (1), “dissatisfied” (2), “neither” (3), “satisfied” (4), and “very satisfied” (5). An overall satisfaction score is determined by calculating the average of the item scores (Martins & Proenca, 2012). Scores range from 1 to 5; a score of 3 indicates neutral job satisfaction, scores below 3 reflect low job satisfaction, and scores higher than 3 indicate high job satisfaction (Çetinkaya Ulusoy & Ecevit Alpar, 2013).

The demographic information form, BM, and MSQ short form used in the study were completed by the nurses themselves during face-to-face interviews.

### Data Analysis

Statistically analyses were performed in NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA). The study data were summarized using descriptive

statistics (mean, standard deviation, median, frequency, percentage, minimum, and maximum values). Normal distribution of quantitative data was tested using Shapiro–Wilk test and graphical analyses. For pairwise comparisons of quantitative variables, independent groups t test was used for normally distributed data and the Mann-Whitney U test was used for nonnormally distributed data. One-way analysis of variance with Bonferroni-corrected pairwise evaluations were used to compare normally distributed quantitative variables between more than two groups. Kruskal-Wallis test and Dunn-Bonferroni test were used for comparisons of nonnormally distributed quantitative data among more than two groups. Qualitative data were evaluated using the Fisher-Freeman-Halton exact test. Statistical significance was accepted at  $p < 0.05$ .

### RESULTS

80.2% of the nurses participating in the research were women, 59.9% were under the age of 30 and 60.1% were single. 92.2% of the participants were ward nurses. 69.6% of nurses worked in day and night shifts, and 52% worked 190-220 hours per month. The most common daily patient load was 10-19 patients (38.8%), 32.6% of the nurses chose the clinic they worked, and 49.7% were subjected to violence in the workplace in the last year. It was determined that 35.2% (n=135) of the nurses was working in pediatric clinics, while 64.8% (n=249) working in adult clinics. Of the nurses, 19.4% (n=73) in pediatric wards, 7.4% (n=28) in pediatric intensive care, 6.6% (n=25) in pediatric emergency, 2.4% (n=9) in neonatal intensive care, 54.7% (n=206) worked in adult wards, 9% (n=34) in adult intensive care and 0.5% (n=2) in adult emergency departments.

**Table 1.** Distribution and Comparison of Scale Scores

	<i>Min-Max (Median)</i>	1.28-7 (4.5)	
	<i>Mean±SD</i>	4.42±1.01	
<b>Burnout Measure Score</b>		<b>No burnout</b>	33 (8.6)
		<b>Warning signs of burnout</b>	91 (23.7)
		<b>Burnout</b>	150 (39.1)
		<b>Burnout that requires help</b>	110 (28.6)
	<i>Min-Max (Median)</i>	1-4.6 (2.7)	
	<i>Mean±SD</i>	2.69±0.72	
<b>Minnesota Job Satisfaction Questionnaire Total Score</b>		<b>Low job satisfaction</b>	234 (60.9)
		<b>Neutral</b>	27 (7.0)
		<b>High job satisfaction</b>	123 (32.1)
<b>Intrinsic Job Satisfaction Score</b>	<i>Min-Max (Median)</i>	1-5 (2.9)	
	<i>Mean±SD</i>	2.90±0.78	
<b>Extrinsic Job Satisfaction Score</b>	<i>Min-Max (Median)</i>	1-4.9 (2.4)	
	<i>Mean±SD</i>	2.37±0.79	

The nurses' mean BM score was 4.42±1.01 and the mean total MSQ score was 2.69±0.72. Only 8.6% of the nurses had no burnout according to the BM and only 32.1% (n=123) reported high job satisfaction (Table 1). The nurses' scores in the MSQ intrinsic and extrinsic satisfaction subscales are presented in Table 1.

As a result of Pearson's Correlation Analysis, a moderate negative correlation was observed between burnout and job satisfaction (r=-0.537; p=0.001). When nurses working in pediatric and adult clinics were compared, there were no significant differences in burnout or job satisfaction levels (Table 2).

Evaluation of the scale scores according to stressors reported by the nurses is shown in Table 3. High proportions of the nurses in our study responded affirmatively when asked if they experienced stressors such as communication problems in their work environment (58.3%), inappropriate physical conditions in their work environment (51%), inadequate social opportunities (45%), inadequate pay (58.3%), conflicts between colleagues (53.1%), irregular working hours (61.9%), long working hours (67.7%), working night shift (59.9%), not being appreciated (53.1%), not being rewarded (51%), and coping with the demands of patients and their relatives (63.5%). In addition to these, the most frequently reported work-related stress factor (71%) was unclear job descriptions. Job satisfaction and burnout differ significantly according to some of these stress factors (Table 3).

Having experienced workplace violence of any kind in the last year was associated with higher burnout and lower job satisfaction in adult nurses. Pediatric nurses exposed to violence in the last year showed no difference in burnout levels, but reported lower job satisfaction (Table 4). Pediatric nurses who willingly chose the nursing profession had significantly lower levels of burnout and higher job satisfaction compared to those who did not. Adult nurses who willingly chose the nursing profession also had significantly higher job satisfaction than those who did not.

Adult nurses who reported having conflicts with colleagues had significantly higher burnout scores and lower job satisfaction scores than those working in conflict-free clinics (Table 5). Similarly, adult nurses who said unclear job descriptions was a problem had significantly more burnout and lower job satisfaction. Among pediatric nurses, unclear job descriptions were not associated with differences in burnout or job satisfaction.

## DISCUSSION

This study investigated the burnout and job satisfaction levels of nurses working in three training and research hospitals during the COVID-19 pandemic, compared burnout and job satisfaction scores between nurses working in pediatric and adult clinics, and evaluated factors associated with nurse burnout and job satisfaction.

**Table 2.** Evaluation of Scale Scores by Clinic

		Adult clinics (n=249)	Pediatric clinics (n=135)	Test statistic; p
<b>Burnout Score</b>	Mean±SD	4.41±1.28	4.42±0.89	t:-0.086
				<sup>b</sup> <b>0.932</b>
<b>Burnout Level, n (%)</b>	None	26 (10.5)	7 (5.2)	χ <sup>2</sup> :4.587
	Warning sign	56 (22.5)	35 (25.9)	<sup>c</sup> <b>0.198</b>
	Burnout	<b>92 (36.9)</b>	<b>58 (43.0)</b>	
	Burnout requiring assistance	75 (30.1)	35 (25.9)	
<b>Job Satisfaction Score</b>	Mean±SD	2.66±0.70	2.73±0.74	t:-0.901
				<sup>b</sup> <b>0.368</b>
<b>Job Satisfaction Level, n (%)</b>	Low job satisfaction	<b>155 (62.3)</b>	<b>79 (58.5)</b>	χ <sup>2</sup> :2.312
	Neutral	20 (8.0)	7 (5.2)	<sup>c</sup> <b>0.303</b>
	High job satisfaction	74 (29.7)	49 (36.3)	

<sup>b</sup>Student's t-test

<sup>c</sup>Fisher-Freeman-Halton test

Table 3. Evaluation of Scale Scores According to Stress Factors

Which work-related stressor(s) do you experience most?			Burnout Measure Score	Minnesota Job Satisfaction Questionnaire Total Score
Communication problems in the work environment	Yes	Mean±SD	4.52±1.01	2.67±0.68
	No	Mean±SD	4.28±0.99	2.71±0.76
		Test statistic	t:-2.307	t:0.452
		p	<sup>b</sup> 0.022*	<sup>b</sup> 0.652
Inappropriate physical conditions in the work environment	Yes	Mean±SD	4.55±1.00	2.66±0.71
	No	Mean±SD	4.29±1.00	2.71±0.72
		Test statistic	t:-2.556	t:0.687
		p	<sup>b</sup> 0.011*	<sup>b</sup> 0.493
Lack of social opportunities	Yes	Mean±SD	4.54±0.93	2.61±0.7
	No	Mean±SD	4.32±1.05	2.75±0.72
		Test statistic	t:-2.218	t:1.958
		p	<sup>b</sup> 0.027*	<sup>b</sup> 0.051
Inadequate remuneration	Yes	Mean±SD	4.49±0.96	2.68±0.68
	No	Mean±SD	4.31±1.06	2.7±0.76
		Test statistic	t:-1.738	t:-0.214
		p	<sup>b</sup> 0.083	<sup>b</sup> 0.830
Conflicts between colleagues	Yes	Mean±SD	4.55±0.95	2.63±0.71
	No	Mean±SD	4.27±1.05	2.75±0.72
		Test statistic	t:-2.758	t:1.696
		p	<sup>b</sup> 0.006**	<sup>b</sup> 0.091
Unclear job responsibilities	Yes	Mean±SD	4.49±0.97	2.64±0.69
	No	Mean±SD	4.24±1.06	2.81±0.76
		Test statistic	t:-2.283	t:2.089
		p	<sup>b</sup> 0.023*	<sup>b</sup> 0.037*
Irregular working hours	Yes	Mean±SD	4.52±0.97	2.63±0.69
	No	Mean±SD	4.25±1.05	2.78±0.75
		Test statistic	t:-2.650	t:2.106
		p	<sup>b</sup> 0.008**	<sup>b</sup> 0.036*
Long working hours	Yes	Mean±SD	4.55±0.94	2.60±0.69
	No	Mean±SD	4.13±1.08	2.87±0.73
		Test statistic	t:-3.881	t:3.466
		p	<sup>b</sup> 0.001**	<sup>b</sup> 0.001**
Working night shift	Yes	Mean±SD	4.53±0.98	2.61±0.69
	No	Mean±SD	4.25±1.03	2.80±0.74
		Test statistic	t:-2.668	t:2.572
		p	<sup>b</sup> 0.008**	<sup>b</sup> 0.010*

Table 3. (Continue) Evaluation of Scale Scores According to Stress Factors

Which work-related stressor(s) do you experience most?			Burnout Measure Score	Minnesota Job Satisfaction Questionnaire Total Score
Working night shift	Yes	Mean±SD	4.53±0.98	2.61±0.69
	No	Mean±SD	4.25±1.03	2.80±0.74
		Test statistic p	t:-2.668 <sup>b</sup> 0.008**	t:2.572 <sup>b</sup> 0.010*
Not being appreciated	Yes	Mean±SD	4.64±0.96	2.57±0.71
	No	Mean±SD	4.16±1.00	2.81±0.70
		Test statistic p	t:-4.838 <sup>b</sup> 0.001**	t:3.326 <sup>b</sup> 0.001**
Not being rewarded	Yes	Mean±SD	4.58±0.95	2.62±0.69
	No	Mean±SD	4.25±1.04	2.76±0.74
		Test statistic p	t:-3.281 <sup>b</sup> 0.001**	t:2.000 <sup>b</sup> 0.046*
Coping with the demands of patients and their relatives	Yes	Mean±SD	4.49±1.01	2.62±0.70
	No	Mean±SD	4.30±1.00	2.80±0.73
		Test statistic p	t:-1.793 <sup>b</sup> 0.074	t:2.267 <sup>b</sup> 0.024*

<sup>b</sup>Student's t-test      \*p<0.05      \*\*p<0.01

Table 4. Evaluation of the Scale Scores of Nurses According to Exposure to Workplace Violence and Choosing the Nursing Profession

		Exposure to any type of violence in the workplace in the last year	Adult clinics	Pediatric clinics	Test statistic; p
Burnout Measure score	Yes	n	106	85	t:1.306
		Mean±SD	4.65±1.00	4.46±0.91	<sup>b</sup> 0.193
	No	n	143	50	t:-0.752
		Mean±SD	4.24±1.09	4.36±0.84	<sup>b</sup> 0.454
		Test statistic p	t:2.988 <sup>b</sup> 0.003**	t:0.678 <sup>b</sup> 0.499	
Minnesota Job Satisfaction Questionnaire Total Score	Yes	n	106	85	t:-1.384
		Mean±SD	2.49±0.69	2.63±0.74	<sup>b</sup> 0.168
	No	n	143	50	t:-0.950
		Mean±SD	2.79±0.69	2.90±0.73	<sup>b</sup> 0.343
		Test statistic p	t:-3.419 <sup>b</sup> 0.001**	t:-2.046 <sup>b</sup> 0.043*	

<sup>b</sup>Student's t-test      \*\*p<0.01



**Table 4. (Continue)** Evaluation of the Scale Scores of Nurses According to Exposure to Workplace Violence and Choosing the Nursing Profession

Willingly chose nursing profession		Adult clinics	Pediatric clinics	Test statistic; p	
Burnout Measure score	Yes	n Mean±SD	162 4.33±1.09	84 4.23±0.81	t:0.796 <sup>b</sup> 0.427
	No	n Mean±SD	86 4.59±1.01	51 4.74±0.91	t:-0.850 <sup>b</sup> 0.397
		Test statistic	t:-1.850	t:-3.337	
		p	<sup>b</sup> 0.066	<sup>b</sup> 0.001**	
Minnesota Job Satisfaction Questionnaire Total Score	Yes	n Mean±SD	162 2.78±0.73	84 2.91±0.66	t:-1.354 <sup>b</sup> 0.177
	No	n Mean±SD	86 2.44±0.58	51 2.45±0.78	t:-0.051 <sup>b</sup> 0.959
		Test statistic	t:3.970	t:3.659	
		p	<sup>b</sup> 0.001**	<sup>b</sup> 0.001**	

<sup>b</sup>Student's t-test                      \*\*p<0.01

**Table 5.** Evaluation of the Burnout and Job Satisfaction Scores of Nurses According to Conflict Experience and Unclear Job Responsibilities

Conflict with colleagues		Adult clinics	Pediatric clinics	Test statistic; p	
Burnout Measure score	Yes	n Mean±SD	132 4.59±0.99	72 4.48±0.86	t:0.762 <sup>b</sup> 0.447
	No	n Mean±SD	118 4.22±1.12	63 4.36±0.91	t:-0.885 <sup>b</sup> 0.378
		Test statistic	t:-2.739	t:-0.810	
		p	<sup>b</sup> 0.007**	<sup>b</sup> 0.419	
Minnesota Job Satisfaction Questionnaire Total Score	Yes	n Mean±SD	132 2.56±0.68	72 2.75±0.75	t:-1.861 <sup>b</sup> 0.064
	No	n Mean±SD	118 2.78±0.71	63 2.71±0.74	t:0.622 <sup>b</sup> 0.535
		Test statistic	t:2.449	t:-0.358	
		p	<sup>b</sup> 0.015*	<sup>b</sup> 0.721	
Unclear job responsibilities					
Burnout Measure score	Yes	n Mean±SD	180 4.52±1.02	93 4.44±0.88	t:0.734 <sup>b</sup> 0.464
	No	n Mean±SD	69 4.14±1.14	42 4.40±0.91	t:-1.271 <sup>b</sup> 0.206
		Test statistic	t:-2.586	t:-0.218	
		p	<sup>b</sup> 0.010*	<sup>b</sup> 0.828	
Minnesota Job Satisfaction Questionnaire Total Score	Yes	n Mean±SD	184 2.57±0.66	89 2.78±0.73	t:-2.360 <sup>b</sup> 0.019*
	No	n Mean±SD	70 2.91±0.74	41 2.64±0.76	t:1.879 <sup>b</sup> 0.063
		Test statistic	t:3.523	t:-1.018	
		p	<sup>b</sup> 0.001**	<sup>b</sup> 0.310	

<sup>b</sup>Student's t-test                      \*p<0.05

The mean burnout score of the nurses participating in our study was  $4.42 \pm 1.01$ . This shows that the nurses in our sample had a generally high level of burnout that approached crisis level. We determined that only 8.6% of the nurses were not experiencing burnout, while the largest proportion of nurses had burnout (Table 1). As there is no information in the literature regarding levels of nurse burnout before the pandemic in the hospitals where our study data were collected, we could not evaluate whether there was an increase in burnout during the pandemic. However, Şahin (2020) reported a mean BM score of  $3.78 \pm 1.10$  in their study examining levels of burnout among nurses working in a public hospital in another city in Turkey before the pandemic (2018). In an earlier study by Kaya et al. (2010) using the same scale, the mean burnout score of the nurses was found to be  $3.46 \pm 0.68$ . These findings suggest that some nurses experienced burnout before the pandemic, but our study might imply that nurses' burnout increased during the pandemic. Similarly, in a study conducted by Khasne et al. (2020) with healthcare professionals in India, it was determined that more than half of the participants (52.8%) experienced pandemic-induced burnout. They also noted that this rate of burnout was higher than in studies they conducted before COVID-19.

The mean overall job satisfaction score of the nurses participating in our study indicated a generally low level of job satisfaction in the nurses. The majority of the nurses who participated in our study had low job satisfaction and only 32.1% had high job satisfaction (Table 1). Nurses in our country faced intense working conditions even before the pandemic, and these conditions have only become more severe during the pandemic. Occupational issues such as understaffing, low salaries, and lack of respect negatively affect nurses psychosocially, reducing job satisfaction and leading to burnout (Akkuş et al. 2021). In another study conducted in Turkey during the pandemic, Camcı and Kavuran (2021) determined that nurses had moderate job satisfaction scores. The data for their study were collected between September and November 2020. However, the data was collected for this study in 2021, and the lower mean job satisfaction scores in our study can be attributed to the accumulating effects of the pandemic.

When international studies were examined, it was seen that nurses were not very satisfied with their job before the pandemic (Aljohani, 2019; Lu, Zhao, & While, 2019; Dilig-Ruiz et al., 2018). According to the findings of a study conducted by Zakiyah et al. (2021) in Indonesia, it was determined that 34.6% of nurses had high job satisfaction, 59.3% had medium and 6.1% had low level of job satisfaction during the pandemic period.

When burnout and job satisfaction levels were compared between nurses working in pediatric and adult clinics, no statistically significant differences were observed (Table 2). The similar intensity of the working conditions in both pediatric and adult clinics during the pandemic may have played a role in this finding. There are no other studies in the literature comparing the burnout and job satisfaction of nurses working in pediatric and adult clinics during the pandemic.

According to our findings, unclear job descriptions were the most reported occupational stressor (Table 3). Nurses who agreed that unclear job descriptions were a problem in their workplace had significantly higher burnout levels and lower job satisfaction compared to those who did not. The study of Orgambidez, Almeida, & Borrego, (2022) supports this view of nurses, stating that role ambiguity has a direct impact on job satisfaction. On the other hand, Wells (2021) found in her study with critical care nurses providing end-of-life care that burnout was best predicted by role conflict. Although the job descriptions are clearly stated in our country in the Nursing Regulation published and enacted in the Official Gazette number 27515 dated March 8, 2010, it is noteworthy that nurses perceive their job responsibilities as unclear. This shows that there may be problems implementing the legally specified job descriptions in the hospitals in our sample. According to Dinçel (2019), one of the most important reasons for nurses' conflicts with physicians is ambiguity in their job descriptions.

As an occupational stressor unclear job descriptions and conflict with colleagues were associated with lower job satisfaction among adult nurses. This relationship was not observed among pediatric nurses (Table 5). Since the work done in pediatric clinics requires greater sensitivity (Chelazzi et al., 2023), this finding may be a result of job descriptions being established and implemented more clearly in pediatric clinics. Even if unclear job descriptions are a problem in pediatric clinics, it may not be to the same extent as in adult clinics. Güney Kızıl et al. (2015) reported that nurses working in emergency departments knew their duties less than nurses working in pediatric clinics. Additionally, it was determined that pediatric nurses in our country fulfilled their responsibilities significantly more than other nurses.

In this study, we determined that exposure to workplace violence during the last year was associated with significant differences in the job satisfaction scores of both pediatric and adult nurses and in the burnout scores of adult nurses (Table 4). Lower job satisfaction among nurses exposed to violence is expected. Çelik (2020) also reported that health professionals who were exposed to violence in the last five years had higher burnout levels and lower job satisfaction compared to those who



had not experienced violence. However, exposure to violence in pediatric clinics does not show a significant difference in terms of burnout as in adult clinics (Tablo 4). Since nurses in pediatric clinics primarily care for children, the level of violence they experience may not be as high as in adult clinics. No study has been found in the literature that directly examines the type and level of violence in pediatric and adult clinics. In the study of Oğuz, Sayın, & Gürses, (2020), verbal violence was present in all violent incidents in pediatric clinics, and spitting, pushing, kicking, biting, pressure, and throwing objects were involved in 8.8% of the violent incidents. In another study conducted in a general hospital, it was found that 16.1% of nurses were subjected to physical violence (Demirci, & Uğurluoğlu, 2020).

In our study, both pediatric and adult nurses who willingly chose the nursing profession had higher job satisfaction and lower burnout scores (Table 4). In Turkey, factors such as employment opportunities, parental preferences, and income level play an important role in young people's choice of profession, and many students choose a career in nursing because finding a job will be easy (Özveren et al., 2017). It is an expected finding that nurses who willingly choose their profession have high job satisfaction and low burnout levels. Bayer et al. (2021) also reported that nurses who willingly chose their career had higher job satisfaction levels and lower emotional exhaustion and depersonalization levels than those who did not.

In terms of occupational stressors, we observed in this study that nurses working in adult clinics who reported conflict with colleagues had significantly higher burnout and lower job satisfaction (Table 5). This difference in burnout and job satisfaction associated with conflict between colleagues may be because such conflicts occur more frequently and are more intense in adult clinics. According to Temujin et al. (2019), organizational constraints, ineffective leadership, inadequate interpersonal relationships, and feeling powerless in terms of social equality can lead to interpersonal conflict in the work environment. Additionally, Modaresnezhad et al. (2021) in their study of 1080 nurses in the USA, determined that conflicts experienced at work or at home cause anxiety, reduce job satisfaction, and ultimately lead to turnover intentions.

### Limitations

The results of this study are limited to three training and research hospitals serving one region of the Istanbul province of Turkey. In addition, there is no study showing the pre-pandemic job satisfaction and burnout levels of nurses in these hospitals, the magnitude of the effect of the pandemic on job satisfaction and burnout is unknown.

### CONCLUSIONS

In this study, we found that the majority of nurses experienced burnout and job satisfaction was generally low. Job satisfaction and burnout scores were associated with some occupational stressors. Comparison of nurses working in pediatric and adult clinics revealed no significant difference in their levels of burnout and job satisfaction. However, it was determined that the job satisfaction and burnout scores of pediatric nurses differed from adult nurses in terms of workplace violence, conflict with colleagues and unclear job responsibilities. Support programs should be developed and working conditions improved in the post-COVID era to mitigate the high level of burnout and low job satisfaction experienced by nurses during the pandemic.

### REFERENCES

- Akkuş, Y., Karacan, Y., Güney, R., & Kurt, B. (2022). Experiences of nurses working with COVID-19 patients: A qualitative study. *Journal of Clinical Nursing*, 31(9-10), 1243-1257. <https://doi.org/10.1111/jocn.15979>
- Aljohani, K. A. (2019). Nurses' job satisfaction: A multi-center study. *Saudi Journal for Health Sciences*, 8(3), 167-181. [https://doi.org/10.4103/sjhs.sjhs\\_81\\_19](https://doi.org/10.4103/sjhs.sjhs_81_19)
- Andriani, D. A., Rustiyaningsih, A., & Haryanti, F. (2017). Factors related to nurse's compassion satisfaction, burnout, and secondary traumatic stress in pediatric care unit RSUP Dr. Sardjito Yogyakarta. *Belitung Nursing Journal*, 3(5), 577-584. <https://doi.org/10.33546/bnj.135>
- Aytekin, A., & Yılmaz-Kurt, F. (2014). Yenidoğan yoğun bakım kliniğinde çalışan hemşirelerde iş doyumunu ve etkileyen faktörler. *Izmir Dr. Behçet Uz Çocuk Hastanesi Dergisi*, 4(1), 51-58. doi:10.5222/buchd.2014.051
- Baran Camcı, G., & Kavuran, E. (2021). Hemşirelerin iş stresi ve tükenmişlik düzeyleri ile meslek ve yaşam doyumunu düzeyleri arasındaki ilişkinin belirlenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 24(2), 274-283. <https://doi.org/10.17049/ataunihem.930846>
- Barr P. (2024). Relationships of nursing stress and trait emotional intelligence with mental health in neonatal intensive care unit nurses: A cross-sectional correlational study. *Australian Critical Care*, 37(2), 258-264. <https://doi.org/10.1016/j.aucc.2023.07.005>
- Bayer, N., Golbasi, Z., Uzuntarla, Y., & Akarsu, K. (2021). Job satisfaction, burnout and turnover intention of nurses working in hospital during the pandemic COVID-19 in Turkey. *Journal of Clinical Medicine of Kazakhstan*, 18(6), 69-75. <https://doi.org/10.23950/jcmk/11347>
- Chelazzi, C., Villa, G., Lanini, I., Romagnoli, S., & Latronico, N. (2023). The adult and pediatric palliative care: differences and shared issues. *Journal of Anesthesia, Analgesia and Critical Care*, 3(1), 1. <https://doi.org/10.1186/s44158-023-00085-8>
- Çapri, B. (2006). Tükenmişlik ölçeğinin Türkçe uyarlaması: Geçerlik ve güvenilirlik çalışması. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 2(1), 62-77. ISSN: 1305-5429
- Çelik, A. (2020). Sağlık çalışanlarında şiddete uğramanın iş doyumunu ve tükenmişlik ile ilişkisi. [Master Thesis, Çağ University]. <https://acikbilim.yok.gov.tr/handle/20.500.12812/71359>
- Çetinkaya Ulusoy, E., & Ecevit Alpar, Ş. (2013). Hemşirelerde meslekteki dayanışması ve iş doyumunu ile ilişkisi. *Florence Nightingale Journal of Nursing*, 21(3), 154-163. <https://dergipark.org.tr/en/pub/fjn/issue/9011/112243>

- Çevirme, A., & Kurt, A. (2020). COVID-19 pandemisi ve hemşirelik mesleğine yansımaları. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, 7(5), 46-52. <https://dergipark.org.tr/en/pub/asead/issue/54658/723821>
- Davis, S., Lind, B. K., & Sorensen, C. (2013). A comparison of burnout among oncology nurses working in adult and pediatric inpatient and outpatient settings. *Oncology nursing forum*, 40(4), e303–e311. <https://doi.org/10.1188/13.ONF.E303-E311>
- Demirci, Ş., & Uğurluoğlu, Ö. (2020). An evaluation of verbal, physical, and sexual violence against healthcare workers in Ankara, Turkey. *Journal of Forensic Nursing*, 16(4), E33–E41. <https://doi.org/10.1097/JFN.0000000000000286>
- Dilig-Ruiz, A., MacDonald, I., Varin, M. D., Vandyk, A., Graham, I. D., & Squires, J. E. (2018). Job satisfaction among critical care nurses: A systematic review. *International Journal of Nursing Studies*, 88, 123-134.
- Dinçel, Y. M. (2019). Çalışma ortamlarında hekim-hemşire arasındaki çatışma nedenleri ve çatışmaların yönetimi. *Sağlık ve Hemşirelik Yönetimi Dergisi*, 6(3), 256-265 doi:10.5222/SHYD.2019.88700
- Dincer, B., & Inangil, D. (2021). The effect of emotional freedom techniques on nurses' stress, anxiety, and burnout levels during the COVID-19 pandemic: A randomized controlled trial. *Explore (New York, N.Y.)*, 17(2), 109–114. <https://doi.org/10.1016/j.explore.2020.11.012>
- Esenay, F.I., Yiğit, R., Binay, Ş., & Erdoğan, S. (2017). Occupational satisfaction and implementation of roles and functions: A national survey of pediatric nurses in Turkey. *International Refereed Journal of Gynaecological Diseases and Maternal Child Health*, 1-17. Doi: 10.17367/JACSD.2017.2.1
- Güdücü Tüfekci, F., Kurudirek, F., & Baran, G. (2015). Çocuk hemşirelerinin iş tanımlama ve doyum düzeyleri. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 4(1), 70-83. <https://dergipark.org.tr/en/pub/gumussagbil/issue/23835/253920>
- Güney Kızıl, E., Beyece İncazlı, S., Erken, S., Güntürkün, F., & Özkan, B. (2015). Hemşirelerin görevlerini bilme, benimseme ve yerine getirme durumları: İzmir örneği. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 12(3), 215-223. doi:10.5222/HEAD.2015.215
- Kackin, O., Ciydem, E., Aci, O. S., & Kutlu, F. Y. (2021). Experiences and psychosocial problems of nurses caring for patients diagnosed with COVID-19 in Turkey: A qualitative study. *The International Journal of Social Psychiatry*, 67(2), 158–167. <https://doi.org/10.1177/0020764020942788>
- Kang, J. M., Kim, W. S., Cho, H. H., Kang, J. M., Kim, W. S., & Cho, H. H. (2017). Effects of social capital, labor intensity and incivility on job burnout in pediatric nurses. *Child Health Nursing Research*, 23(1), 61-69. <https://doi.org/10.4094/chnr.2017.23.1.61>
- Kaya, N., Kaya, H., Ayık, S. E., & Uygur, E. (2010). Bir devlet hastanesinde çalışan hemşirelerde tükenmişlik. *Uluslararası İnsan Bilimleri Dergisi*, 7(1), 401-419.
- Khasne, R. W., Dhakulkar, B. S., Mahajan, H. C., & Kulkarni, A. P. (2020). Burnout among healthcare workers during COVID-19 pandemic in India: results of a questionnaire-based survey. *Indian Journal of Critical Care Medicine*, 24(8), 664–671. <https://doi.org/10.5005/jp-journals-10071-23518>
- Lu, H., Zhao, Y., & While, A. (2019). Job satisfaction among hospital nurses: A literature review. *International Journal of Nursing Studies*, 94, 21-31.
- Martins, H., & Proença, T. (2012). Minnesota satisfaction questionnaire–psychometric properties and validation in a population of Portuguese hospital workers. *FEP Journal–Economics & Management: Working Paper*, 471(1), 1-23. doi: <https://doi.org/10.26537/iirh.v0i3.1825>
- Modaresnezhad, M., Andrews, M. C., Mesmer Magnus, J., Viswesvaran, C., & Deshpande, S. (2021). Anxiety, job satisfaction, supervisor support and turnover intentions of mid career nurses: a structural equation model analysis. *Journal of Nursing Management*, 29(5), 931-942.
- Nguyen, V. H. A., Phan, Y. T. H., Vuong, T. N. T., Truong, N. A., Le, T. D., Nguyen, X. T. K., & Tran-Chi, V. L. (2024). The relationship between burnout, stress, and resilience among Vietnamese health care workers. *National Journal of Community Medicine*, 15(03), 215-226. <https://doi.org/10.55489/njcm.150320243557>
- Oğuz, M., Sayın, E., & Gürses, D. (2020). Violence against health employees in a child health and diseases clinic: A tertiary-level hospital example. *Türk Pediatri Arsivi*, 55(2), 117–123. <https://doi.org/10.14744/TurkPediatriArs.2020.27003>
- Orgambidez, A., Almeida, H., & Borrego, Y. (2022). Social support and job satisfaction in nursing staff: Understanding the link through role ambiguity. *Journal of Nursing Management*, 30(7), 2937–2944. <https://doi.org/10.1111/jonm.13675>
- Özsoylu, S., Akyıldız, B., & Dursun, A. (2017). Bir üniversite hastanesinde çalışan hemşirelerin tükenmişlik düzeyi ve etkileyen faktörler. *J Pediatr Emerg Intensive Care Med*, 4, 104-109. <https://doi.org/10.4274/cayd.05925>
- Özveren, H., Gülnar, E., & Özden, D. (2017). Hemşirelik öğrencilerinin meslek seçimini etkileyen faktörlerin belirlenmesi. *Turkish Journal of Clinics and Laboratory*, 8(2), 57-64. <https://doi.org/10.18663/tjcl.320040>
- Pines, A.M. ve Aronson, E. (1988). *Career burnout: Causes and cures*. New York: Free Press
- Polat, F. (2021). Çocuk kliniklerinde çalışan hemşirelerin yaşam kalitesinin belirlenmesi. [Master thesis. Medipol University]. <https://acikerisim.medipol.edu.tr/xmlui/handle/20.500.12511/8069>
- Sargın, N., & Kutluca, V. (2020). COVID-19 salgını sürecinde yetişkinlerin tepkileri. *Bilge Uluslararası Sosyal Araştırmalar Dergisi*, 4(2), 47-59. <https://doi.org/10.47257/busad.838408>
- Sayılan, A. A., Kulakac, N., & Uzun, S. (2021). Burnout levels and sleep quality of COVID-19 heroes. *Perspectives in Psychiatric Care*, 3 (57), 1231–1236. <https://doi.org/10.1111/ppc.12678>
- Sun, W. Y., Ling, G. P., Chen, P., & Shan, L. (1996). Burnout among Nurses in the People's Republic of China. *International Journal of Occupational and Environmental Health*, 2(4), 274-279. <https://doi.org/10.1179/oeh.1996.2.4.274>
- Şahin, Ö. (2020). Hemşirelerin merhamet yorgunluğu ve tükenmişlik düzeylerinin belirlenmesi. [Master thesis, Mustafa Kemal University]. <https://acikbilim.yok.gov.tr/handle/20.500.12812/255669>
- T.C. Cumhurbaşkanlığı Mevzuat Bilgi Sistemi. (n.d.). Hemşirelik yönetmeliği. Retrieved March 21, 2024 <https://www.saglik.gov.tr/TR,10533/hemsirelik-yonetmeliği.html>
- Temuçin, E., Dolu, İ., & Kargin, M. (2019). Hemşire-hemşire işbirliği ölçeği'nin geçerlik ve güvenilirliği. *Sağlık Bilimleri ve Meslekleri Dergisi*, 6 (1), 1-7. <https://doi.org/10.17681/hsp.379895>
- Torun, T. (2016). Pediatri kliniklerinde çalışan hemşirelerde tükenmişlik ve iş doyumunun incelenmesi. [Master thesis, Hacettepe University]. [https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp?id=TEHAIOo49vax-tHc4tqnUQ&no=zZe2gDm9l1xTewr\\_fLNtw](https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp?id=TEHAIOo49vax-tHc4tqnUQ&no=zZe2gDm9l1xTewr_fLNtw)
- Wells C. M. (2021). Factors influencing role ambiguity and role conflict among intensive care unit nurses providing end of life care. *The Journal of Nursing Administration*, 51(12), 620–625. <https://doi.org/10.1097/NNA.0000000000001084>
- World Health Organization. (2020). WHO director-general's opening remarks at the media briefing on COVID-19 - 11 March 2020 (no date) Available at: <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> (Accessed: 18 March 2024).
- Yayla, A., & Eskici İlgin, V. (2021). The relationship of nurses' psychological well being with their coronaphobia and work-life balance during the COVID 19 pandemic: A cross sectional study. *Journal of Clinical Nursing*, 30(21-22), 3153-3162. <https://doi.org/10.1111/jocn.15783>

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- Yurtsever, N. (2015). İzmir’de çalışan evde bakım hemşirelerinin iş doyum ve tükenmişlik düzeylerinin incelenmesi. [Master thesis, T.C. İzmir Katip Çelebi University]. <https://acikbilim.yok.gov.tr/handle/20.500.12812/123741>
- Yüksel Kaçan, C. Y., & Örsal, Ö. (2018). Yoğun bakım hemşirelerinde tükenmişliği etkileyen faktörler: sistematik derleme. *Yoğun Bakım Hemşireliği Dergisi*, 22(1), 25-36. <https://dergipark.org.tr/en/pub/ybhd/issue/37979/38005>
- Yüksel Kaçan, C., Örsal, Ö., & Köşgeroğlu, N. (2016). Hemşirelerde iş doyum düzeyinin incelenmesi. *Hemşirelikte Araştırma Geliştirme Dergisi*, 18(2/3), 1-12. <https://dergipark.org.tr/en/pub/hemarge/issue/52749/696067>
- Zakiyah, A., Iswati, I., Rofi’ah, I. A., & Cahyani, S. T. (2022). Work stress and job satisfaction of nurses during the COVID-19 pandemic. In *International Conference on Health and Well-Being*, 130-136. <https://doi.org/10.2991/ahsr.k.220403.018>