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Examining the Relationship Between Occupational Stressors and Burnout Levels of Nurses

Hemşirelerin Mesleki Stresörleri ile Tükenmişlik Düzeyleri Arasındaki İlişkinin İncelenmesi

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Abstract:

Aim: The aim of this study is to examine the relationship between occupational stressors to which nurses are exposed and burnout level.

Methods: This study is cross-sectional and correlational. The study was conducted with nurses working in the clinics of a state hospital between May-July 2024. The sample of the study consisted of 217 nurses. In this study, data were collected by using personal information form, Maslach Burnout Scale and Nurses' Occupational Stressor Scale.

Results: As a result of this study, nurses the mean total score of the occupational stressor scale was 62.57 ± 9.85 . The Maslach Burnout Scale emotional exhaustion sub-dimension score of the nurses was 18.55 ± 6.14 , personal achievement sub-dimension score was 20.92 ± 3.71 , and depersonalisation sub-dimension score was 6.13 ± 3.39 . There was a significant positive relationship between occupational stressors and burnout levels of nurses.

Conclusion: As a result, it was determined that the occupational stress levels of nurses were above average, they experienced moderate emotional exhaustion, depersonalisation was at a low level and personal achievement perception was at a moderate level. It was found that emotional burnout levels of nurses increased as occupational stressors increased. Nurses to protect and strengthen mental health by identifying occupational stressors interventions are recommended.

Key Words: Stress; occupational stressors; burnout.

Özet:

Amaç: Bu çalışmanın amacı hemşirelerin maruz kaldıkları mesleki stresörler ile tükenmişlik düzeyi arasındaki ilişkiyi incelemektir.

Yöntem: Bu çalışma kesitsel ve ilişki arayıcı bir çalışmadır. Araştırma, Mayıs-Temmuz 2024 tarihleri arasında bir devlet hastanesinin kliniklerinde çalışan hemşirelerle yürütülmüştür. Araştırmanın örneklemini 217 hemşire oluşturmuştur. Araştırmada veriler, Kişisel Bilgi Formu, Maslach Tükenmişlik Ölçeği ve Hemşirelerin Mesleki Stresör Ölçeği kullanılarak toplanmıştır.

Bulgular: Bu çalışma sonucunda hemşirelerin mesleki stresör ölçeği toplam puan ortalaması 62.57 ± 9.85 olarak bulunmuştur. Hemşirelerin Maslach Tükenmişlik Ölçeği Duygusal Tükenmişlik alt boyut puanı 18.55 ± 6.14 , Kişisel Başarı alt boyut puanı 20.92 ± 3.71 ve Duyarsızlaşma alt boyut puanı ise 6.13 ± 3.39 olarak bulunmuştur. Mesleki stresörler ile hemşirelerin tükenmişlik düzeyleri arasında pozitif yönde anlamlı ilişki bulunmuştur.

Sonuç: Sonuç olarak hemşirelerin mesleki stres düzeylerinin ortalamanın üstünde olduğu, orta düzeyde duygusal tükenmişlik yaşadıkları, duyarsızlaşma düzeylerinin düşük düzeyde olduğu ve kişisel başarı algılarının orta düzeyde olduğu belirlenmiştir. Hemşirelerin mesleki stresörleri arttıkça duygusal tükenmişlik düzeylerinin arttığı bulunmuştur. Hemşirelerin mesleki stresörleri belirlenerek hemşirelerin ruh sağlıklarının korunmaları ve güçlendirmeleri için müdahaleler önerilmektedir.

Anahtar Kelimeler: Stres; mesleki stresör; tükenmişlik.

Introduction

Occupational stress is defined as a psychological response that threatens the well-being and health of employees and arises as a result of interactions with managers and colleagues or the nature of the work itself.⁽¹⁾ Work-related stress can harm a person's physical and mental health and ultimately have a negative impact on work productivity by increasing stress levels.⁽²⁾ Nursing is one of the professions that experiences the most occupational stressors.⁽³⁾ The occupational stress of nurses has long been a subject of research and has been shown to be important in providing quality and effective care to patients.⁽³⁾ It is known that nurses may experience low job satisfaction and various mental health problems such as burnout due to their heavy workload and high levels of occupational stress.⁽⁴⁾ The increasing number of patients is causing an increase in anxiety and helplessness among nurses.⁽⁵⁾

Burnout is defined as a long-term response to chronic emotional and interpersonal stress factors.⁽³⁾ Burnout is said to consist of three dimensions: emotional exhaustion, depersonalization, and personal accomplishment.⁽³⁾ Healthcare institutions are environments where stress levels are higher than in other workplaces, both because they serve individuals with high stress levels and because healthcare professionals often work in stressful environments.⁽⁶⁾ Healthcare workers may encounter many physical or psychological hazards in their workplaces. Common problems among workers include burnout and job dissatisfaction.⁽⁷⁾

Burnout and occupational stress are two significant problems in the nursing profession that negatively affect individuals, the people they care for, and institutions.⁽³⁾ Due to factors such as developments in healthcare services, changes in patient/consumer relationships, and policy and regulatory changes, occupational stress and related factors for nurses may change over time.⁽³⁾ Nurses working in the healthcare sector, where there are many stress factors, are among the groups at risk of professional burnout.⁽⁸⁾ Therefore, it is crucial to understand the occupational stressors and burnout levels experienced by nurses. In the literature, there are limited studies examining the relationship between nurses' occupational stressors and burnout levels under current conditions. This study aims to determine the relationship between nurses' occupational stressors and burnout levels under today's changing conditions. It is anticipated that the data obtained from this study will shed light on nurses' occupational stressors and burnout levels and guide initiatives aimed at preventing or reducing stressors and burnout.

Research questions

- What is the level of professional stressors experienced by nurses?

- What is the level of burnout experienced by nurses?
- What factors influence the professional stressors experienced by nurses?
- What factors influence the level of burnout experienced by nurses?
- Is there a relationship between nurses' occupational stressors and their burnout levels?

Materials and Methods

Study setting

This study is cross-sectional and exploratory in nature. The research was conducted between May and July 2024 with nurses working at a hospital in western Turkey. The institution does not have any routine practices aimed at identifying or improving nurses' occupational stressors, burnout, and coping skills.

Participants

The study population consisted of 406 nurses who were actively working in the clinics of the hospital during the period when the study was conducted. No sampling method was used in the study, and all nurses who volunteered to participate in the study and met the inclusion criteria were included in the study. Accordingly, the study sample consisted of 217 nurses. The inclusion criteria for the study were: being between the ages of 18 and 65, having worked as a nurse for at least six months, volunteering to participate in the study, being actively working in the main building clinic during the period when the study data was collected, and having answered all questions completely.

Data collection tools

Nurse information form: Based on research data found in the relevant literature, this form consists of a total of 10 questions.^(9,10) The form includes sociodemographic characteristics such as nurses' gender, age, marital status, number of children, educational status, years of service in the profession, and type of employment.

Nurses' occupational stressors scale: The scale was developed by Chen and colleagues in 2020.⁽¹¹⁾ The validity and reliability study of the scale in Turkish was conducted by Sarılioğlu and colleagues in 2021. The scale consists of a total of 21 items. The scale is a 4-point Likert scale, evaluated according to the choice between “Strongly disagree (1)” and “Strongly agree (4)”. The score that can be obtained from the scale ranges from 21 to 84, and as the score obtained from the scale increases, nurses' professional stress also increases. There are no

reverse-coded items or cutoff points in the scale. In the validity and reliability study of the scale, the Cronbach's alpha value for the total score is 0.82.⁽¹²⁾ In this study, Cronbach's alpha value for the total scale score was calculated as 0.88.

Maslach Burnout Inventory: The scale was developed by Maslach and Jackson in 1986. The Turkish validity and reliability study of the Maslach Burnout Inventory was conducted by Ergin 1992. The scale is a 5-point Likert scale, with responses ranging from “Never (0)” to “Always (4)”. The scale consists of a total of 22 items and three subscales. These subscales are emotional exhaustion, personal accomplishment, and depersonalization. The scale is scored separately for each subscale. As the score increases, the level of burnout increases. The score that can be obtained from the emotional exhaustion sub-dimension is between 0 and 36, the score that can be obtained from the desensitization sub-dimension is between 0 and 20, and the score that can be obtained from the personal achievement sub-dimension is between 0 and 32. In Ergin's study, Cronbach's alpha reliability coefficients were found to be 0.83 for the emotional exhaustion subscale, 0.65 for the depersonalization subscale, and 0.72 for the personal accomplishment subscale.⁽¹³⁾ As a result of this study, the Cronbach alpha values for the subdimensions were found to be 0.85 for the emotional exhaustion subdimension, 0.70 for the personal accomplishment subdimension, and 0.70 for the depersonalization subdimension.

Data collection

After obtaining a list of nurses working at the institution where the study was conducted from the nursing services department, the purpose of the study was announced to the nurses' common groups and they were invited to participate in the study. The researcher visited the clinics on specific days of the week, provided information about the purpose of the study, and collected data. Research data were obtained through face-to-face interviews with nurses. A total of 217 nurses who met the study criteria were included in the study. A total of 231 nurses who were on maternity leave, had military service exemptions, were not willing to participate in the study, or did not meet the study participation criteria during the study period were excluded from the study.

Data Analyses

The Statistical Package for Social Sciences (SPSS) 25.0 program was used to analyze the research data. The Kolmogorov-Smirnov test was used to test the normality assumption of continuous dependent variables. Parametric tests were used because the continuous variables met most of the above characteristics. Independent samples t-test, one-way analysis of variance, and Pearson correlation analysis were used in the analysis of the data. The Bonferroni method

was preferred among post hoc multiple comparison tests to determine the source of the difference between the groups. As a result of the study, power analysis was calculated using the G*Power 3.1.9.7 program. In the multiple linear regression analysis of the study, 217 participants and 4 independent variables were used. The calculated effect size ($f^2=0.3679891$) and degrees of freedom ($df_1=4$, $df_2=212$) resulted in a statistical power of 1.000 ($\alpha = 0.05$). In all tests performed, the statistical significance level was accepted as $p<0.05$.

Ethical consideration

Ethical committee approval was obtained from the Human Research Ethics Committee of Zonguldak Bülent Ecevit University (dated 02.02.2024 and numbered 396987) in order to conduct the study. Written institutional permission was obtained from the institution where the study was conducted (dated March 14, 2024, and numbered 428276). Verbal and written consent was obtained from the nurses who agreed to participate in the study. Permission to use the scales employed in the study was obtained from the scale owners.

Results

The sociodemographic characteristics of the nurses are presented in Table 1.

Table 1. Sociodemographic Characteristics of Nurses

Sociodemographic Characteristics	$\bar{x}\pm SD$	Min-max
Age	33.37±8.21	22-59
Number of children	0.68±0.91	0-4
Length of experience in their unit (year)	8.11±7.19	1-40
Length of professional experience (year)	10.68±8.87	1-40
Gender	n	%
Female	186	85.7
Male	31	14.3
Marital status		
Single	125	57.6
Married	92	42.4
Educational status		
High school	13	6.0
Associate degree	14	6.4
Bachelors degree	171	78.8
Graduate degree	19	8.8
Having child		
No	126	58.1
Yes	91	41.9
Work type		
Only day	41	18.9
Shifts	176	81.1
Unit		
Intensive care	53	24.4
Internal units	87	40.1
Surgical units	59	27.2
Other units	18	8.3
Title		
Clinical nurses	200	92.2
Charge nurses	17	7.8

The total scores of the Nurses' Professional Stress Scale and the subscale scores of the Maslach Burnout Inventory are presented in Table 2. The mean total score on the Nurses' Occupational Stress Scale was 62.57 ± 9.85 . The scores obtained by nurses on the Occupational Stress Scale correspond to 66.00% of the maximum score, indicating that their occupational stress levels are moderate.

The subscale scores of nurses on the Maslach Burnout Inventory are presented in Table 2. The scores obtained from the emotional exhaustion subscale are at 52.00% of the maximum score, indicating that nurses experience moderate levels of emotional exhaustion. The nurses' scores on the depersonalization subscale remained at 31.00% of the maximum score, indicating that depersonalization is at low levels. In contrast, the personal accomplishment subscale score was at 65.00% of the maximum score, indicating that nurses' perception of personal accomplishment is at a moderate level.

Table 2. Nurses' Professional Stress Scale and Maslach Burnout Scale Scores

Scales and Sub Scales	$\bar{x} \pm SD$	Min.-Max	Median
Nurses' Professional Stress Scale Score	62.57 ± 9.85	34-81	63
Maslach Burnout Scale Subscales Scores			
Emotional exhaustion	18.55 ± 6.14	0-34	18
Personal accomplishment	20.92 ± 3.71	11-32	21
Depersonalization	6.13 ± 3.39	0-15	5

\bar{x} : Average, SD: Standard deviation

Table 3 shows a comparison of the Maslach Burnout Inventory subscale and the total score averages of the Nurses' Professional Stressors Scale according to the sociodemographic characteristics of nurses.

No statistically significant differences were found in the Maslach Burnout Inventory subscale scores of nurses according to gender, marital status, number of children, work type, or department ($p < 0.05$). Statistically significant differences were found in nurses' Maslach Burnout Inventory scores only in terms of personal accomplishment subscale mean scores according to educational status ($F = 4.002$, $p = 0.008$, $\eta^2 = 0.05$). According to the post hoc Bonferroni test, the mean scores of graduate graduates were found to be higher than those of associate degree graduates ($p = 0.024$) and bachelor's degree graduates ($p = 0.007$). In the effect

size calculation, the difference was determined to have a low effect. Statistically significant differences were found in the mean scores of the Maslach Burnout Inventory emotional exhaustion ($t=2.088$, $p=0.038$, $d=0.53$) and personal accomplishment subdimensions ($t=-3.740$, $p=0.032$, $d=0.55$) according to the titles of the nurses in the clinic where they worked. It was found that clinical nurses had higher mean scores on the emotional exhaustion subscale and lower mean scores on the personal accomplishment subscale compared to charge nurses. In the effect size calculation, the difference was found to have a moderate effect.

There was no statistically significant difference in the total scores of the Nurses' Professional Stress Scale according to gender, marital status, and having of child ($p<0.05$). There was a statistically significant difference in the mean total scores on the Occupational Stress Scale among nurses according to educational status ($F=3.793$; $p=0.011$; $\eta^2=0.05$). However, the post hoc Bonferroni test revealed no significant difference between groups, although the scores of bachelor's degree graduates were higher than those of other educational levels. The effect size calculation revealed that the difference was due to a low level of effect. A statistically significant difference was found in the total mean scores of the Occupational Stress Scale among nurses according to their work pattern ($t=-3.702$, $p<0.001$, $d=0.64$). It was found that the average total score on the Occupational Stress Scale for nurses working shifts was higher than that for nurses working only during the day. In the effect size calculation, it was determined that the difference had a moderate effect.

It was found that the total mean scores of the Professional Stress Scale for nurses differed significantly depending on the unit they worked in ($F=7.550$, $p<0.001$, $\eta^2=0.11$). According to the post hoc Bonferroni test, the mean scores of nurses working in intensive care were found to be higher than those working in internal units ($p=0.005$) and other units ($p<0.001$). In addition, it was determined that the average score of those working in internal units was higher than those working in other units ($p=0.032$) and that the average score of those working in surgical units was higher than those working in other units ($p=0.015$). In the effect size calculation, it was determined that the difference had a moderate effect. It was found that the total mean scores of the Professional Stressors Scale for nurses differed significantly according to their titles in the clinic where they worked ($t = 2.165$, $p = 0.032$, $d = 0.55$). It was found that the average total score on the Occupational Stress Scale for clinical nurses was higher than that for charge nurses. In the effect size calculation, it was determined that the difference had a moderate effect (Table 3).

Table 3. Comparison of Maslach Burnout Inventory Subscale Scores and Nurse's Professional Stress Scale Total Scores According to Nurses' Sociodemographic Characteristics (n = 217)

Sociodemographic Characteristics	Maslach Burnout Scale Subscales					Nurses' Professional Stress Scale
	n	%	Emotional exhaustion $\bar{x}\pm SD$	Depersonalization $\bar{x}\pm SD$	Personal accomplishment $\bar{x}\pm SD$	
Gender						
Female	186	85.7	18.55±6.12	6.01±3.35	20.78±3.73	62.67±9.41
Male	31	14.3	18.55±6.30	6.90±3.53	21.74±3.56	62.00±12.33
t			0.000	-1.369	-1.338	0.287
p			1.000	0.172	0.182	0.775
d			0.00	0.27	0.26	0.06
Marital status						
Single	125	57.6	19.06±6.08	6.04±3.24	21.06±3.79	62.89±10.08
Married	92	42.4	17.85±6.18	6.26±3.59	20.72±3.62	62.14±9.58
t			1.447	-0.474	0.678	0.551
p			0.149	0.636	0.498	0.582
d			0.20	0.07	0.09	0.08
Educational status						
High school ¹	13	6.0	18.54±3.69	6.46±2.73	21.08±3.84	57.85±10.78
Associate degree ²	14	6.4	19.71±6.90	6.07±3.29	19.86±4.72	59.64±10.66
Bachelors degree ³	171	78.8	18.68±6.19	6.01±3.39	20.70±3.61	63.70±9.43
Graduate degree ⁴	19	8.8	16.47±6.40	7.05±3.92	23.58±2.81	57.79±10.29
F			0.920	0.579	4.002	3.793
p			0.432	0.629	0.008	0.011
η^2			0.01	0.01	0.05	0.05
Post hoc			-	-	4>2; p=0.024 4>3; p=0.007	-
Having child						
No	126	58.1	18.50±6.16	6.32±3.36	21.08±3.51	62.50±9.98
Yes	91	41.9	18.62±6.13	5.88±3.42	20.69±3.99	62.67±9.72
t			-0.136	0.941	0.757	-0.125
p			0.892	0.348	0.450	0.900
d			0.02	0.13	0.10	0.02
Work type						
Only day	41	18.9	17.51±6.33	6.34±3.64	21.85±3.24	57.59±10.99
Shifts	176	81.1	18.79±6.08	6.09±3.33	20.70±3.79	63.73±9.22
t			-1.202	0.436	1.802	-3.702
p			0.231	0.664	0.073	<0.001
Unit						
Intensive care ¹	53	24.4	20.38±5.53	6.11±3.21	20.91±3.32	67.06±9.09
Internal units ²	87	40.1	17.69±6.13	5.63±3.56	20.85±3.81	61.55±8.81
Surgical units ³	59	27.2	18.61±6.56	6.51±3.24	20.53±4.11	62.44±10.33
Other units ⁴	18	8.3	17.11±5.63	7.39±3.29	22.56±2.64	54.72±9.54
F			2.517	1.728	1.408	7.550
p			0.059	0.162	0.241	<0.001
η^2			0.03	0.02	0.02	0.11
Post hoc			-	-	-	1>2; p=0.005 1>4; p<0.001 2>4; p=0.032 3>4; p=0.015
Title						
Clinical nurses	200	92.2	18.80±6.16	6.25±3.40	20.65±3.56	62.99±9.59
Charge nurses	17	7.8	15.59±5.10	4.82±2.94	24.06±4.15	57.65±11.81
t			2.088	1.668	-3.740	2.165
p			0.038	0.097	<0.001	0.032
d			0.53	0.42	0.94	0.55

n: Number, \bar{x} : Average, SD: Standard deviation, t: Independent samples t-test value, F: One-way analysis of variance test value (ANOVA), ¹⁻²⁻³⁻⁴: Indication of differences between groups, Post Hoc: Comparison of differences between groups (Bonferroni).
d: Cohen's d effect size value, η^2 : Eta-square effect size

The relationship between nurses' Maslach Burnout Inventory subscale scores and Professional Stressors Scale total scores is shown in Table 4. A moderately significant positive relationship was found between nurses' Maslach Burnout Inventory Emotional Exhaustion subscale and nurses' Occupational Stressors Scale total score ($r=0.431$, $p<0.001$). As nurses' occupational stressor levels increase, their emotional exhaustion levels also increase.

Table 4. Relationship between Nurses' Maslach Burnout Inventory Subscale Scores and Nurses' Occupational Stress Scale Total Scores (n = 217)

Scales		Tests	1	2	3	4
Emotional exhaustion	1	r	1			
		p	-			
Depersonalization	2	r	0.465**	1		
		p	<0.001	-		
Personal accomplishment	3	r	-0.077	-0.029	1	
		p	0.259	0.672	-	
Nurses' Professional Stress Scale	4	r	0.431**	0.062	-0.011	1
		p	<0.001	0.367	0.869	-

*Statistically significant relationship at the $p<0.05$ and ** $p<0.01$ levels.

Discussion

As a result of this study, it was determined that nurses are exposed to moderate levels of occupational stressors and that there is a significant positive correlation between occupational stressors and emotional exhaustion. The positive and significant relationship between occupational stressors and emotional exhaustion found in this study indicates that the negative aspects of nurses' work environment directly erode their mental resources. The fact that occupational stressors trigger burnout despite being moderate in intensity can be explained by the nature of the nursing profession, which requires a high level of 'emotional labor'. This finding shows that it is difficult to protect nurses' emotional health unless stress factors in the workplace are reduced.

The study concluded that the professional stress levels of participating nurses were moderate. This finding is consistent with other studies in the literature.⁽¹⁴⁻¹⁶⁾ Both the sociodemographic characteristics and working conditions of nurses contribute to the occurrence of occupational stressors. In this study, it is thought that the reasons for the moderate levels of

occupational stressors among nurses include increased workload, communication problems with patients and their relatives, and internal team conflicts. In a systematic review examining factors associated with occupational stress among nurses in Ethiopia, findings from various studies showed that the prevalence of occupational stress among healthcare workers varies by country and socioeconomic level.⁽¹⁰⁾ A systematic review and meta-analysis study conducted to examine the prevalence of occupational stress among nurses in Pakistan found that the prevalence of mild occupational stress was 16.00%, moderate stress was 48.00%, and severe stress was 30.00%.⁽⁹⁾ A systematic review and meta-analysis study conducted with healthcare workers determined that the workload stress level was 52.90%.⁽¹⁷⁾ As a result of the study conducted by Camci and Kavuran with 642 nurses in Turkey, the perceived job stress of nurses was found to be moderate.⁽¹⁸⁾ Considering similar findings in the literature, this indicates that stress in the nursing profession has become a professional norm rather than an individual one. Improving mental health is not a privilege, but an institutional necessity. Individual coping methods alone will not be sufficient to reduce nurses' stress. Considering the findings, structural adjustments such as reducing workload, improving communication skills, and ensuring team harmony are of vital importance. Mental health should be improved by implementing measures to reduce professional stressors for nurses

As a result of this study, no differences were found in terms of occupational stressors among nurses based on sociodemographic variables such as gender, marital status, and whether they had children. The results of studies conducted in this area in the literature vary. A systematic review of 132 studies was conducted to examine the occupational stress factors and their consequences among nurses.⁽³⁾ As a result, three types of factors affecting occupational stress have been identified: sociodemographic characteristics, work environment, and personal resources. Most of the studies reviewed in the systematic review found that the results for sociodemographic characteristics were inconsistent in relation to occupational stress.⁽³⁾ In a systematic review examining factors related to occupational stress in Ethiopia, women were found to be more likely to experience occupational stress, with no correlation found between marital status and work experience.⁽¹⁰⁾ Another systematic review and meta-analysis study found that the main determinants of work stress are being female, young age, and dissatisfaction with work.⁽¹⁷⁾ A study conducted in Turkey concluded that female employees experience more stress than male employees, and that male employees derive greater satisfaction from their jobs than female employees. The study also found that job satisfaction increases with age and years of experience in the profession.⁽⁶⁾ Another study found that female employees experience higher levels of stress and burnout than male employees.⁽¹⁹⁾ The same study concluded that

occupational stress is higher among single individuals. The reason why female nurses experience higher occupational stress may be that they have multiple roles outside of work. Although there are widespread findings in the literature that female gender and single status increase occupational stress^(6,17,19), this study did not find that sociodemographic variables had a decisive effect on stress. This suggests that the working conditions and occupational stressors in the institution studied are homogeneous and dominant enough to override individual characteristics. In other words, the source of stressors may be directly related to the nature of the job and the work environment rather than the individual's lifestyle.

As a result of this study, a significant difference was found in the 'Occupational Stress Scale' scores according to educational status, work type, unit worked in, and title. Bachelor's degree-holding nurses were found to have higher stress levels than nurses with other educational levels. A review of the literature revealed that nurses with higher educational levels had higher levels of stressor interpretation and coping skills.⁽²⁰⁾ A systematic review and meta-analysis study has determined that having a low level of education increases the likelihood of developing work-related stress.⁽¹⁷⁾ The difference between this study and the literature is thought to stem from the sample group not being homogeneously distributed. This study found that shift-working nurses had higher stress levels than nurses who worked only during the day. This difference was found to have a moderate effect. This result is similar to other studies in the literature.^(21, 22) Another study found that nurses working in shift systems experienced a disruption in their role-activity balance, which led to an increase in pain levels among nurses and the emergence of fatigue symptoms in individuals.⁽²³⁾ As a result of this study, it was concluded that the stress levels of clinical nurses were higher than those of head nurses. A similar finding has not been reached in other studies. In conclusion, the impact of sociodemographic factors on nurses' occupational stress varies across study results. Further studies with larger sample sizes should be conducted to determine the effect of sociodemographic variables on nurses' occupational stressors, and any interventions should address occupational stressors based on these variables.

This study concluded that nurses experience moderate emotional exhaustion, low levels of depersonalization, and moderate personal accomplishment. Another study conducted at a state hospital in Turkey found that healthcare workers scored above average on all three subdimensions of burnout, with nurses in particular experiencing higher levels of burnout.⁽²⁴⁾ Another study conducted at a university hospital in Turkey found that nurses had high levels of emotional exhaustion, moderate levels of depersonalization, and low levels of personal

accomplishment.⁽²⁵⁾ In this study, no significant differences were found in the three subscales of each burnout scale according to gender, marital status, parenthood, and unit of employment. Another study found that the level of occupational burnout was high among nurses working in inpatient clinics, while it was low among nurses working in emergency rooms, intensive care units, and operating rooms.⁽²⁶⁾ According to the data obtained from this study, it was concluded that clinical nurses experience more emotional exhaustion than charge nurses, and that charge nurses have higher levels of personal success than clinical nurses. The communication of clinical nurses with patients and their families, as well as their work in night shifts, can be cited as factors contributing to emotional exhaustion. A review of the literature reveals that there are numerous studies examining the levels of burnout among nurses. A systematic review of studies conducted with healthcare workers determined that the burnout rate was 39.10%.⁽¹⁷⁾ In the same compilation, being married, having a low level of education, and working shifts were found to be significant predictors of burnout. Many factors, such as nurses' sociodemographic structures, psychosocial factors, the clinics they work in, and team communication, cause different results to be obtained in studies conducted with nurses. A study found that professional burnout decreases as the number of years of service and age increase. The same study also found that professional burnout is higher among single individuals compared to married individuals.⁽¹⁴⁾ A study has concluded that women experience higher levels of stress and burnout than men.⁽¹⁹⁾ Nurses' burnout levels show significant variability in different studies depending on numerous factors such as sociodemographic characteristics (gender, marital status, age) and working conditions (shifts, type of clinic, job position); this reveals that there is no standardized and uniform profile in the field where burnout rates reach high levels.

The results of this study showed that as nurses' occupational stress levels increased, their emotional exhaustion levels also increased. A study conducted with 488 surgical nurses in China found a positive correlation between occupational stress and job burnout.⁽²⁷⁾ As a result of the study conducted by Camci and Kavuran, it was determined that there is a weak positive correlation between nurses' level of burnout and their perceived stress. It is stated that occupational factors have indirect effects on burnout and that there is a significant positive relationship between occupational stress and burnout.⁽²⁸⁾ As a result, it is clear that the higher the professional stress of nurses, the more burnout they experience. This situation can negatively affect the quality of life of nurses and the quality of care they provide. Healthcare institutions should take an active role in helping nurses cope with burnout and professional stress and develop policies to reduce professional stressors.

Results and Recommendations

The study conducted to examine the relationship between nurses' occupational stressors and their levels of burnout revealed that nurses' emotional exhaustion levels were moderate, their depersonalization levels were low, and their perceptions of personal accomplishment were moderate. It was determined that nurses' occupational stressors were at a moderate level. It was found that as nurses' occupational stressors increased, emotional exhaustion also increased.

In order to identify and reduce nurses' occupational stressors, institutional administrators must carry out sustainable efforts to reduce occupational stressors. Creating areas where consultation liaison psychiatric nurses can work in clinics is important for protecting and strengthening the mental health of nurses who are at risk of burnout. Nurses should be provided with interactive in-house training to learn how to cope with stress. Considering that the stress factors nurses are exposed to may vary depending on the unit they work in, clinic-specific training should be planned. Increasing the sample size of similar studies to be conducted in the future may be important in terms of the generalizability of the study. Group activities focused on stress management techniques can be conducted (breathing exercises, meditation groups, laughter yoga, etc.).

Limitation

One of the limitations of this study is that it was conducted with nurses working at a single institution. Another limitation is that the nurses who participated in the study did not show a homogeneous distribution in terms of gender and education level. The use of a Likert-type scale as the data collection method in the study also limits the evaluation of the feedback received from nurses. In the validity study of the scale, the cronbach's alpha value for the depersonalization subscale was below the acceptable level of consistency. Due to the limited internal consistency of this subscale, the findings have been interpreted with caution.

Conflict of Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Author contributions

Author contributions: Study design: BC, SÇİ; Data collection: BC; Data analysis: BC, SÇİ; Study supervision: SÇİ; Manuscript writing: BC; Critical revisions for important intellectual content: SÇİ

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