The Egyptian Journal of Hospital Medicine (July 2025) Vol. 100, Page 3484-3491

Occupational Burnout and Its Associated Work-Related Factors among Nurses at King Khalid University Hospital, Riyadh, Saudi Arabia: An Analytic Cross-Sectional Study

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ABSTRACT

Background: Occupational burnout is a critical health concern among healthcare professionals, with nurses particularly vulnerable due to the physical and emotional demands of their roles. Understanding the burden and predictors of burnout in Saudi healthcare settings is vital for developing effective interventions.

Aim: To assess the prevalence and associated factors of burnout among nurses at King Khalid University Hospital (KKUH), Riyadh, Saudi Arabia. **Methods**: A cross-sectional study was conducted among 270 nurses at KKUH between January and March 2025. Data were collected using a self-administered electronic survey that included sociodemographic information, work characteristics, workplace stressors, and the Maslach Burnout Inventory-Human Services Survey (MBI-HSS) to evaluate burnout.

Results: A high prevalence of burnout was observed, with 73% of participants reporting high scores in at least one burnout domain. Emotional exhaustion was most common (58.1%), followed by depersonalization (49.6%) and low personal accomplishment (14.1%). Multivariate regression analysis identified younger age (B = -11.093, $p < 0.001$), female gender (B = -12.044, p = 0.002), night shift work (B = 10.559, p = 0.002), long working hours (B = 5.937, p = 0.009), and work-life interference (B = 3.548, p = 0.013) as significant predictors of burnout. The model explained 78.8% of the variance in total burnout scores.

Conclusion: The alarmingly high prevalence of burnout among KKUH nurses necessitates urgent, targeted organizational interventions to foster staff well-being and safeguard patient care quality.

Keywords: Burnout, Nurses, Occupational Health, Saudi Arabia.

INTRODUCTION

Currently, healthcare is a challenging field where conditions have very serious effects on the health of health workers. Among these challenges, work-related burnout has developed into a significant phenomenon in healthcare sector worldwide with nurses having significantly high levels of burnout, largely attributed to their direct patient related duties and exposure to many occupational stressors [1,2].

Burnout was first proposed as a concept by Freudenberger based on the emotional and physical exhaustion associated with chronic workplace stress in the 1970s [3]. Maslach et al then developed this concept into a three-dimensional syndrome including emotional exhaustion (EE), depersonalization (DP) and reduced personal accomplishment (PA) [4]. Burnout is now formally recognized as an "occupational phenomenon" in the ICD-11 by the World Health Organization, characterized by "chronic workplace stress that has not been successfully managed" [5].

The clinical presentations of burnout symptoms are varied and unspecific and can include persistent fatigue, mood changes, sleep disturbance, decreased cognition and increased cynicism [6]. However, it has implications beyond personal suffering and there are implications for reduced job satisfaction or feeling more likely to be absent from work, higher staff turnover, patient safety, and deteriorating quality of care [7,8]. These consequences have significant implications for the viability of health systems and the welfare of patients.

Nurses' burnout prevalence is higher than that of other healthcare professionals, and these higher rates have been linked to their frontline functions providing direct patient care, emotional engagement, physical effort, and traumatic events exposure [10,11]. Nursing constitutes around 59% of the global health workforce, hence, their welfare is vital for the effective operation of healthcare delivery systems [12]. Factors contributing to nursing burnout Factors may be categorized as demographic factors (e.g., age, gender, educational level), work-related factors (e.g., job intensity, shift work, short staffing, lack of resources) and organizational factors such as leadership quality and peer support [13-15]. The prevalence of burnout among nurses worldwide significantly differs from one study to another; it is estimated to be between 11.2% and 30% in recent meta-analyses, which shows that this trend is on the rise [16,17]. In Middle East area, the rate of burnout among nurses was between 40%-60% [18] and it reached 67.2% in the Gulf Cooperation Council countries [19]. In Saudi Arabia, local studies have reported different rates as follows: 89% in Al-Madinah [20], 82.2% in Jazan [21], 67.5% in Yanbu [22] and 44.8% in Jeddah [23], reflecting the severity of this occupational health challenge. In parallel, a worldwide shortage of nurses represents another challenge for healthcare services. It had been

Received: 01/04/2025
Accepted: 02/06/2025

estimated that there would be global shortage of 4.5 million nurses by 2030 by World Health Organization [12]. In Saudi Arabia, non-Saudi nurses make up 55.9% of the nursing workforce due to lack of domestic availability [24] and burnout has been recognized as a leading cause of staff turnover and professional flight [25].

Despite increasing global evidence, little is known about the prevalence and determinants of burnout in Saudi tertiary health centers. Such knowledge is key in institutional settings, with the aim of implementing evidence-based interventions to increase staff retention and well-being among healthcare and to sustain the quality of care. Therefore, in the present study, the prevalence of occupational burnout and its association with work related factors and workplace stressors among nurses of King Khalid University Hospital (KKUH), at Riyadh, Saudi Arabia was assessed.

SUBJECTS AND METHODS

Study Design

This cross-sectional study was conducted at King Khalid University Hospital (KKUH), a major tertiary care facility in Riyadh, Saudi Arabia, over a three-month period from January to March 2025. The study aimed to assess burnout levels and associated factors among registered nurses engaged in direct patient care.

Eligibility Criteria

The target population included all registered nurses employed at KKUH with a minimum of six months of clinical experience. Nurses working in administrative or managerial roles, those with less than six months of clinical service, individuals with self-reported chronic physical or psychiatric illnesses, and those who declined participation were excluded. This ensured that the sample represented actively practicing clinical nurses with relevant exposure to hospital stressors.

Sample Size

A convenience sampling method was employed. The minimum required sample size (n = 225) was calculated based on a previously reported burnout prevalence (p = 0.822) using the standard formula for sample size estimation at a 95% confidence level and a 5% margin of error. To compensate for potential non-response, an additional 20% was added, bringing the final target sample to 270 participants.

Recruitment and Data Collection

Recruitment was conducted electronically via Google Forms, with invitations disseminated through hospital-approved communication channels such as official staff WhatsApp groups and institutional email lists.

Survey Instrument

The self-administered questionnaire consisted of four main sections:

1. Sociodemographic and Work Characteristics: Included age, gender, marital status, education level, income satisfaction, duration of clinical experience, shift pattern, and perceived supervisory support.
2. Workplace Stressors: Assessed using 10 validated items rated on a 4-point Likert scale (1 = no stress to 4 = severe stress), with high internal consistency (Cronbach's $\alpha = 0.91$).
3. Burnout Assessment: Utilized the Maslach Burnout Inventory–Human Services Survey for Medical Personnel (MBI-HSS MP), a 22-item scale evaluating Emotional Exhaustion (EE, 9 items), Depersonalization (DP, 5 items), and Personal Accomplishment (PA, 8 items) on a 7-point Likert scale (0 = never to 6 = every day). Internal reliability was high across domains: EE ($\alpha = 0.837$), DP ($\alpha = 0.869$), and PA ($\alpha = 0.881$). Burnout was defined as scoring high in at least one of the three domains.
4. Training and Awareness: Covered prior exposure to burnout management training and interest in future programs.

Pilot Study: A preliminary test involving 27 nurses (approximately 10% of the total sample) was carried out to evaluate the survey's clarity, ease of understanding, and estimated completion time. Suggestions from participants were used to refine and finalize the questionnaire.

Data Analysis

Data were cleaned in Excel and analyzed using SPSS version 26. Descriptive statistics summarized participant demographics and work conditions. Group comparisons were made using Mann-Whitney U and Kruskal-Wallis tests. Pearson's correlation assessed the relationship between workplace stressors and burnout scores. Multivariate linear regression identified significant predictors of total burnout scores. A p-value < 0.05 was considered statistically significant.

Ethical consideration:

Ethical approval was granted by the Institutional Review Board of the College of Medicine, King Saud University (Approval No. E-25-9769). Informed electronic consent was obtained from all participants before data collection. Responses were anonymous and confidential, and data were used solely for research purposes. All procedures were performed according to the Declaration of Helsinki.

RESULTS

A total of 270 nurses participated in the study, the majority of nurses were aged 25–34 years (68.1%) and female (86.3%), held a bachelor's degree (70.7%), non-Saudi (74.8%). Nearly two-thirds (66.3%) were married. Of them 51.5% worked in inpatient settings, 27.8% in outpatient clinics, 10.7% in emergency departments, 10.0% in intensive care units, 63.3% worked night shifts, 62.6% had 5 and 10 years of experience, 28.9% received high supervisor support, while 37.4% and 33.7 reported moderate and low support respectively. Only 36.7% had received training on how to handle workplace burnout, 61.5% expressed interest in future opportunities to learn how to cope with burnout (Table 1).

Table 1: Sociodemographic and work-related factors of study participants

	Domain	No. (%)
Total	270 (100%)	
Age (years)	< 25	27 (10.00)
	25–34	184 (68.15)
	35–44	39 (14.44)
	45 and above	20 (7.41)
Gender	Female	233 (86.30)
	Male	37 (13.70)
Nationality	Non-Saudi	202 (74.81)
	Saudi	68 (25.19)
Marital Status	Married	179 (66.30)
	Unmarried (Single/Divorced/Widowed)	91 (33.70)
Educational Level	Bachelor's Degree	191 (70.74)
	Diploma	61 (22.59)
	Master or Doctorate	18 (6.67)
Income Satisfaction	Satisfied	170 (62.96)
	Not satisfied	100 (37.04)
Workplace Setting	Inpatient services	139 (51.48)
	Outpatient services	75 (27.78)
	Emergency	29 (10.74)
	ICU	27 (10.00)
Years of Experience	< 5	68 (25.19)
	5–10	169 (62.59)
	> 10	33 (12.22)
Working Night Shifts	Yes	171 (63.33)
	No	99 (36.67)
Supervisor Support	High	78 (28.89)
	Medium	101 (37.41)
	Low	91 (33.70)
Received Training on Workplace Burnout	Yes	99 (36.67)
	No	171 (63.33)
Interested in Future Training	Yes	166 (61.48)
	No	104 (38.52)

The most important sources of stress reported by study participants, ranked by mean, were work overload (mean = 3.09 ± 0.92), followed by long working hours (mean =2.90 ± 1.00), lack of staff (mean =2.88± 0.95), work demands affect personal or home life (mean =2.37 ± 1.13), working with unsupportive colleagues (mean = 2.25 ± 1.03), interactions with patients and relatives (mean = 2.16 ± 1.07), poor work environment (mean = 2.10 ± 1.00), fear of making a mistake that can lead to serious consequences (mean = 2.06 ± 1.07), fear of violence (mean = 2.00 ± 1.04), and lack of resources (mean =1.69 ± 0.83) (Table 2).

Table 2: Sources of stress in the workplace among study participants

Sources of stress	Mean	SD
Long working hours	2.90	1.00
Work overload	3.09	0.92
Fear of violence	2.00	1.04
Lack of resources	1.69	0.83
Lack of staff	2.88	0.97
Working with uncooperative colleagues	2.25	1.03
Interaction with patients and relatives	2.16	1.07
Poor work environment	2.10	1.00
Work demands affect my personal / home life	2.37	1.13
Fear of making a mistake that can lead to serious consequences	2.06	1.07

Among the 270 nurses participated in this study, 157 (58.1%) had high EE, 134 (49.6%) had high DP, and 38 (14.1%) had low PA. Meanwhile, 44 (16.3%) showed moderate EE, 27 (10.0%) showed moderate DP, and 46 (17.0%) showed moderate PA. Overall, the prevalence of high burnout was found among 197 (73%) participants, defined as scoring high on at least one subscale of burnout (Table 3).

Table 3: Prevalence of burnout among study participants

Dimensions of burnout	Low (n, %)	Moderate (n, %)	High (n, %)
Emotional exhaustion (EE)	69 (25.6%)	44 (16.3%)	157 (58.1%)
Depersonalization (DP)	109 (40.4%)	27 (10.0%)	134 (49.6%)
Personal accomplishment (PA)	38 (14.1%)	46 (17.0%)	186 (68.9%)

EE: High: >27, Moderate: 17–26, Low: 0–16, DP: High: >13, Moderate: 7–12, Low: 0–6, PA: Low: 0–31, Moderate: 32–38, High: >39.

Table 4 explores the relationship between burnout domains and sociodemographic and work-related factors. Statistically significant associations ($p < 0.05$) were observed for several variables. The EE score was significantly higher among younger age <25 years (37.74 ± 14.89) compared to nurses aged 45 and above (9.05 ± 3.17) ($p < 0.001$), nurses who hold diploma (36.25 ± 14.09) compared to those with a master's or doctorate (15.06 ± 7.26) ($p < 0.001$). Furthermore, EE score was significantly higher among non-Saudi nurses (32.87 ± 15.82) compared to Saudi nurses (27.44 ± 16.16) ($p = 0.020$), nurses who were dissatisfied with their income (39.42 ± 14.99) compare to those who were satisfied (26.84 ± 14.81) ($p < 0.001$), the participants who work in emergency departments (41.31 ± 13.52) compare

to who work in outpatient settings (19.11 ± 12.92) (p < 0.001). Also, those with <5 years of experience (35.97 ± 15.42) compared to those with >10 years (13.76 ± 8.84) (p < 0.001), who had night shift (37.55 ± 14.28) compared to those who did not work night shifts (21.05 ± 13.39) (p < 0.00), and among nurses who received low supervisor support (41.19 ± 14.70) compared to those with high support (20.59 ± 12.05) (p <0.001) (Table 4). The DP score was significantly higher among females (13.95 ± 11.18) compare to males (6.32 ± 7.65) (p = 0.001), married (14.45 ± 11.40) compare to unmarried (9.88 ± 9.76) (p = 0.001), younger age <25 years (12.67 ± 9.09) compared to aged 45 and above (1.35 ± 2.58) (p < 0.001), who hold diploma (14.30 ± 9.92) compared to those with a master's or doctorate (3.00 ± 4.56) (p < 0.001), non-Saudi nurses (14.29 ± 11.13) compared to Saudi nurses (8.81 ± 9.86) (p < 0.001), who were dissatisfied with their income (18.30 ± 11.57) compare to those who were satisfied (9.74 ± 9.45) (p < 0.001), participants who work in emergency departments (17.34 ± 9.53) compare to who work in outpatient settings (3.52 ± 6.05) (p < 0.001), who <5 years of experience (13.22 ± 10.43) compare to those with >10 years (4.94 ± 6.78) (p < 0.001), and nurses who had night shift (17.06 ± 10.42) compared to those who did not work night shifts (5.73 ± 8.10) (p < 0.00), and among nurses who received low supervisor support (19.13 ± 10.95) compare to those with high support (6.32 ± 8.12) (p <0.001) (Table 4).

Table 4: Relationship between burnout and sociodemographic and work-related factors among study participants

Personal Characteristics	Emotional exhaustion		Depersonalization		Personal accomplishment	
	Mean (SD)	P–value	Mean (SD)	P–value	Mean (SD)	P–value
Age						
< 25	37.74 (14.89)	**<0.001**	12.67 (9.09)	**<0.001**	14.78 (9.76)	**<0.001**
25-34	35.07 (14.97)		15.04 (11.44)		18.33 (14.05)	
35-44	21.85 (11.68)		8.95 (8.28)		28.03 (10.51)	
45 and above	9.05 (3.17)		1.35 (2.58)		36.40 (11.70)	
Gender						
Female	32.33 (16.39)	0.176	13.95 (11.18)	**0.001**	19.70 (14.42)	0.081
Male	26.24 (12.69)		6.32 (7.65)		27.05 (11.09)	
Nationality						
Non-Saudi	32.87 (15.82)	**0.020**	14.29 (11.13)	**<0.001**	19.82 (14.30)	0.064
Saudi	27.44 (16.16)		8.81 (9.86)		23.35 (13.75)	
Marital Status						
Married	32.64 (16.31)	0.103	14.45 (11.40)	**0.001**	19.37 (14.47)	**0.028**
Unmarried	29.25 (15.37)		9.88 (9.76)		23.34 (13.40)	
Educational level						
Bachelor's Degree	31.53 (16.26)	**<0.001**	13.40 (11.42)	**0.001**	20.16 (14.31)	**<0.001**
Diploma	36.25 (14.09)		14.30 (9.92)		18.21 (12.73)	
Master or Doctorate	15.06 (7.26)		3.00 (4.56)		35.06 (9.88)	
Income satisfaction						
Satisfied	26.84 (14.81)	**<0.001**	9.74 (9.45)	**<0.001**	24.22 (13.38)	**<0.001**
Not satisfied	39.42 (14.99)		18.30 (11.57)		14.75 (13.67)	
Workplace setting						
Inpatient	36.21 (14.20)	**<0.001**	17.14 (10.38)	**<0.001**	16.44 (12.92)	**<0.001**
Outpatient	19.11 (12.92)		3.52 (6.05)		32.03 (11.21)	
Emergency	41.31 (13.52)		17.34 (9.53)		12.03 (10.61)	
ICU	31.15 (15.91)		12.41 (11.00)		20.59 (13.30)	
Working duration						
<5	35.97 (15.42)	**<0.001**	13.22 (10.43)	**<0.001**	17.41 (12.56)	**<0.001**
5-10	33.17 (15.16)		14.34 (11.38)		19.72 (14.20)	
>10	13.76 (8.84)		4.94 (6.78)		32.58 (11.73)	
Night Shifts						
Yes	37.55 (14.28)	**<0.001**	17.06 (10.42)	**<0.001**	15.16 (12.43)	**<0.001**
No	21.05 (13.39)		5.73 (8.10)		30.29 (11.86)	
Supervisor support						
High support	20.59 (12.05)	**<0.001**	6.32 (8.12)	**<0.001**	29.38 (11.88)	**<0.001**
Medium support	31.20 (14.43)		12.39 (10.08)		20.44 (12.94)	
Low support	41.19 (14.70)		19.13 (10.95)		13.58 (13.46)	

Concerning PA score, was lower among married (19.37 ± 14.47) compare to unmarried (23.34 ± 13.40) (p = 0.028), younger age <25 years (14.78 ± 9.76) compared to aged 45 and above (36.40 ± 11.70) (p < 0.001), who hold diploma (18.21 ± 12.73) compared to those with a master's or doctorate (35.06 ± 9.88) (p < 0.001), who were dissatisfied with their income (14.75 ± 13.67) compare to those who were satisfied (24.22 ± 13.38) (p < 0.001), who work in emergency departments (12.03 ± 10.61) compare to who work in outpatient settings (32.03 ± 11.21) (p < 0.001), who <5 years of experience (17.41 ± 12.56) compare to those with >10 years (32.58 ± 11.73) (p < 0.001), those who had night shift (15.16 ± 12.43) compared to those who did not work night shifts (30.29 ± 11.86) (p < 0.00), and among nurses who received low supervisor support (13.58 ± 13.46) compare to those with high support (29.38 ±11.88) (p <0.001) (Table 4).

A significant and positive correlation was evident between EE and 9 out of the 10 sources of stress in this study, (r coefficients ranged from 0.359 to 0.576) (P < 0.001) (Table 5). A significant and positive correlation was evident between DP and 9 out of the 10 sources of stress in this study, (r coefficients ranged from 0.294 to 0.657) (P < 0.001) (Table 5). A significant and negative correlation was evident between PA and 9 out of the 10 sources of stress in this study, (r coefficients ranged from -0.676 to -0.340) (P < 0.001) (Table 5).

Table 5: Correlation between burnout and sources of stress in the workplace among study participants

Items	Emotional exhaustion		Depersonalization		Personal accomplishment	
	r	p	r	p	r	p
Long working hours	0.708	**<0.001**	0.657	**<0.001**	-0.676	**<0.001**
Work overload	0.742	**<0.001**	0.657	**<0.001**	-0.668	**<0.001**
Fear of violence	0.359	**<0.001**	0.294	**<0.001**	-0.340	**<0.001**
Lack of resources	0.129	**0.034**	0.098	0.107	-0.127	**0.037**
Lack of staff	0.562	**<0.001**	0.488	**<0.001**	-0.488	**<0.001**
Working with uncooperative colleagues	0.460	**<0.001**	0.435	**<0.001**	-0.422	**<0.001**
Interaction with patients and relatives	0.576	**<0.001**	0.501	**<0.001**	-0.514	**<0.001**
Poor work environment	0.491	**<0.001**	0.436	**<0.001**	-0.461	**<0.001**
Work demands affect my personal / home life	0.502	**<0.001**	0.489	**<0.001**	-0.479	**<0.001**
Fear of making a mistake that can lead to serious consequences	0.492	**<0.001**	0.353	**<0.001**	-0.452	**<0.001**

The multivariate linear regression analysis evaluated the ability of the variables to predict the burnout score among nurses. The final model accounted for 78.8% of the variance in burnout (R^2 = 0.788), indicating strong explanatory power. Younger age (B = –11.093, p < 0.001), female gender (B = –12.044, p = 0.002), working night shifts (B = 10.559, p = 0.002), long working hours (B = 5.937, p = 0.009), and work demands affecting personal or home life (B = 3.548, p = 0.013) were significant predictors to burnout (Table 6).

Table 6: Multivariate regression analysis of factors that predict the total burnout score among study participants

Factors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	20.661	7.700	—	2.683	**0.008**
Age	-11.093	2.920	-0.202	-3.799	**0.000**
Gender	-12.044	3.900	-0.106	-3.088	**0.002**
Nationality	-1.489	3.036	-0.017	-0.490	0.624
Marital Status	-3.132	2.978	-0.038	-1.052	0.294
Education Level	-2.480	2.092	-0.038	-1.185	0.237
Income Satisfaction	5.312	2.925	0.066	1.816	0.071
Workplace Setting	-0.974	1.469	-0.025	-0.663	0.508
Working Duration	4.323	3.263	0.066	1.325	0.186
Night Shifts	10.559	3.425	0.130	3.083	**0.002**
Long Working Hours	5.937	2.270	0.152	2.616	**0.009**
Work Overload	2.059	2.916	0.048	0.706	0.481
Fear of Violence	0.959	1.582	0.025	0.606	0.545
Lack of Resources	-2.863	1.794	-0.061	-1.596	0.112
Lack of Staff	-0.194	1.882	-0.005	-0.103	0.918
Uncooperative Colleagues	-0.439	1.874	-0.012	-0.234	0.815
Interaction with Patients/Relatives	1.705	1.855	0.047	0.919	0.359
Poor Work Environment	2.338	2.024	0.060	1.155	0.249
Work demands affecting personal or home life	3.548	1.412	0.102	2.512	**0.013**
Fear of Making Serious Mistake	2.640	1.675	0.072	1.576	0.116

DISCUSSION

This study reveals alarmingly high burnout prevalence among nurses at King Khalid University Hospital, with 73% of participants scoring high on at least one burnout dimension. The findings align with regional and national trends while providing crucial insights into institutional-specific factors contributing to nursing burnout in Saudi tertiary healthcare settings.

The observed burnout prevalence is consistent with other Saudi studies, including 82.2% in Jazan [21], 67.5% in Yanbu [22], and 89% in Al-Madinah [20], though slightly higher than the 44.8% reported in Jeddah [23]. This variation may reflect institutional differences in workload, organizational support, and resource availability. The high emotional exhaustion (58.1%) and depersonalization (49.6%) rates observed in this study underscore the severity of psychological distress among nursing staff, while the relatively lower prevalence of diminished personal accomplishment (14.1%) suggests that despite experiencing exhaustion and cynicism, nurses maintain some sense of professional efficacy.

The demographic analysis revealed several significant associations with burnout dimensions. Younger nurses, particularly those under 25 years, demonstrated significantly higher burnout levels across all dimensions. This finding corroborates international research identifying younger age as a primary risk factor for nursing burnout [26]. The vulnerability of early-career nurses likely reflects limited clinical experience, underdeveloped coping mechanisms, and the challenging transition from academic preparation to clinical practice realities. These findings emphasize the critical need for structured mentorship programs and comprehensive orientation initiatives for new graduates.

Educational background emerged as another significant factor, with diploma-prepared nurses exhibiting higher burnout levels compared to those with baccalaureate or advanced degrees. This pattern suggests that enhanced educational preparation may provide better foundation for stress management and professional resilience. The finding supports arguments for advancing nursing education standards and providing continuous professional development opportunities.

The study identified nationality as a significant predictor, with non-Saudi nurses experiencing greater emotional exhaustion and depersonalization. This finding aligns with previous research in Saudi Arabia and the Gulf region [19,27], highlighting unique challenges faced by expatriate nurses including cultural adaptation difficulties, social isolation, language barriers, and potential workplace discrimination. These findings call for targeted support programs addressing the specific needs of international nursing staff.

Occupational factors demonstrated strong associations with burnout levels. Night shift work emerged as a significant predictor, consistent with

research documenting the adverse effects of circadian rhythm disruption on psychological well-being [28]. The physiological and social consequences of night work contribute to accumulated stress and reduced recovery opportunities, emphasizing the need for optimized shift scheduling and enhanced support for night shift workers.

Workplace setting significantly influenced burnout levels, with emergency and intensive care unit nurses experiencing higher burnout rates compared to outpatient settings. This finding reflects the high-stress, high-acuity nature of critical care environments characterized by life-threatening situations, emotional intensity, and time pressures. These results support the need for specialized stress management interventions in high-acuity clinical areas.

Supervisory support emerged as a crucial protective factor, with nurses receiving high supervisory support demonstrating significantly lower burnout across all dimensions. This finding underscores the critical role of nursing leadership in fostering supportive work environments, providing guidance during challenging situations, and promoting staff well-being. Investment in leadership development and supervisor training programs appears essential for burnout prevention.

The correlation analysis revealed strong relationships between workplace stressors and burnout dimensions. Work overload, extended working hours, and staffing inadequacy emerged as primary stressors, consistent with international literature identifying these factors as primary drivers of nursing burnout [29,30]. The finding that work demands interfering with personal life significantly predicted burnout highlights the importance of work-life balance in maintaining psychological well-being.

The multivariate regression analysis demonstrated that younger age, female gender, night shift work, extended working hours, and work-life interference independently predicted burnout, collectively explaining 78.8% of the variance in burnout scores. This high explanatory power suggests that these factors represent key targets for intervention development.

CONCLUSION AND RECOMMENDATIONS

Night shift, long working hours, young age group, female gender, and conflict between work demands and personal or home life were significant predictors of burnout. A comprehensive set of organizational and individual-level interventions is crucial for mitigating and preventing burnout among nurses. These include strategies for reducing workload, promoting work-life balance initiatives, establishing mentoring programs, implementing supervision training, supporting continuing education, conducting regular assessments of staff well-being and burnout, expanding access to stress management clinics, and offering training programs focused on coping skills and resilience development. Future research should explore the long-term effectiveness of integrating these interventions in reducing nurse burnout across diverse healthcare settings..

LIMITATION

- The study was conducted at a single tertiary hospital in Riyadh, which may limit the generalizability of findings to other healthcare institutions in Saudi Arabia or elsewhere.
- The use of self-reported data may introduce response bias, particularly in reporting burnout symptoms or workplace stressors.
- The cross-sectional design prevents conclusions about causality between workplace factors and burnout levels.
- Convenience sampling may limit the representativeness of the sample and increase the risk of selection bias.
- Potential confounding factors such as personal coping mechanisms or organizational support programs were not assessed.

Funding source: No funding
Conflict of interest: No conflict of interest.

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