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PREVALENCE OF BURNOUT SYNDROME AMONG PHYSICIANS WORKING AT BAGHDAD TEACHING HOSPITAL/BAGHDAD-2024

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ABSTRACT

Background: Burnout is a psychosocial syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, significantly affecting healthcare professionals' well-being and healthcare quality. Aim: To determine the prevalence of Burnout Syndrome among physicians at Baghdad Teaching Hospital and assess socio-demographic and job-related factors associated with burnout. **Methods:** A cross-sectional study was conducted from March 1 to September 1, 2024, at Baghdad Teaching Hospital. A total of 391 physicians were conveniently sampled and completed a self-administered questionnaire based on the Maslach Burnout Inventory-Human Services Survey (MBI-HSS), covering socio-demographic and work-related characteristics. Burnout was evaluated across three domains: emotional exhaustion, depersonalization, and personal accomplishment. Data were analyzed using descriptive statistics, chi-square, and Fisher's exact tests, with significance set at $p \leq 0.05$. **Results:** Among the participants, 40.41% exhibited high emotional exhaustion, 27.37% high depersonalization, and 67.77% low personal accomplishment. The overall prevalence of burnout syndrome was 14.07%. Physicians in emergency medicine, general surgery, and gynecology reported the highest burnout rates. Burnout was significantly associated with female gender, younger age, single marital status, absence of children, extensive working hours, frequent on-call duties, and inadequate rest ($p<0.05$). Protective factors included leisure activities and institutional support ($p<0.05$). **Conclusion:** Burnout is common among physicians at Baghdad Teaching Hospital, particularly in high-stress specialties. Addressing organizational factors and implementing targeted interventions are essential for improving physician well-being and healthcare quality.

KEYWORDS: Prevalence, Burnout Syndrome, Physicians, Baghdad Teaching Hospital.

INTRODUCTION

Burnout is a psychosocial syndrome resulting from prolonged workplace stress, particularly in professions requiring intense interpersonal interactions, such as healthcare. It is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, significantly affecting healthcare professionals and systems.[1] Burnout progresses as a response to chronic work-related stress, impairing cognitive, emotional, and attitudinal functions, and fostering negative behaviors toward jobs, colleagues, and professional identity.[2] This syndrome, driven by workplace characteristics and tasks, is classified as an occupational phenomenon in the ICD-11, defined by exhaustion, detachment, and reduced professional effectiveness.[3] Burnout arises from a mix of organizational and individual factors, with organizational conditions being the primary drivers and personal traits influencing susceptibility.[4] Coined in the 1970s by Herbert Freudenberger and later expanded upon by Maslach, the concept evolved to describe a psychological syndrome with three key dimensions: emotional exhaustion, depersonalization, and reduced professional efficacy.[5] These dimensions often interrelate, with emotional exhaustion frequently preceding depersonalization, according to longitudinal studies.[6] Preventing burnout requires multi-level strategies, including organizational changes, resilience training, early symptom intervention, and self-care practices.[5] Burnout disproportionately affects healthcare workers, with up to half of physicians experiencing it at some point in their careers. Rates are particularly high in trauma surgery, urology, and emergency medicine, and among young professionals with children.[7] Burnout impacts healthcare quality by increasing medical errors, malpractice incidents, and patient dissatisfaction while burdening healthcare systems with physician turnover and reduced productivity.[8] In Iraq, burnout is

exacerbated by resource constraints, work overload, conflict-induced stress, and governmental undermining of the doctor-patient relationship. Media campaigns criticizing healthcare providers have fostered public mistrust and increased abuse against medical professionals. These conditions have driven physician migration, undermining the healthcare system.[9] A 2018 study in Iraq reported a burnout prevalence of 60%, associated with long work hours, unsafe practices, and strained doctor-patient relationships.[10] In Karbala, 52.7% of physicians experienced high emotional exhaustion, especially younger professionals with less experience.[11] Despite resilience among Iraqi physicians, intense pressure from workload, insecurity, and limited resources persists. A 2018 Baghdad study reported low burnout levels overall, though depersonalization was prevalent.[12] At Al-Yarmouk Teaching Hospital, a 2022 study found 19.6% of participants exhibited burnout, with 36.4% experiencing moderate emotional exhaustion and depersonalization.[13] A 2024 study across Iraqi university hospitals reported burnout prevalence at 43%, with young, inexperienced professionals and residents most affected due to extended work hours and limited support.[14] In the broader Arab world, burnout prevalence is similarly high due to underfunded healthcare systems, shortages of professionals, and evolving healthcare demands.[15] For instance, 19.3% of Syrian medical residents and 77.5% of Jordanian residents experienced burnout, while rates in Saudi Arabia and Oman were 18.3% and 16.6%, respectively.[16] The study aims to determine the prevalence of Burnout Syndrome among physicians working at Baghdad teaching hospitals and to assess the socio-demographic and job-related factors associated with burnout.

Method

This cross-sectional study, conducted from March 1 to September 1, 2024, aimed to assess burnout among physicians at Baghdad Teaching Hospital, Iraq. Data were collected twice weekly through self-administered, English-language questionnaires. The study included 391 physicians selected via convenient sampling after excluding 18 participants who either refused or incompletely filled the questionnaire. Inclusion criteria covered physicians of all specialties working at the hospital, including junior and senior residents and specialists, while those unwilling to participate or not completing the questionnaire were excluded. The target population included physicians from diverse specialties such as internal medicine, surgery, pediatrics, and emergency medicine.

The questionnaire consisted of two parts

1. Sociodemographic and job characteristics, including age, gender, marital status, number of children, smoking behavior (based on CDC guidelines[17], chronic conditions, and drug use. Job details included title, specialty, years of experience, working hours, on-call duties, and sick leave history.
2. Burnout assessment using the Maslach Burnout Inventory-Human Services Survey (MBI-HSS).[37,38], a validated tool measuring three domains of burnout:
   - Emotional Exhaustion (EE): Feeling emotionally drained.
   - Depersonalization (DP): Developing a detached attitude.
   - Personal Accomplishment (PA): Sense of competence in work.

Responses were recorded on a 7-point Likert scale, and cutoff scores classified burnout levels as high, moderate, or low based on subscale thresholds.

Protective factors, including spousal support, colleague support, leisure activities, and institutional backing, were also assessed. Ethical approval was obtained from the Iraq Board for Medical Specialization and the hospital health authorities. Verbal consent was secured from participants after explaining the study's purpose and ensuring confidentiality.

Data were analyzed using SPSS-26. Statistical significance was determined using the Chi-square or Fisher Exact test, with a p-value ≤ 0.05 considered significant. Results aimed to identify burnout prevalence and its socio-demographic and occupational correlates.

RESULTS

A total of 409 doctors received the questionnaire, with 391 responding (95.5% response rate). The majority were female (54.5%), aged 30–39 years (71.1%), and married (57.0%), with none being widowed. Nearly half had no children (51.4%), and most resided in Baghdad (77.5%). Smoking was uncommon (79.8% non-smokers), and 96.7% abstained from alcohol. Most were free of chronic illnesses (82.4%) and reported no drug history (81.3%). Resident doctors comprised the majority (85.2%), followed by specialists (10.0%) and junior doctors (4.9%). Internal medicine was the most represented specialty (12.5%), followed by general surgery (10.5%), gynecology and obstetrics (10.0%), and neuromedicine (9.7%). Other specialties had smaller representations, including oncology (2.0%) and vascular surgery (1.0%). Regarding work characteristics, most participants had 5–10 years of experience (64.7%). Working hours varied, with 43.0% working 49–96 hours per week and 39.9% exceeding 96 hours weekly. On-call duties ranged from 1–5 days per month (35.5%), with 14.3% having no on-call days. Shift lengths were diverse, with 35.5% working less than 12 hours and 30.9% exceeding 24 hours. Night shifts were reported by 47.3%, while 30.7% had none. Over half (55.5%) worked fewer than four weekends per month, and 24.0% had no weekend work. Most participants (58.3%) had not taken sick leave in the past year. As in table 1.

Table 1: Demographic and sample characteristics among participants of the study.

		Frequency	Percent
Sex	Male	178	45.5%
	Female	213	54.5%
Age group	<30 years	77	19.7%
	30-39 years	278	71.1%
	40-49 years	27	6.9%
	≥50 years	9	2.3%
Marital status	Single	159	40.7%
	Married	223	57.0%
	Divorced	9	2.3%
	Widow	0	0%
No of children	No children	201	51.4%
	1-2 children	157	40.2%
	3-5 children	33	8.4%
Residency	Baghdad	303	77.5%
	Another governorate	88	22.5%
Smoking status	Yes	76	19.4%
	No	312	79.8%
	Ex-smoker	3	0.8%
Alcohol status	Yes	13	3.3%
	No	378	96.7%
Chronic medical illness	Yes	69	17.6%
	No	322	82.4%
Drug history	Yes	73	18.7%
	No	318	81.3%
Total		391	100.0%
		Frequency	Percent
Job role	Junior	19	4.9%
	Resident	333	85.2%
	Specialist	39	10.0%
Specialty	Anesthesia	6	1.5%
	Clinical hematology	3	0.8%
	Dermatology	26	6.6%
	Emergency medicine	9	2.3%
	ENT	7	1.8%
	Family medicine	27	6.9%
	General surgery	41	10.5%
	Gynecology & obstetrics	39	10%
	Internal medicine	49	12.5%
	Neuro-surgery	2	0.5%
	Neuro-medicine	38	9.7%
	Oncology	8	2.0%
	Orthopedics	13	3.3%
	Pediatric	15	3.9%
	Pediatric surgery	6	1.5%
	Plastic surgery	15	3.8%
	Psychiatry	12	3.1%
	Radiology	18	4.6%
	Rheumatology	20	5.1%
	Rotator	19	4.9%
	Urology	14	3.6%
	Vascular surgery	4	1.0%
Total		391	100.0%
		Frequency	Percent
Years of experience	<5 years	66	16.9%
	5-10 years	253	64.7%
	>10 years	72	18.4%

Number of working hours per week	<48 hours	67	17.1%
	49-96 hours	168	43.0%
	>96 hours	156	39.9%
No of on-call days per month	No	56	14.3%
	1-5 call days	139	35.5%
	6-10 call days	88	22.5%
	>10 call days	108	27.6%
No of working hour per shift	<12 hours	139	35.5%
	13-24 hours	131	33.5%
	>24 hours	121	30.9%
No of working nights per month	No	120	30.7%
	1-5 shifts	185	47.3%
	>5 shifts	86	22.0%
No of working weekend per month	No	94	24.0%
	<4 days	217	55.5%
	≥4 days	80	20.5%
No of sick leaves per year	No	228	58.3%
	1-2 days	95	24.3%
	≥3 days	68	17.4%
Total		391	100%

For the level of emotional exhaustion among participants of the study, 127 (32.48%) had low level, 106 (27.11%) had moderate level and 158 (40.41%) had high level. Depersonalization level, on the other hand, showed that 140 (35.81%) had low level, 144 (36.83%) had moderate level and 107 (27.37%) had high level. The personal accomplishment of physicians was low in 265 (67.77%) of them, moderate in 71 (18.16%) of them and high in 55 (14.07%) of them (Figure 1).

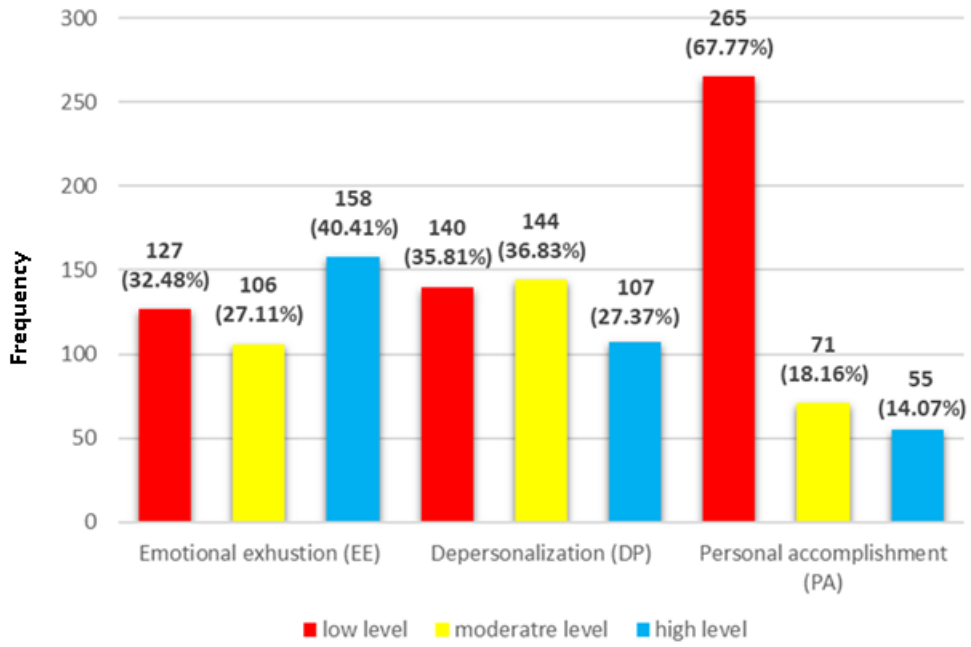

Figure 3.1: levels of burnout domains among physicians.

The overall burnout level among participants of the study showed that 163 (41.69%) had mild burnout level, 173 (44.25%) had moderate burnout level and 55 (14.07%) had high burnout level (Figure 2).

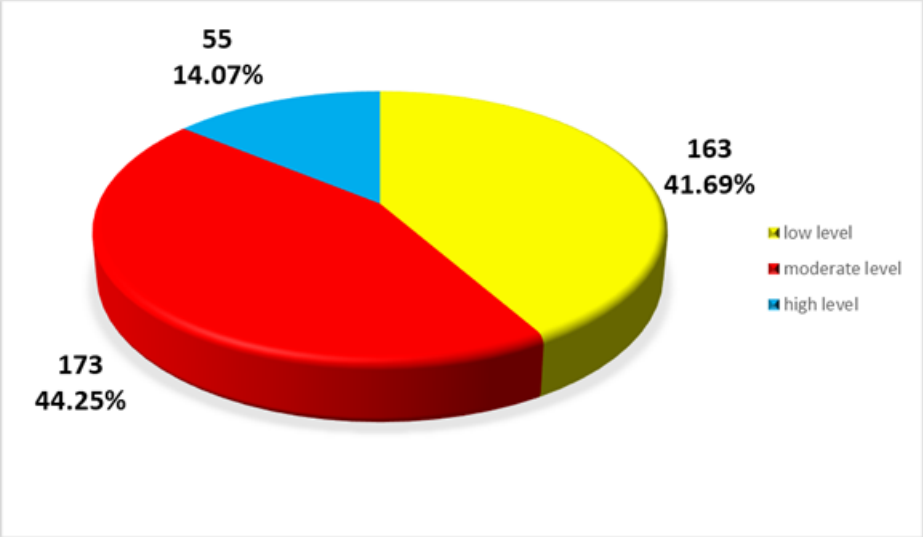

Figure 3.2: Overall burnout level among physician.

Table 2 below shows that a large portion of participants, 322 (82.4%), having support from their spouse or family, Similarly, 328 (83.9%) reported receiving social support from colleagues and 326 (83.4%) reported having institutional support. 290 (74.2%) of participants were involved in leisure activities.

Table 2: Protective factors against burnout.

	Yes		No		Total	
	Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Spouse or family support	322	82.4%	69	17.6%	391	100%
Social support from colleagues	328	83.9%	63	16.1%	391	100%
Institutional support	326	83.4%	65	16.6%	391	100%
Leisure activity	290	74.2%	101	25.8%	391	100%

For the association of the demographic characteristics and the level burnout among participants of the study, there was a statistically significant difference for each of them with p-value < 0.05 as shown in table 3 below.

Table 3: The association of demographic characteristics with burnout level.

Burnout level		**Low Level**		**Moderate Level**		**High Level**		**Chi-Sq. test P-value**
		No.	**%**	**No.**	**%**	**No.**	**%**	
Gender	Male	89	22.8%	74	18.9%	15	3.8%	13.33 0.001*
	Female	74	18.9%	99	25.3%	40	10.2%	
Age group	<30 years	18	4.6%	44	11.3%	15	3.8%	42.33 0.001*[a]
	30-39 years	114	29.2%	124	31.7%	40	10.2%	
	40-49 years	25	6.4%	2	0.5%	0	0.0%	
	>=50 years	6	1.5%	3	0.8%	0	0.0%	
Marital status	Single	53	13.6%	71	18.2%	35	9.0%	18.3 0.001*[a]
	Married	106	27.1%	99	25.3%	18	4.6%	
	Divorced	4	1.0%	3	0.8%	2	0.5%	
No of children	No children	65	16.6%	97	24.8%	39	10.0%	22.07 0.001*
	1-2 children	77	19.7%	64	16.4%	16	4.1%	
	3-5 children	21	5.4%	12	3.1%	0	0.0%	
Residency	Baghdad	133	34.0%	136	34.8%	34	8.7%	9.445 0.009*
	Another governorate	30	7.7%	37	9.5%	21	5.4%	
Total		163	41.7%	173	44.2%	55	14.1%	

***Statistically significant difference with p-value <0.05, a. Fisher exact test**

There was also a statistically significant association for alcohol consumption status and job role with burnout level with p-value<0.05 while there was no statistically significant association for smoking status, chronic

medical illness and drug intake history with burnout level with p-value>0.05 as shown in table 4 below.

Table 4: The association of study sample characteristics with burnout levels.

Burnout level		Low Level		Moderate Level		High Level		Chi-Sq. test P-value
		No.	%	No.	%	No.	%	
Smoking Status	Yes	37	9.5%	30	7.7%	9	2.3%	5.15 0.229[a]
	No	123	31.5%	143	36.6%	46	11.8%	
	Ex-smoker	3	0.8%	0	0.0%	0	0.0%	
Alcohol Status	Yes	3	0.8%	5	1.3%	5	1.3%	6.9 0.032*
	No	160	40.9%	168	43.0%	50	12.8%	
Chronic Medical Illness	Yes	37	9.5%	22	5.6%	10	2.6%	5.76 0.056
	No	126	32.2%	151	38.6%	45	11.5%	
Drug History	Yes	37	9.5%	26	6.6%	10	2.6%	3.26 0.19
	No	126	32.2%	147	37.6%	45	11.5%	
Job title	Junior	7	1.8%	8	2.0%	4	1.0%	46.4 0.001*
	Resident	120	30.7%	162	41.4%	51	13.0%	
	Specialist	36	9.2%	3	0.8%	0	0.0%	
Total		163	41.7%	173	44.2%	55	14.1%	

***Statistically significant difference with p-value <0.05, a. Fisher exact test**

The association for the job characteristics with burnout level showed a statistically significant association for each one with p-value <0.05 as shown in table 5 below.

Table 5: The association of job characteristics with burnout level.

Job Characteristics		Low Level		Moderate Level		High Level		Chi-Sq. test P-value
		No.	%	No.	%	No.	%	
No of Years Working	<5 years	15	3.8%	36	9.2%	15	3.8%	17.2 0.002*
	5-10 years	108	27.6%	111	28.4%	34	8.7%	
	>10 years	40	10.2%	26	6.6%	6	1.5%	
No of Working Hours per Week	<48 hours	39	10.0%	28	7.2%	0	0.0%	30.997 0.001*
	49-96 hours	81	20.7%	62	15.9%	25	6.4%	
	>96 hours	43	11.0%	83	21.2%	30	7.7%	
No of On-Call Days per Month	Zero	33	8.4%	20	5.1%	3	0.8%	25.91 0.001*
	1-5 days	65	16.6%	59	15.1%	15	3.8%	
	6-10 days	36	9.2%	42	10.7%	10	2.6%	
	>10 days	29	7.4%	52	13.3%	27	6.9%	
No of Working Hours per Shift	<12 hours	78	19.9%	50	12.8%	11	2.8%	28.72 0.001*
	13-24 hours	51	13.0%	65	16.6%	15	3.8%	
	>24 hours	34	8.7%	58	14.8%	29	7.4%	
No of Working Nights per Month	Zero	77	19.7%	38	9.7%	5	1.3%	39.9 0.001*
	1-5	59	15.1%	94	24.0%	32	8.2%	
	>5	27	6.9%	41	10.5%	18	4.6%	
No of Working Weekends per Month	Zero	45	11.5%	40	10.2%	9	(2.3%	15.63 0.003*
	<4	98	25.1%	84	21.5%	35	9.0%	
	≥4	20	5.1%	49	12.5%	11	2.8%	
No of Sick Leaves per Year	Zero	94	24.0%	102	26.1%	32	8.2%	11.71 0.019*
	1-2	30	7.7%	51	13.0%	14	3.6%	
	≥3	39	10.0%	20	5.1%	9	2.3%	
Total		163	41.7%	173	44.2%	55	14.1%	

***Statistically significant difference with p-value <0.05**

The association between specialty and burnout level of burnout showed a high statistically significant association with p-value of 0.001 as shown om table 6.

Table 6: Association between specialty and burnout level.

Specialty	Mild burnout		Moderate burnout		High burnout		Chi-Sq. test P-value
	No.	%	No.	%	No.	%	
Rotator	7	36.8%	8	42.1%	4	21.1%	135.6

Rheumatology	11	55.0%	9	45.0%	0	0.0%	0.001*[a]
Psychiatry	3	25.0%	9	75.0%	0	0.0%	
Gynecology & Obstetrics	7	17.9%	18	46.2%	14	35.9%	
Plastic surgery	7	46.7%	4	26.7%	4	26.7%	
Radiology	6	33.3%	12	66.7%	0	0.0%	
Urology	5	35.7%	7	50.0%	2	14.3%	
Pediatrics	9	60.0%	6	40.0%	0	0.0%	
Pediatric surgery	6	100.0%	0	0.0%	0	0.0%	
Vascular surgery	2	50.0%	2	50.0%	0	0.0%	
Anesthesia	0	0.0%	6	100.0%	0	0.0%	
Oncology	2	25.0%	6	75.0%	0	0.0%	
Clinical hematology	0	0.0%	3	100.0%	0	0.0%	
ENT	2	28.6%	5	71.4%	0	0.0%	
Neurosurgery	0	0.0%	2	100.0%	0	0.0%	
Family medicine	24	88.9%	3	11.1%	0	0.0%	
Internal medicine	13	26.5%	24	49.0%	12	24.5%	
Emergency medicine	3	33.3%	2	22.2%	4	44.4%	
General surgery	13	31.7%	14	34.1%	14	34.1%	
Dermatology	14	53.8%	12	46.2%	0	0.0%	
Orthopedics	9	69.2%	3	23.1%	1	7.7%	
Neuromedicine	20	52.6%	18	47.4%	0	0.0%	
Total	163	41.7%	173	44.2%	55	14.1%	

***Statistically significant difference with p-value <0.05, a. Fisher exact test**

The association for the protective factors against burnout with burnout levels showed no statistically significant for spouse or family support and social support from colleagues with burnout levels with p-value>0.05 while there was a statistically significant association of leisure activity and institutional support with burnout level with p-value<0.05 as shown in table 7 below.

Table 7: The association of protective factors against burnout with burnout level among sample of the study.

Burnout Level		**Mild Burnout**		**Moderate Burnout**		**High Burnout**		**Chi-Sq. test P-value**
		No.	%	No.	%	No.	%	
Spouse or Family Support	Yes	128	32.7%	149	38.1%	45	11.5%	3.34
	No	35	9.0%	24	6.1%	10	2.6%	0.188
Social Support from Colleagues	Yes	141	36.1%	146	37.3%	41	10.5%	4.4
	No	22	5.6%	27	6.9%	14	3.6%	0.11
Institutional Support	Yes	143	36.6%	145	37.1%	38	9.7%	10.35
	No	20	5.1%	28	7.2%	17	4.3%	0.006*
Leisure Activity	Yes	133	34.0%	117	29.9%	40	10.2%	8.61
	No	30	7.7%	56	14.3%	15	3.8%	0.013*
Total		163	41.7%	173	44.2%	55	14.1%	

***Statistically significant difference with p-value <0.05**

DISCUSSION

Burnout has become a global concern among healthcare professionals, negatively affecting physician well-being and patient care. In resource-constrained environments like Iraq, burnout prevalence is alarmingly high, necessitating a deeper understanding of its patterns and contributing factors.[18] In this study, 14.07% of participants experienced high burnout levels, lower than the 19.6% reported at Al-Yarmouk Hospital in Baghdad in 2022 but higher than Karbala's 4.4% in 2019.[13,19] Differences in sample characteristics, such as the inclusion of residents (higher burnout risk) versus specialists, likely explain the variations. Another Baghdad study across three general hospitals reported a 43% burnout prevalence, possibly reflecting compounded pressures during the COVID-19 pandemic.[14] Regionally, burnout prevalence among physicians varies. This study's results align with Libya (14.7%) but are lower than Egypt (22.6%) and Saudi Arabia (32.2%).[20-22] Globally, burnout rates are lower in countries like Germany (7.5%) and China (2.46%), likely due to better healthcare infrastructure, manageable workloads, and higher wages.[23,24] High emotional exhaustion (EE) was reported by 40.41% of participants, aligning with the global average of 37% but lower than Iraq's 2018 study (60%).[25] High depersonalization (DP) was noted in 27.3%, slightly below the 31.9% in Baghdad (2023) but significantly lower than India's 65.98% in 2016.[26,27] Low personal accomplishment (PA) was prevalent in 67.77% of participants, exceeding the global average (26%) and approaching Baghdad's 87.3% in 2023.[25,26] Factors such as gender, age, marital

status, and parental status influence burnout. Female physicians exhibited higher burnout levels, consistent with findings attributed to dual professional and domestic responsibilities.[28,29] Younger physicians (<40 years) reported higher burnout, aligning with studies from Iraq and Kerbala, likely due to limited experience and coping mechanisms.[14,19] Single physicians had higher burnout rates than married counterparts, as emotional and practical support from families mitigates stress.[10] Physicians without children also demonstrated higher burnout, as family life may provide emotional fulfillment and a buffer against stress.[30] Burnout was higher among physicians working outside Baghdad, potentially due to resource limitations and poor infrastructure in other governorates.[19] Alcohol consumption was significantly associated with burnout, consistent with a systematic review in *Frontiers in Public Health* (2023).[31] However, no significant associations were found between burnout and smoking, chronic illness, or medication use, contrasting findings from studies in Taiwan and the Netherlands.[32] Residents and junior doctors experienced higher burnout compared to specialists, reflecting heavier workloads and limited autonomy.[13] High workload indicators, such as excessive weekly working hours, frequent on-call duties, long shifts, and limited rest, were all significantly associated with burnout, consistent with findings from JAMA Internal Medicine and other studies.[13,33] Emergency medicine physicians had the highest burnout rates (44.4%), followed by general surgery and gynecology, likely due to the demanding nature of their work.[13] Institutional support and engagement in leisure activities were significantly associated with reduced burnout. Previous studies emphasize the importance of stress-relief strategies and peer support programs, highlighting their role in mitigating burnout.[34] Addressing burnout requires systemic changes, including workload management, improved support systems, and initiatives to enhance physicians' work-life balance.

CONCLUSION

The study found that 14.07% of participants experienced burnout based on the MBI classification, while 47.31% showed high levels in at least one burnout dimension. Female physicians, those under 40, singles, and individuals without children were more susceptible, particularly in high-stress specialties like emergency medicine (44.4%). Burnout was strongly associated with excessive work hours, frequent on-call duties, and inadequate rest. Engagement in leisure activities and institutional support were protective against burnout, highlighting the importance of work-life balance and systemic interventions. These findings emphasize the need for targeted strategies to reduce burnout among physicians.

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