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Prevalence and associated factors of burnout syndrome among doctors: Example from three university hospitals in Iraq

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Abstract

Background: Burnout syndrome (BS) is known to affect health professionals worldwide where negative attitudes towards their jobs prevail leading to psychological distress, work dysfunction, and low accomplishments. However, little has been investigated about BS among doctors working and living in Iraq.
Objective: We aimed to determine the prevalence, severity, and associated demographic and work-related factors of burnout syndrome among doctors working and living in Iraq.
Methods: This cross-sectional study was conducted among conveniently selected 303 physicians working at three general hospitals in Baghdad during April and May 2020. The self-administered Maslach Burnout Inventory which contains 22 questions, was completed through a direct interview. The questions included three domains scored on a frequency rating based on how often the respondent experienced feelings of burnout according to the three domains. Descriptive statistics were presented using Chi-square for categorical variables. A P-value less than 0.05 was considered a discrimination point of relevance.
Results: The mean age of the physicians was 31.3 years, 45.2% were male, and 57.8% were married. Among the 303 physicians, the prevalence of BS was 43%. Younger age, current residency, limited work experience, and extended working hours were factors strongly linked to elevated levels of emotional exhaustion and low scores in professional accomplishment components.
Conclusion: The levels of burnout syndrome and its domains correspond to similar studies in Iraq and some Arab countries. National larger studies are needed to determine the prevalences and the associated risk factors which might help design a preventive plan.

Keywords

Burnout, Doctors, University hospitals, Associated factors, Iraq

INTRODUCTION

Burnout Syndrome (BS) is a common phenomenon affecting wide sectors of working people impacting their psychological well-being and work performance The negative effect of BS on the life quality of working people has been confirmed in various studies (Mohammed et al., 2014; Rothenberger, 2017; Hasan, & Khalaf, 2023). It was defined by the World Health Organization in 2019 as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed". It is characterized by three dimensions:

1. Feelings of energy depletion or Emotional Exhaustion (EE);

2. Increased mental distance from one's job, or depersonalization (DP)

3. Feeling of reduced professional efficacy and low accomplishment (PA)

Working under prolonged stress will lead to the development of BS in all its domains. Many authors attributed the occurrence of BS to a complex interaction of personal, social, and quality of life factors with work-related ones (Schaufeli et al., 2009; Abdo et al., 2016; Lemaire and Wallace, 2017; Mohammed et al., 2023). The personal reaction to burnout can be psychological with symptoms like anxiety, anger, and depression, or may be manifested in physical symptoms like headaches, gastric upset, musculoskeletal complaints, and generalized fatigue (Patel et al., 2018). Much international literature confirmed that healthcare professionals are prone to suffering BS regardless of their medical discipline, being burdened by long working hours preceded by long years of studying in medical schools (Soler et al., 2008; Drummond, 2015; Grover et al., 2018 Rotenstein et al., 2018). When the adversities of personal and work-related factors prevail, doctors can be hit hard by BS at any stage of their career leading to a decline in the quality and quantity of provided medical services (Grover et al, 2018; Lemaire & Wallace, 2017). The negative impact of BS can be extended to the individuals' personal life and their relationships with families and friends. Such conditions can lead to adverse consequences such as increasing medical errors, frequent absences from work, early retirement, or leaving the workplace (Iacovides et al., 2003; Ali Jadoo et al, 2015). Burnout among working doctors is considered to be one of the emerging challenges affecting healthcare systems, patient care, and patient safety around the world (Drummond, 2015; Rotenstein et al., 2018; Epstein & Privitera, 2018). Many studies indicated that lack of control over work conditions, time pressure, officious administrative policies, and disorganization play a major role in the occurrence and severity of BS among doctors (Schaufeli et al., 2009; Gouveia et al., 2017; Patel et al., 2018). Such factors can be reinforced by the presence of patients' oppositional attitudes and their mounting demands especially when health administrations are deficient or disorganised (Siddiqui & Sposato, 2021). BS has been associated with insomnia, increased alcohol & substance use, and marital and family problems (Rothenberger, 2017; Wu et al., 2021).

We hypothesized that doctors working and living in Iraq are a vulnerable population due to not only the personal and work-related stressors but also together with the post-conflict situation manifested by the porous security system, political and economic unrest, frequent acts of violence against them, and chaotic health administrations can be considered as major predisposing factors for the development of BS and contribute to its chronicity (Jadoo et al., 2018; Lafta, & Falah, 2019; Mohammed et al., 2023). Apart from a few published studies, the prevalence and magnitude of BS among Iraqi doctors are not adequately discussed, hence, this study was conducted on a cohort of medical professionals practicing in hospitals in Baghdad, to assess the prevalence of BS and identify the characteristics related to it. This study aligns with a prior investigation undertaken by the primary author to lay the groundwork for future research on this significant health concern (Mohammed et al, 2018).

METHODS

Sampling method

The authors chose three state hospitals located in Baghdad, the capital of Iraq: Al Yarmouk, Al Imamain Al-Kadhimain, and Medical City. All are general teaching hospitals attached to medical colleges, namely, Al-Mustansiriyah, Al-Nahrain, and Baghdad Universities respectively. These hospitals are training centers for medical students and postgraduate candidates of different medical & surgical specialties.

Data sampling was achieved by using a self-reporting instrument during the period from April to May, 2020. The working doctors were approached conveniently regardless of their job designation. The available doctors were approached to complete the study questionnaire during their off-duty hours in the non-occupied hospital halls. The studied doctors were interviewed directly by the 2nd and 3rd authors after giving their written informed consent and explaining the study goals. Non-consenting or reluctant doctors were excluded from the study.

The original paper forms of the *Maslach Burnout Inventory* MBI (Maslach & Jackson,1981) and the socio-demographic questionnaire forms were handed to the participants to be completed within one hour time. Both survey forms were printed in their original English versions because English is the language of medical education in Iraq. The participants were assured that they could withdraw at any stage of the study and their data were anonymous. There were no exclusion criteria for data sampling. Any consenting doctor was enrolled within the allocated two-month period with the aim to collect the targeted number of participants.

Study instruments

The research team designed a questionnaire that contained the sociodemographic and work profile including age, gender, marital status, number of children if applicable, job title, duration of work experience (years after graduation), number of night shifts/month, number of working hours/ week, frequency and duration of annual leave, and private practices (additional source of income other than monthly salaries).

The self-administered questionnaire, MBI, has been widely used to measure BS for the last four decades with acceptable levels of validity and reliability in various sectors at different times (Schutte et al., 2000). The MBI is a 22-item questionnaire containing three subscales that examine the experience of burnout. The first subscale, EE, consists of 9 questions designed to assess emotional and mental resources expressed by reduced energy, loss of enthusiasm, and indifference to work commitment. The second subscale, PA, consists of 8 questions designed to examine the sense of professional competence, and accomplishment., the third subscale, DP consists of 5 questions designed to assesses the experience of cynicism, avoiding contact with patients, or treating them inanimately. The summated scores were calculated according to the frequency at which the respondent experiences burnout sensations as follows: 'Never' = 0; 'Rarely' = 1; 'Sometimes' = 2; 'Frequently' = 3; and 'Very frequently' = 4. The threshold for categorizing as 'High' in the EE and DP assessment was a score of >27; for the 'Average' it was 19-26; and for the 'Low' it was <18 . The threshold for classifying as 'High' in PA was a score of < 10; 'Average' was 10-16; and for 'Low' it was >26. High mean scores on the EE and DP subscales together with low scores on the PA subscale indicate the presence of BS.

Data analysis

The completed forms of 303 participants were checked, validated, and submitted for statistical analysis by an academic statistician, Dr Mahmmod. The collected data were entered into Microsoft Excel sheet 2016 and loaded into the SPSS (V-26) statistical program. Descriptive statistics were presented in terms of frequency, percentage, and graphs. The Chi-square test was used to determine the significance of associations between related categorical variables. A P-value less than 0.05 was considered a discrimination point of statistical significance. The test of significant association was conducted on demographic and work variables with each of the BS subscales rather than testing the total BS scores to exemplify the specific effect of all subscales.

Ethical considerations

The study protocol was approved by the Ethics and Research Committee of the Iraqi Board for Medical Specializations form number 1211/G 98, together with obtaining formal approval from the hospital administrations.

RESULTS

The mean age of the participants was 31.4 years. Among them 45.2% were male doctors; and 38.2% were single. 81.5% of the participants were residents; 41.6% had work experience of 5-10 years; 47.9% worked for less than 56 hours per week; 46.5% had five or more-night shifts per month; and 25.7% worked in private practice in addition to governmental health institutes as shown in Table 1.

Table 1. Demographic and work characteristics of the study doctors

Demographic characteristics	Category	N	%
Age (years)	25-35	128	42.2
	36-56	175	57.8
Gender	Male	137	45.2
	Female	166	54.8
Marital status	Single	124	38.2
	Married	175	57.8
	Divorced or widowed	4	2
Number of children	0	94	31.0
	1-2	149	49.2
	≥2	60	19.8
Job title	Residents	247	81.5
	Specialists & Consultants	55	18.5
Work experience in years	0-5 year	115	38.0
	5-10 year	126	41.6
	>10 year	62	20.5
Number of working hours/ weeks	<56	145	47.9
	≥56	158	52.1
Number of night shifts/ month	0	71	23.4
	1-4	91	30
	≥ 5	141	46.5
Number of holidays/ year (≥ 2 weeks)	No	197	65.0
	Yes	106	35.0
Additional private practice work	No	225	74.3
	Yes	78	25.7
Total		303	100

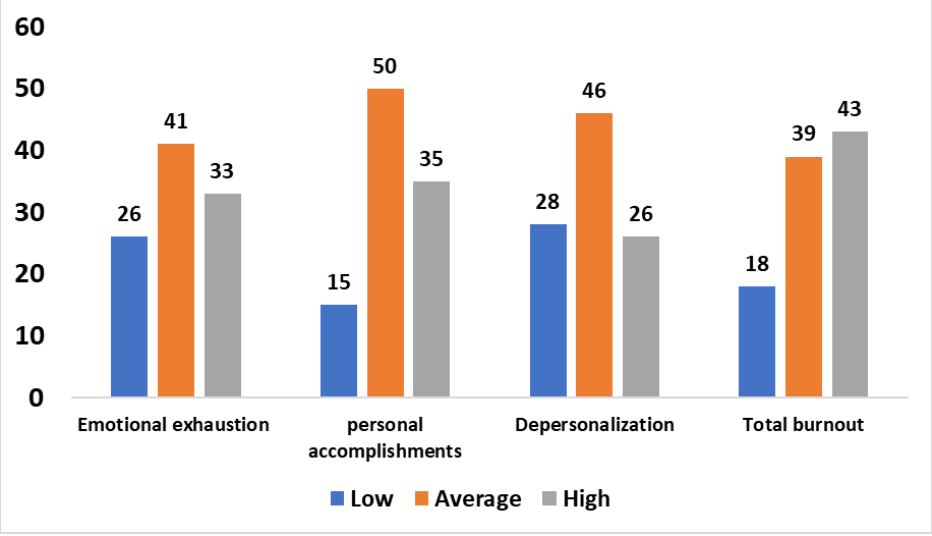

Figure 1. The prevalence of burnout syndrome among participants measured by percentage distribution in total and its three domains

Figure 1 shows the prevalence of BS in total is 43%. 33% and 41% of the participants achieved high and average scores in EE, respectively. In the domain of PA, 35% and 50% of the participants had high and average scores, respectively. In the domain of DP, 26% and 46% of the participants achieved high and average scores, respectively.

Table 2. Association of the demographic & work variables with the Emotional Exhaustion subscale of the MBI

		Low		Average		High		P value
		N	%	N	%	N	%	
Age(years)	25-35	17	13.3	50	39.1	61	47.7	0.001
	36-56	62	35.4	75	42.9	38	21.7	
Gender	Male	40	29.2	55	40.1	42	30.7	0.516
	Female	39	23.5	70	42.2	57	34.3	
Marital status	Single	10	10.6	37	39.4	47	50.0	0.001
	Married	64	36.6	76	43.4	35	20.0	
	Divorced &widow	5	14.7	12	35.3	17	50.0	
Number of children	0	10	10.6	37	39.4	47	50.0	0.001
	1-2	53	37.1	57	39.9	33	23.1	
	≥2	16	24	31	46	19	28.7	
Job title	Resident	54	21.9	102	41.3	91	36.8	0.001
	specialist & consultant	25	44.6	23	41.1	8	14.3	
Work experience in years	0-5	13	11.3	46	40.0	56	48.7	0.001
	5-10	39	31.0	53	42.1	34	27.0	
	>10	27	43.5	26	41.9	9	14.5	
Number of Working hours/week	<56	53	36.6	63	43.4	29	20.0	0.001
	≥ 56	26	16.5	62	39.2	70	44.3	
Number of nightshifts/ months	0	31	43.7	31	43.7	9	12.6	0.001
	1-4	32	35.2	36	39.6	23	25.2	
	≥ 5	36	25.5	52	36.9	53	37.6	
Leaves (<2 weeks) / year	No	43	21.8	81	44.1	67	34.0	0.001
	Yes	35	33.0	51	48.1	20	18.9	
Having private practice	Yes	31	39.7	31	39.7	16	20.5	0.002
	No	48	21.3	94	41.8	83	36.9	

Table 2 demonstrates a notable statistical correlation between a high degree of EE and a younger age group, residency, lengthy working hours, and not working in the private sector. Table 4 demonstrates that, once more, both high and average levels of DP were linked to the same characteristics, except for gender and the possession of private clinics.

Table 3 displays notable correlations between low scores in PA and all the aforementioned variables, except for gender and number of working hours/ week. The questions relating to PA were designed to be calculated in reverse: the lower the scores, the higher the prevalence of BS.

Table 4 demonstrates that, once more, both high and average levels of DP were linked to the same characteristics, except for gender and the possession of private clinics.

Table 3. Association of the demographic & work variables with the Professional accomplishment subscale of MBI

		Low		Average		High		P value
		N	%	N	%	N	%	
Age(years)	25-35 year	60	46.9	58	45.3	10	7.8	0.001
	36-56 year	46	26.3	93	53.1	36	20.6	
Gender	Male	47	34.3	64	46.7	26	19.0	0.235
	Female	59	35.5	87	52.4	20	12.0	
Marital status	Single	48	51.1	42	44.7	4	4.3	0.001
	Married	42	24.0	91	52.0	42	24.0	
	Other	16	47.1	18	52.9	0	0.0	
Number of children	0	36	25.2	70	49.0	37	25.9	0.001
	1	1	16.7	3	50.0	2	33.3	
	≥2	57	60	106	79.0	40	30.9	
Job title	Residents (interns+ registrars)	97	39.3	125	50.6	25	10.1	0.001
	Specialists	9	16.1	26	46.4	21	537	
Work experience in years	0-5	55	47.8	50	43.5	10	8.7	0.001
	5-10	41	32.5	70	55.6	15	11.9	
	>10	10	16.1	31	50.0	21	33.9	
Number of Working hours/week	<56	43	29.7	74	51.0	28	19.3	0.066
	≥ 56	63	39.9	77	48.7	18	11.4	
Number of night shifts/ months	0	14	14.9	43	45.7	37	39.4	0.001
	1-4	30	32.9	41	45.2	20	21.9	
	≥ 5	56	39.7	68	48.2	17	12.7	
Leave (<2 weeks) / year	No	65	32.9	98	49.7	34	17.3	0.001
	Yes	19	17.9	57	53.8	30	28.3	
Having private practice	Yes	14	17.9	45	57.7	19	24.4	0.001
	No	92	40.9	106	47.1	27	12.0	

Table 4. Association of the demographic & work variables with the Depersonalization domain of MBI

		Low		Average		High		P value
		N	%	N	%	N	%	
Age (years)	25-35	19	14.8	64	50.0	45	35.2	0.001
	36-56 year	65	37.1	77	44.0	33	18.9	
Gender	Male	40	29.2	62	45.3	35	25.5	0.866
	Female	44	26.5	79	47.6	43	25.9	
Marital status	Single	14	14.9	43	45.7	37	39.4	0.001
	Married	67	38.3	76	43.4	32	18.3	
	Other	3	8.8	22	64.7	9	26.5	
Number of children	0	14	14.9	43	45.7	37	39.4	0.001
	1	55	38. 5	65	45.5	23	16.1	
	≥2	15	83.3	33	55.0	18	21.7	

		Low		Average		High		P value
		N	%	N	%	N	%	
Job title	Residents (interns, registrars)	57	23.1	121	49.0	69	27.9	0.001
	Specialists	27	48.2	20	35.7	9	16.1	
Work experience in years	0-5	15	13.0	59	51.3	41	35.7	0.001
	5-10	38	30.2	58	46.0	30	23.8	
	>10	31	50.0	24	38.7	7	11.3	
Number of Working hours	<56	54	37.2	62	42.8	29	20.0	0.001
	⩾56	30	19.0	79	50.0	49	31.0	
Number of nightshifts/ months	0	32	45.0	28	39.5	11	15.5	0.001
	1-4	40	43.9	32	35.4	19	20.9	
	⩾ 5	30	21.3	54	38.3	57	40.4	
Leaves (>2 weeks) / year	No	54	27.4	77	39.0	66	33.5	0.001
	Yes	23	21.7	54	50.9	29	27.4	
Having private practice	Yes	26	33.3	40	51.3	12	15.4	0.048
	No	58	25.8	101	44.9	66	29.3	

DISCUSSION

Demographics and workload

This study found that around half of the participants were less than 40 year old female doctors. This is consistent with many previous local studies among medical students as girls in Iraq aspire to medical careers (Mohammed et al., 2018; Mohammed et al., 2023; Almhana et al., 2019; Al-Azzawi & Younis, 2009).

The vast majority of the participants were residents of different ranks with a heavy workload and minimal time for leisure activities. 78% of the residents were trainees attached to either the Iraqi or the Arab post-graduate training programs in one of the four stages of training in different medical and surgical specialties (The Arab Board for Medical Specializations; The Iraqi Board for Medical Specializations) thus, carrying the additional burden of hard study and the pressure of anticipating primary and final exams. Three-quarters of participants had no private practice being committed to the residency rules and training program with unlimited working hours during their duties.

Burnout in Iraq

It seems that BS hit around half of the participants, i.e. 43% hard and to a lesser degree, another 39% of the sample. Such a degree of BS is much higher than the internationally reported ranges, usually in Western countries, using the same instruments. For example, BS affects 22% of doctors in the US, 27% in the UK, and 12% in twelve European countries respectively. This may be explained by the wide variations in the health system, wages, stable and secure community, availability of advanced education and training, and marked cultural differences that contribute to society and personality traits (Rothenberger 2017; Soler et al., 2008; Grover et al.2018). Again, the current BS scores are higher than similar studies in some non-western countries, such as, India, Brazil, and Hong Kong which are 22%, 27.9%, and 31.4% respectively (Niranjan et al., 2017; Gouveia et al., 2017; Ng et al., 2020).

On the other hand, our findings fit within the range of 20-80% denoted by Elbarazi et al (2017) in their systemic review of BS in Arab countries and match

the prevalences found in Egypt and Saudi Arabia (Mohammed et al., 2014; Abdo et al., 2016; Alenezi et al., 2022; Agha et al., 2015).

Again, many studies in the Arab countries including Iraq, attributed elevated BS levels to work responsibilities, patients' demands, long unsociable shift patterns, and inadequate payment leading to a work-life imbalance which was confirmed by this study as a significant cause for developing BS (Agha et al., 2015; Bawakid et al., 2017; Elhadi et al., 2022; El-Menyar et al., 2021). Around half of the doctors had different stages of apathy, indifference, demoralization, and a negative attitude towards their achievements. They expressed feelings of detachment manifested by summated ratios of EE, PA, and in particular DP domains. A third of them were emotionally exhausted and depersonalised to the extreme: starting with EE and then moving into DP. Such a negative emotional experience is a result of stressors perceived by individuals regardless of occupational status (Mohammed et al., 2013). Furthermore, the ratios of this study are comparable to what many Arab authors found: 20-81% in EE; 13-85% in PA; and 9-80% in DP, reflecting the similarities in comparable social and work atmospheres. The current BS prevalences in total and its domains are higher than those found in the United Arab Emirates, Kuwait, and Oman. This may be attributed to the stability, security, affluence, infrastructures, well-organized health establishments, and higher wages in these countries (Hussein et al., 2016; Siddiqui & Sposato, 2021; Abdulghafour et al., 2011; Al-Hashemi et al., 2019). Moreover, the health workforce frames a large number of multi-national doctors who have variable cultural backgrounds influencing their perspectives (Elbarazi et al., 2017; Chemali et al., 2019). As expected, BS was significantly associated with long working hours, frequent night shifts, and shortage of leave for leisure time in its three subscales: this is consistent with previous studies in Iraq and some Arab countries (Mohammed et al., 2018; Jadoo et al., 2018; Alenezi et al., 2022; Elhadi et al., 2022).

The highest scores were reported in the DP subscale, which highlighted experiences of 'feeling callous towards patients', a 'lack of energy', and feeling 'overwhelmed and frustrated' reflecting the participants' experiences. The absence of gender differences in all BS scores can be attributed to the fact that female physicians were equally burdened by the workload inconsistency in some studies and contradicted others (Ali Jadoo et al., 2015; Dastan et al., 2019).

It is imperative to prioritize research and action strategies related to BS. Enhancing job satisfaction and mitigating burnout are crucial measures to consider when designing interventions, particularly in countries like Iraq that have had a substantial departure of doctors from the healthcare system in the last thirty years. It is crucial to prioritize the physicians who have reported being impacted by burnout (Jadoo et al., 2018; Adebayo et al., 2020; Mohammed et al., 2023).

LIMITATIONS OF THE STUDY

This study was restricted in various respects. It is important to note that the medical specializations of the participants were not taken into account and assessed as factors linked with BS. This is a topic that should be considered in future investigations. Furthermore, the MBI did not undergo cultural validation from the standpoint of Iraqis or Arab perspectives.

CONCLUSIONS

Doctors working and living in Iraq were significantly affected by BS recording high levels across all its subscales measured by the MBI. High and average levels of BS in EE, DP and low level in PA were positively correlated with demographic and work variables, exemplifying the participants' marked sense of reduced energy ,lack of enthusiasm ,and callous attitude towards their medical profession. The most important contributing factors were the hectic workload and the surrounding life difficulties. Doctors' BS is under-researched in Iraq and little is known about correlated risks and/or protective factors, thus, future larger-scale studies and effective strategies are required to support doctors in their efforts to maintain efficient health care services. Regular meetings of hospital administrators with working doctors, especially residents, may provide better work schedules and alleviate the latter's tension. Integrated action is needed to tackle the

adverse effect of BS on medical practice, and further research is called to cover the data gap in Iraq's health sector.

DECLARATIONS

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Authors' contributions

All authors have made equal contributions to the editing of this paper and have thoroughly reviewed and given their approval to the final version of the manuscript.

Conflict of interest

None declared.

Ethical approval

The study protocol was approved by the Ethics and Research Committee of the Iraqi Board for Medical Specializations form number 1211/G 98, together with obtaining formal approval from the hospital administrations.

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Informed Consent

Written informed consent was taken from individuals before participating in the study.

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