




Burnout among Physicians at Medical Departments in Benghazi-Libya

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Abstract

Background Burnout syndrome is recognized as a global issue, and as medical practice is stressful, healthcare workers are found to be burnt out and exhausted very soon, which is reflected negatively on the medical staff well-being, patients' outcome, and the overall organizational performance.

Aim This study is planned to assess the magnitude of burnout among physicians in Benghazi-Libya.

Methods This cross-sectional study was carried out in 2020 on a total of 150 physicians working at different departments of internal medicine in Benghazi-Libya. The Maslach Burnout Inventory collection instrument was used to assess the three components of burnout syndrome: emotional exhaustion, depersonalization, and reduced personal accomplishment. High scores in emotional exhaustion and depersonalization and low scores in personal accomplishment are indicative of high burnout. The statistical analyses of the data were performed using the SPSS version 21. The level of statistical significance was considered as *p*-value less than 0.05.

Results 60% of the respondents were females and 40% were males. About 14.7% had high emotional exhaustion, 92% had high depersonalization, and 87.3% had low personal accomplishment scores. Statistical analysis showed no significant relationship between gender and burnout. Alternatively, a significant association was found between degree certificate and emotional exhaustion, as moderate- and high-level burnout were more prevalent among MBChB participants than those with masters and board degrees. No association was found between degree certificate and depersonalization or personal accomplishment.

Conclusion Burnout is prevalent among internal medicine doctors in Benghazi, with the newly graduated medical personnel scoring higher rates of burnout than doctors with higher degrees. No relationship was found between gender and burnout.

Keywords

- ▶ burnout
- ▶ Benghazi
- ▶ Libya
- ▶ physician
- ▶ Maslach

ملخص المقال باللغة العربية

الإرهاق بين الأطباء في الأقسام الطبية في بنغازي - ليبيا - دراسة مقطعية

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الخلفية: تم التعرف على متلازمة الإرهاق كتضحية عالمية، وبما أن الممارسة الطبية مرهقة، فقد وجد أن العاملون في مجال الرعاية الصحية يصيبهم الإرهاق في وقت قصير، مما يعكس سلباً على حياة الطاقم الطبي ونتائج المرضى والأداء التنظيمي العام.

الهدف: خطت هذه الدراسة لتقييم حجم الإرهاق بين الأطباء في بنغازي ليبيا.

الطرق: أجريت هذه الدراسة المقطعية في عام 2020 على ما مجموعه 150 طبيباً يحملون في أقسام مختلفة من الطب الباطني في بنغازي - ليبيا. تم استخدام مقياس ماساتس للاحتراق الوظيفي لتقييم المكونات الثلاثة لمتلازمة الإرهاق: الإرهاق العاطفي، وتبدد الشخصية، وانخفاض الإنجاز الشخصي. تشير الدرجات العالية في الإرهاق العاطفي وتبدد الشخصية والدرجات المنخفضة في الإنجاز الشخصي إلى ارتفاع مستوى الإرهاق. تم إجراء التحليلات الإحصائية للبيانات باستخدام الإصدار 21 من SPSS. واعتبر مستوى الدلالة الإحصائية عند $p < 0.05$.

النتائج: (60%) من المستجوبين إناث و (40%) ذكور. (14.7%) لديهم إرهاق عاطفي مرتفع، (92%) لديهم معدلات تبدد شخصية عالي، و (87.3%) لديهم درجات إنجازات شخصية منخفضة. أظهر التحليل الإحصائي عدم وجود علاقة ذات دلالة إحصائية بين الجنس والإرهاق. وبدلاً من ذلك، تم العثور على ارتباط كبير بين الشهادة الجامعية والإرهاق العاطفي، حيث كان الإرهاق المعتدل والعالي أكثر انتشاراً بين المشاركين الحاملين لشهادة البكالوريوس من أولئك الحاصلين على درجة الماجستير أو شهادة التخصص. لم يتم العثور على أي ارتباط بين نوعية الشهادة وتبدد الشخصية أو الإنجاز الشخصي.

الخلاصة: الإرهاق منتشر بين أطباء الطب الباطني في بنغازي، حيث يسجل الأطباء حديثي التخرج معدلات إرهاق أعلى من الأطباء ذوي الدرجات العليا. لم يتم العثور على علاقة بين الجنس والإرهاق.

الكلمات المفتاحية: الإرهاق، بنغازي، ليبيا، طبيب، مقياس ماساتس للاحتراق الوظيفي.

Introduction

The term "Burnout" originated in the 1970s by psychologist Herbert Freudenberger after observing healthcare volunteers.¹ It is defined as a psychological syndrome characterized by emotional, mental, and physical exhaustion caused by excessive and prolonged stress related to one's professional life.² It is measured by assessing the combination of three subscales: emotional exhaustion (EE), depersonalization (DP) (negative and detached responses to others), and low personal accomplishment (feelings of incompetence in one's work) (PA).³ Employees who work in stressful professions, demanding jobs, and who care for others such as social workers, teachers, and healthcare professionals, are more

likely to suffer from burnout.² Many researchers have conducted investigations into burnout in different business areas over the last 20 years, and it was found that burnout rates are higher among physicians than individuals in other careers, making it an urgent health problem. This alarming prevalence is attributed to many factors including, the long training process, long work hours, sleep deprivation, their relationships with a large number of patients, having to deal with medical errors, being responsible for the health and well-being of others, patients' aggressive behaviors and complaints, and coping with death and injury. Other factors include forcing physicians to do clerical tasks; and a lack of agreement between physicians and officials regarding values, mission, purpose, and compensation.^{2,4-6} Burnout was

found to be a significant predictor of many physical and psychological conditions among physicians. Some studies have found that physician burnout is related to a higher rate of medical errors, reduced patient satisfaction, prolonged post-discharge recovery times, decreased professional work, and lower job satisfaction, which incites early retirement.⁷ As a consequence, individuals become distant from the business and family environment, and they experience incompatibilities in interpersonal relationships.² Thus, burnout is a losing situation for both physicians and the health-care industry as a whole. On the other hand, the persistence of violence and the current instability in Libya are not in favor of improving the situation regarding this issue.⁸ In order to prevent and reduce this phenomenon, it needs to be tackled at an individual and organizational level.² This study is aimed to evaluate the prevalence and extent of burnout among physicians in Benghazi.

Materials and Methods

Design and Sampling

This cross-sectional study was conducted in 2020 in Benghazi-Libya. Physicians working in different departments of internal medicine were involved.

Instruments and Procedure

The data collection instrument was the Maslach Burnout Inventory (MBI), which is the gold standard of burnout surveys in the field of medicine.⁹ The first part of the questionnaire includes items on demographic variables, and the second part consists of 22 items in the three subscales of EE, DP, and PA.

The Cronbach's alpha coefficient of this questionnaire was calculated at 0.82, indicating the acceptable internal consistency of the tool.

This questionnaire is rated based on a 7-point Likert scale, ranging from 0 (never) to 6 (every day). Due to the multidimensionality of the burnout structure, the scores of each subscale are reported separately and cannot be added up as a total score.¹⁰ According to Maslach, high scores in EE and DP and low scores in PA are considered as high burnout.¹¹ Burnout level is classified into three groups, low, moderate, and high. The cutoff points for this classification are presented in ►Table 1.

The questionnaire was distributed at the workplace of the staff, after describing the purpose of the study and assuring the confidentiality of information. Staff consent to participate in the study was obtained.

Table 1 Classification of burnout level

Level	Low	Moderate	High
EE (9 items, 0–54)	0–18	19–26	27–54
DP (5 items, 0–30)	0–5	6–9	10–30
AP (8 items, 0–48)	39–48	32–38	0–31

Abbreviations: DP, depersonalization; EE, emotional exhaustion; PA, personal achievement.

Statistics

The data was summarized using Microsoft excel 2010 then coded and processed on IBM compatible computers, using the Statistical Package for Social Sciences (SPSS) software (version 21). Descriptive statistics of the different variables were presented either as frequencies and percentages or as means \pm standard deviation (SD). For statistical comparisons, independent samples chi-squared test was employed for testing statistical significance of association between two discrete variables. Significant value is set up at *p*-value less than 0.05.

Results

Demographics

Demographic data of the physicians are shown in ►Table 2. Two-hundred questionnaires were distributed; we received 150 surveys with response rate of 75%. Of the 150 survey applicants, 60 (40%) were males, and 90 (60%) were females. Age ranged from a minimum of 27 years to a maximum of 63 years, with a mean \pm SD of 37.1 \pm 9.1 years. Regarding their current occupation, 91 (60.7%) were senior house officers (SHO), 17 (11.3%) were specialists, 22 (14.7%) were consultants, and 20 (13.3%) for non-qualified Physicians. In terms of degree certificates, 96 (64%) had MBCHB, 19 (12.7%) had masters, and 35 (23.3%) had boards.

Table 2 Physician demographics

	n (%)
Gender	
Male	60 (40%)
Female	90 (60%)
Current occupation	
SHO	91 (60.7%)
Specialist	17 (11.3%)
Consultant	22 (14.7%)
Others	20 (13.3)
Highest degree certificate	
MBCHB	96 (64%)
Master	19 (12.7%)
Board	35 (23.3%)

Abbreviation: SHO, station house officer.

Burnout

►Table 3 shows MBI scores range, mean \pm SD, and levels for all responders. Based on the MBI subscales for EE, 32% were identified as low-level burnout, 53.3% as moderate burnout, and 14.7% as high-level burnout. Regarding DP subscale results, 7.3% had moderate burnout, and 92.7% suffered from high-level burnout. PA subscale results were as follows: moderate burnout was found in only 12.6% of the applicants, and high-level burnout in 87.3%.

When the effect of gender on the levels and types of burnout was examined, no significant relationship between gender and burnout was found (►Table 4). However, there was a highly significant association between academic

Table 3 MBI scores for all responders

Type	Range	Mean(\pm SE)	Level no (%)	
EE	4-38	21.3 \pm 8	Low	48 (32%)
			Moderate	80 (53.3)
			High	22 (14.7)
DP	6-35	21.3 \pm 6.7	Low	0 (0%)
			Moderate	11 (7.3%)
			High	139 (92.7)
PA	6-38	24.8 \pm 7.5	Low	0 (0%)
			Moderate	19 (12.6%)
			High	131 (87.3%)

Abbreviations: DP, depersonalization; EE, emotional exhaustion; MBI, Maslach Burnout Inventory ; PA, personal achievement; SE, standard error.

degree of the participant and EE (**►Table 5**), as moderate- and high-level burnout were observed more among participants who had MBCHB, and started to noticeably drop with participants holding higher academic degree, while low-

level burnout was higher within board-certified doctors. No significant statistical association was found either between the academic degree and DP or between the academic degree and PA.

Table 4 Level of burnout according to gender in each dimension of the MBI

EE no. (gender %)				Level of significance
Gender	Low-level burnout	Moderate burnout	High-level burnout	$p = 0.561$
Male	22 (36.6%)	29 (48.3%)	9 (15%)	
Female	26 (28.8%)	51 (56.6%)	13 (14.4%)	
DP no. (%)				Level of significance
Gender	Moderate burnout	High-level burnout		$p = 0.701$
Male	5 (8.3%)	55 (91.6%)		
Female	6 (6.6%)	84 (93.3%)		
PA no. (%)				Level of significance
Gender	Moderate burnout	High-level burnout		$p = 0.841$
Male	8 (13.5%)	52 (86.8%)		
Female	11 (12.2%)	79 (87.7%)		

Abbreviations: DP, depersonalization; EE, emotional exhaustion; MBI, Maslach Burnout Inventory ; PA, personal achievement.

Table 5 The relation between the highest degree certificate and the level of burnout in each dimension of the MBI

EE no. (%)				Level of significance
Highest degree certificate	Low-level burnout	Moderate burnout	High-level burnout	$p < 0.01$
MBCHB	11 (11.4%)	65 (67.6%)	20 (20.8%)	
Master Board	8 (42.1%) 29 (82.8%)	9 (47.3%) 6 (17.1%)	2 (10.5%) 0 (0%)	
DP no. (%)				Level of significance
Highest degree certificate	Moderate burnout	High-level burnout		$p = 0.080$
MBCHB	6 (6.2%)	90 (93.7%)		
Master Board	0 (0%) 5 (14.2%)	19 (100%) 30 (85.7%)		
PA no. (%)				Level of significance
Highest degree certificate	Moderate burnout	High-level burnout		$p = 0.161$
MBCHB	9 (9.3%)	87 (90.6%)		
Master Board	5 (26.3%) 5 (14.2%)	14 (73.6%) 30 (85.7%)		

Abbreviations: DP, depersonalization; EE, emotional exhaustion; MBI, Maslach Burnout Inventory; PA, personal achievement.

Discussion

Burnout

Burnout syndrome has serious effects on the physical and mental well-being of healthcare providers, so determining the extent of the problem may aid in preventing its occurrence and deployment of measures of management. The results indicate that of the 150 physicians surveyed, the majority reported levels of burnout ranging from mild to moderate in the EE subscale, high-level burnout in both DP, and PA subscales, showing a high prevalence of burnout among Libyan physicians in Benghazi with almost all of them reporting features of burnout. This is concerning regarding the effects of burnout on the physicians themselves (e.g., high turnover, absenteeism, reduced staff motivation, and possible medical errors) and the quality of patient care and satisfaction. The local situation and current state of the country through history of civil war and dealing with the increased demands and high expectations from healthcare workers through the recent pandemic may be a precipitating factor to this alarming state of burnout.

Gender, on the other hand, was found to have no significant implication on the magnitude of burnout according to the results across the three subclasses of the MBI. This goes in line with several other studies that showed no relationship between gender and burnout.¹²⁻¹⁴ On the contrary, meta-analysis of 183 studies conducted by Purvanova and Muros¹⁵ showed that women are more likely to experience EE, while men were more likely to experience DP. In addition, several studies showed that women have a higher level of burnout compared to men.¹⁶⁻¹⁸ This does not correlate significantly with this study's findings as the percentage of those affected was relatively the same when comparing males and their female counterparts, but these results may be limited by the sample size that was taken so generalization of these findings might not be applicable.

There was a significant association between the highest degree certificate and the EE subscale, but not with the DP nor PA subscales. As reviewed by Maslach et al,¹⁹ EE is the most widely encountered component of this syndrome making it an important factor. Moreover, EE was found most commonly to be correlated with physicians with MBCHB degree than those with masters or a board degree. Our findings are supported by two other studies that concluded that burnout is a common issue among interns.^{20,21} On the contrary, a study by Stanetic and Tesanovic²² showed that older physicians with a higher length of service were exposed to more levels of stress and thus, a higher risk for burnout syndrome. Our study results might suggest that newly graduated medical personnel in Benghazi are having more difficulty dealing with their newfound responsibilities and adjusting to the workload of hospital life when compared to their colleagues with more work experience and higher degrees, which may be appropriated to poor managerial guidance, supervision, and lack of infrastructure.

Implications

The data contributes a clearer understanding of the magnitude of burnout among physicians in Benghazi and highlights the need for various methods of determining the extent among other departments than internal medicine to establish the prevalence among the medical community as a whole, as dealing with the aftermath of its effects negatively impacts the lives of both the physicians and their patients

Conclusion

Burnout syndrome is recognized as a global issue, and as medical practice is stressful, healthcare workers are found to be burnt out and exhausted very soon, which is reflected negatively on the medical staff well-being, patients' outcome, and the overall organizational performance. This study might suggest that burnout is prevalent among internal medicine doctors in Benghazi, with the newly graduated medical personnel scoring higher rates of burnout than doctors with higher academic degrees. No relation was found between gender and burnout. However, further research is needed to establish the causality of burnout in Libyan physicians and ways to early identify and combat its occurrence, and the development of management plans to those who are already affected by burnout. Future studies should take into account to investigate the reasons behind the difference in levels of burnout across occupational ranks.

Limitations of the Study

The generalizability of the results is limited by the small sample size. There is no justification of power calculation.

Conflict of Interest

None Declared.

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