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Burnout among Emergency Physicians in Saudi Arabia: A Cross-sectional Study

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Abstract

Background/ Objectives: Burnout, a state of mental, physical, and emotional exhaustion, is typically evaluated by assessing levels of depersonalization (DP), emotional exhaustion (EE), and perceived personal accomplishment (PA). Burnout is usually associated with reduced career satisfaction and an increase in medical errors by healthcare providers. This study evaluated burnout in the emergency physicians in Saudi Arabia.

Methods: A cross-sectional study was conducted among all physicians attending a large national emergency medicine conference. Only those practicing for more than 1 year in any of the Arabian Gulf countries were included. We recruited 303 participants through a wellness booth on the exhibition floor, and the Maslach Burnout Inventory was used to electronically collect the data. Association and correlation between multiple demographic variables and risk of burnout were assessed.

Results: Only 265 participants (265/303) were eligible; most participants (60.8%) were in the 25–34 years age group, and 84.2% were males. The mean score (standard deviation) for EE, DP, and PA subscales was 2.51 (1.31), 2.09 (1.28), and 4.27 (1.18), respectively. Further, 156 (56.3%) participants were in the high-risk group, according to the EE or the DP subscale. Scores for DP, EE, and PA were not significantly different between genders, among age groups, job titles, or years of experience, but a negative correlation between participants' age and DP scores was observed ($r = -0.13$; two-tailed, $p = 0.03$).

Conclusions: The study suggest that risk for burnout in this sample was high. Regulators and medical directors must work to reduce the detrimental effects of burnout in emergency medicine providers.

Keywords: Burnout; Emergency Physicians; exhaustion; Saudi Arabia.

What is already known about this subject?

Burnout is relatively common among physicians. Studies in the United States suggest that emergency physicians have a high risk for burnout compared to other disciplines.

What are the new findings?

A cross-sectional survey of emergency physicians practicing in Saudi Arabia shows a high risk for burnout with a possible correlation between age and risk of depersonalization.

How it might impact on clinical practice in the foreseeable future?

Medical directors and decision makers may choose to implement policies and practices that reduce the risk of burnout in this high-risk discipline.

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1. INTRODUCTION

Owing to its impact on the health care system, physician burnout has become the subject of many studies over the last decade [1,2]. Burnout is a state of physical, mental, and emotional exhaustion that results from an ongoing exposure to an emotionally demanding environment. Since 1996, burnout has been evaluated by assessing levels of emotional exhaustion (EE), depersonalization (DP), and a sense of personal accomplishment (PA) using the Maslach Burnout Inventory –Human Services Survey (MBI-HSS) [3,4].

Burnout has been associated with reduced career satisfaction, increased absenteeism, and higher turnover rates among health care providers, apart from an increase in medical errors [5-7]. Previous studies have demonstrated that emergency physicians are at greater risk of burnout compared with other medical disciplines [2,8]. Working in shifts, overcrowding, dealing with critical illnesses, death, and the pressure associated with making crucial decisions with little information are some of the inherent factors that may explain the increased risk of burnout in this discipline [9,10]. Higher stress levels among people in the health sector is not merely an individual burden but it also frightens both the maintenance of healthy and sustainable workforce along with the capacity to offer quality services. The quality of doctor and patient relationship is one of the major factors in the general practice. Moreover, feeling at easiness and job satisfaction of the physicians is usually associated with honesty to patients and more attention to psychosocial aspects of complaints, while frustration and lack of time are related to a decrease in the tendency to offer explanations to patients. The Joint Commission on Accreditation of Healthcare Organizations has mandated that all health care systems as well as hospitals should have a process to address physical and psychological health of the physicians [11]. Burnout among emergency physicians has previously been studied at a single centre in Saudi Arabia [12]. In this study, we evaluated physician burnout in a more representative sample of emergency physicians attending a national conference in Saudi Arabia.

2. METHODS

2.1 Study Design/Setting

This observational, cross-sectional study was performed at the Saudi Emergency Medicine Assembly (SEMA) 2015 conference, held in Riyadh, Saudi Arabia. Data was collected from 303 participants.

2.2. Inclusion and Exclusion criteria

All emergency physicians were eligible for the study. We excluded study investigators, those who have been practicing for less than 1 year, and those who practiced medicine outside the Arab Gulf region.

2.3 Data collection instrument

A wellness booth was set up in the exhibition floor and was used to approach and recruit participants. To prevent sensitization, participants were informed that the survey was designed to assess their personal experience at work with no mention of the term “burnout.” The MBI-HSS, a well-established and validated tool, was used in this study [2,13,14]. Six demographic questions on age, gender, job title, level of training, years of experience and location of practice were added to the survey's 22 questions. The English version of the survey was used. Additionally, participants had access to definitions of key terms used in the survey to ensure clear meaning and intent of each question. The MBI-HSS tool scores participants on the three main components of the burnout syndrome, namely, DP, EE, and PA. The MBI-HSS questions are statements about personal attitudes or feelings of the participants (e.g., “I feel depressed at work”) and answers must be provided on a 7-point scale, based on the frequency upon which the respondents experience such feelings, from 0 for “never” to 6 for “every day.” Higher scores in the DP and EE subscales whereas, lower scores in the PA subscale are often associated with higher degrees of burnout. Participants were also categorized as having high, medium, or low degree of burnout for each of the subscales based on reference cut-offs used in the MBI-HSS manual [4]. Participants completed the survey anonymously and using an electronic survey tool (MindGarden.com) on laptops, tablets, or smartphones provided at the SEMA wellness booth over a period of 5 days.

2.4 Data Analysis

Standard descriptive statistics were used to describe study participants and to compute mean and standard deviation for the different subscales. Distribution of subscale scores was compared between subgroups for significant differences and possible correlations explored. The statistical

analysis was performed using the "Statistical Package for Social Sciences" (SPSS for Mac, Version 21; SPSS, Inc., Chicago, IL, USA).

3. RESULTS

Data were collected from 303 participants, and 265 were eligible for inclusion in the study. Reasons for exclusion were practicing outside the included region of interest and nursing participants. The MBI-HSS inventory was completed without missing data by all participants. Most participants (60.8%) were in the 25–34 years age group, 84.2% were males, and 69.4% were Saudi nationals. Of the 265 participants, 126 were attending physicians and 89.3% of the attendings were board certified. Table 1 provides details of the demographic characteristics of the study population.

Table 1: Participants' demographic data

Demographic	Frequency (n)	Percentage (%) of total
Age		
<25	2	0.8%
25–34	161	60.8%
35–44	76	28.7%
45–55	20	7.5%
≥55	6	2.3%
Gender		
Male	223	84.2%
Female	42	15.8%
Job title		
Service Resident	15	5.7%
Resident in an EM program	84	31.7%
Staff / General Physician	40	15.1%
Attending / Consultant	126	47.5%
Years of practice; EM		
<5 years	135	50.9%
5–<10 years	79	29.8%
10–<15 years	31	11.7%
≥15 years	20	7.5%

The mean score and standard deviations for the EE, DP, and PA subscales were 2.51 (1.31), 2.09 (1.28), and 4.27 (1.18) respectively. The distribution of participants in the MBI-HSS risk categories for each of the subscales is presented in Table 2 and was based on the reference cut-offs provided in Table 3.

Table 2: MBI-HSS subscale scores

	Mean (SD)	Risk of Burnout n (%)		
		Low	Medium	High
Emotional Exhaustion	2.51 (1.31)	108 (40.8)	62 (23.4)	95 (35.8)
Depersonalization	2.09 (1.28)	69 (26.0)	61 (23.0)	135 (50.9)
Personal Accomplishment	4.27 (1.18)	82 (30.9)	76 (28.7)	107 (40.4)

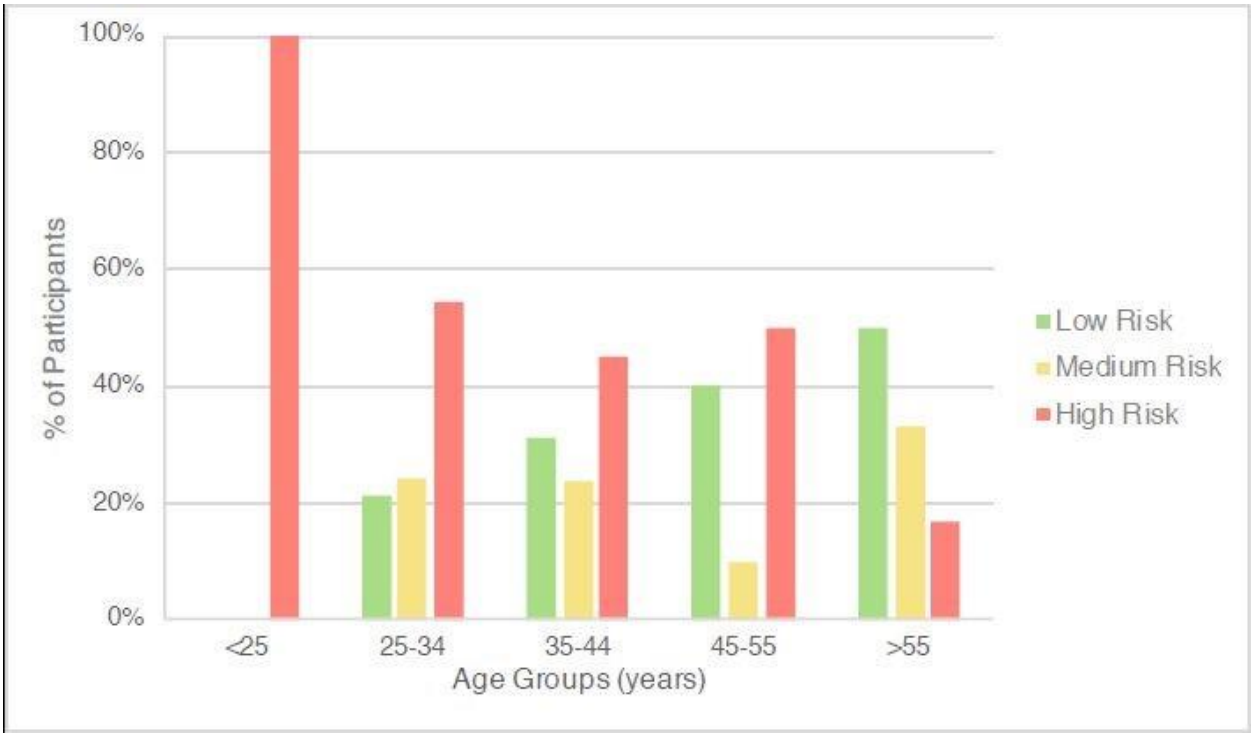
Table 3: MBI-HSS reference subscales mean score cut-offs for risk of burnout [4].

	Risk of Burnout		
	Low	Medium	High
Emotional Exhaustion	≤2	>2–< 3	≥3
Depersonalization	≤1	>1–< 2	≥2
Personal Accomplishment	≥5	<5–> 4.1	≤4.1

Of the 265 participants, 191 (72.1%) were in the high-risk group in at least one of the burnout domains, 156 (56.3%) were in the high-risk group in either EE or DP domains, and 37 (13.4%) were in the high-risk group in all three burnout domains. Scores for EE, DP, and PA subscales were not normally distributed and were not significantly different between genders or among the various age groups, job titles, or years of EM experience ("Kruskal–Wallis and Mann–Whitney *U* tests," respectively). When participants were grouped based on their risk of burnout as high, medium, or low, with respect to each subscale, the distribution of risk groups was also not statistically significant between age groups or among genders, job titles, or years of EM experience. There was a negative correlation between participant age and DP scores (Spearman's Rho, $r = -0.13$; two-tailed, $p = 0.03$); a similar correlation was not observed with EE or PA

subscale scores (Fig. 1). There were no significant correlations between years of EM experience and any of the burnout subscale scores.

Fig 1. Distribution of Risk of Depersonalization by Age Groups.



4. DISCUSSION

Using established scales of assessment, we show that Saudi emergency physicians are at higher risk for burnout. To the best of our knowledge, this is the first national-level study on burnout in this group of health care providers. Our study also shows that burnout can be measured at a national level using conferences and large gatherings of the delegates of the speciality. We found a negative correlation between age and DP scores which may be explained by the additional stresses associated with training and relative lack of knowledge or expertise. Data available from previous studies were insufficient to confirm this correlation. Although we did not explore potential reasons for this correlation, it may be worthy of exploration in future studies.

Previous studies have used different methods to label participants with burnout as a dichotomous outcome [15,16]. Although we did not label participants in this study as such, the data needed for comparison were available in the results. We have previously assessed burnout

among emergency physicians at a single centre and found higher EE scores but lower risk in the DP and the PA subscales, compared with the current sample. A study in a mixed group of physicians practicing in Saudi Arabia found that 70% of participants experienced burnout compared with 72.1% in our study when using the same definition for burnout [13]. In the United States of America (USA), a large study in more than 7000 physicians from different specialties found that the prevalence of burnout was 45.4% for all physicians, but that emergency physicians were the highest of the specialists surveyed with a prevalence between 60% and 70%. A control group from the general population had a far lower prevalence of burnout (27.6%) [7]. Using the definition of burnout in the study from the USA for comparison, the prevalence of burnout in our study was 56.3%. In Europe, a survey among Romanian emergency department physicians also showed lower scores for the EE and the DP subscales, with higher scores for PA, compared with our results [17]. Our study included emergency physicians from all regions in the country and with the expected age distribution for a relatively young specialty in this country. Our data collection was electronic and utilized digital validation methods such as mandatory fields to ensure that all surveys were complete.

4.1 Limitations

A potential limitation in our study was that only people who chose to attend the conference were approached, that is, sampling may have been biased as this group is more likely to be motivated and enthusiastic about their work compared with physicians who chose not to attend. The landscape of emergency medicine practice in Saudi Arabia is such that most emergency departments are covered by non-board-certified physicians (service residents); however, that group of providers was under-represented in our study. Thus, both these factors may have skewed our results toward lower burnout rates. Even though most participants were native Arabic speakers and the surveys were conducted in English, any effects of a language barrier are likely to be negligible.

5. CONCLUSIONS

This study affirms that emergency physicians in Saudi Arabia are at high risk for burnout. Regulators and medical directors must work to improve working conditions and work–life balance to help reduce the detrimental effects of burnout in this workforce.

6. Funding sources

The study received no funding.

7. Conflicts of Interest

None declared.

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