

Physicians' job satisfaction, ethics and burnout in Makkah, Saudi Arabia

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Abstract

Objective: To investigate the frequency of job satisfaction, burnout and ethics among physicians across specialties with varied levels of experience and seniority, in hospitals in Makkah, Saudi Arabia.

Methods: From April-May 2016, job satisfaction, burnout and ethics were assessed in 136 physicians across specialties from six government hospitals in Makkah. Data collection was via a self-administered questionnaire. SPSS was used to obtain the likelihood ratio chi-square for all categorical bivariate statistical analyses. P-value <0.05 was considered significant.

Results: A total of 136 physicians participated in the study. Ninety five (70%) physicians were male and 41 (30%) were female. Medical specialties varied between genders. There was no significant difference by gender, in job satisfaction among physicians (p -value 0.99). However, a high level of burnout was statistically significant among physicians (51%, p -value <0.001) and the level of burnout was significantly higher among physicians willing to change their specialty compared to those willing to repeat it (50% vs. 24%, p -value 0.02). Physicians dissatisfied with their salary had double the scores of ethics compared to satisfied physicians. Female physicians were better at resolving ethical dilemmas.

Conclusion: This study provided the first evidence of high frequency of burnout and career choice regret among physicians working in Makkah, Saudi Arabia. Preventing physician burnout not only improves the quality of healthcare but also ensures patient safety.

Keywords: Physician satisfaction, ethics, burnout, work stress, loss of enthusiasm
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Introduction

Ethics or moral philosophy involve developing, defending and recommending concepts of right and wrong behaviour.¹ Ethical dilemmas involving money, patients, harm, life, and death arise regularly throughout a physician's career.² The way physicians choose to deal with those dilemmas, reflects each physician's individual values and manners, which might conflict with rigorous professional standards.^{1,3} Physicians grapple with many wrenching decisions throughout their medical careers.⁴ Some situations even involve decisions about prolonging or ending patients' lives.⁵

A career in medical field brings significant challenges that might cause substantial personal distress for individual physicians and their families. Physician career satisfaction has recently received much attention.⁶ One of the main aims of American Medical Association survey was to determine the most important contributing factors for career satisfaction. Measures of personal accomplishments and emotional resilience were found to be strongly associated with career satisfaction.⁷ A recent cross-sectional survey conducted to determine dissatisfaction and ascertain strategies to drive change, found that

negative physician mental health and burnout rates increase with physician dissatisfaction.⁸ Considerable evidence suggested that dissatisfaction in medical practice is increasing and affecting the quality of care.⁹ Furthermore, dissatisfied physicians are thought to be at higher risk for professional burnout, a potential barrier to successful healthcare performance.⁶

Globally, about one-third of physicians in varied specialties, suffer from at least one form of burnout.¹⁰ There are many dimensions of burnout, depersonalization, emotional exhaustion, and low personal accomplishment.¹¹ Burnout is defined as loss of enthusiasm for work, emotional exhaustion and feeling a low sense of personal accomplishment (QD85) by the International Classification of Diseases (ICD) code.¹¹ Discussing the goals of being a physician gives a clear picture of their character and morals. A physician should enjoy monetary rewards, and humanistic rewards, which are priceless.

Work-life balance is a major stressor for male and female physicians.¹² Although gender might be an important factor in job satisfaction and burnout; there are inconsistencies in published evidence. Studies reported no gender differences,¹³ a higher incidence among males^{14,15} and a higher incidence among females.^{10,12} The reported rate of burnout across specialties is 30-65%. The highest burnout rates were seen in primary care physicians (40%),¹³ critical care (53%)¹⁶ and emergency medicine (77%).¹⁷ In

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the USA, half of all family physicians, internists, and general surgeons reported burnouts during their careers¹⁶ and this trend is increasing globally.¹⁸ In contrast, evidence about physicians' burnout is lacking in Saudi Arabia. Therefore, this study aimed to determine the rates of physicians' job satisfaction, commitment to professional morals, and burnout (loss of enthusiasm) at Makkah, Saudi Arabia's general hospitals.

Methods

In this observational, cross-sectional, questionnaire-based study, we recruited physicians (residents, specialists, and consultants for professional diversity), from all specialties working at six government hospitals (Al Noor Specialized Hospital, Hera'a Hospital, King Abdul Aziz Hospital, King Faisal Hospital, King Abdullah Hospital, and Maternal and Children Hospital) in Makkah, Saudi Arabia. Data was collected from April-May 2016. Inclusion criteria were physicians holding a current medical license and working at government hospitals in Makkah city. Physicians working outside Makkah city, at military and private hospitals, and those in Makkah city who refused participation were excluded. The study was approved by Committee of Bio-Medical Ethics, Umm Al-Qura University (Ethics Approval Number: HAPO-02-K-012-2018-10-275). All eligible physicians were invited to participate. Participants gave written consent and completed a self-administered questionnaire. Data collectors informed all participants about purpose of the study. The participant's confidentiality of data and anonymity was assured. After being informed about study objectives, benefits and risks, participants had choice of participation, refusal or withdrawal from the study at any point in time. No incentives or rewards were given to participants and research was offered to all eligible physicians with no obligation to participate.

The cross-sectional study design fitted the main aim of the study, which was to determine the frequency of physicians' career satisfaction, commitment to professional ethics, and burnout (loss of enthusiasm).¹⁹

The sample size was calculated based on the prevalence of physicians' burnout published in previous studies.^{20,21} The prevalence of burnout used was 70% assuming response rate 60%, and a confidence level of 95% with an acceptable 0.05 margin of error. This gave a minimum sample size of 290. We used a random sample technique at all six government hospitals in Makkah. Six public (i.e. government) regional hospitals were randomly selected using random number tables. Questionnaires were administered to eligible doctors working in these hospitals. Similarly, all doctors were chosen through random number

tables; these were based on doctors' medical licence number. However, due to time constraints, the researchers had to limit the sample size to only 136 randomly selected practicing physicians.

Researchers collected data via a questionnaire, which included sociodemographic information, detailed questions about burnout, satisfaction and ethics. Satisfaction was assessed by three factors based on previous published survey.¹⁰ Satisfaction about salary and current job, and whether the physician would repeat the specialty (do it, all over again). For satisfaction about the salary and current job, the response options were 'Yes' or 'No'. Participants who chose the same specialty again were considered to be satisfied at work, whereas those who would consider another specialty were considered to be dissatisfied at work.

Questions about burnout included factors perceived as causes of burnout. The questionnaire used was adapted from the study tool used by previous survey study examined burnout among primary health care doctors in Saudi Arabia.¹⁰ This validated questionnaire categorised burnout into 3 levels: high, moderate and low level of burnout. The participants were asked whether they had burnout. The next part included 13 factors of burnout. Each of the "Yes" or "No" answers were added up to calculate the "score of burnout". These scores ranged from 2-110 and participants were classified into low (2-24), moderate (25-60), or high (61-110) scores of burnout.¹⁰

Detailed questions about factors affecting ethics were classified into two parts. The first part covered life, death, and pain. The second part covered money, harm, and patients. Each question could be answered with "Agree" or "Disagree". Participants' answers from both parts were added to calculate the "score of ethics". Participants were classified into low (0-15), moderate (16-30), and high (31-38) scores of ethics.

Given the time constraints, the likelihood ratio chi-square (LHR chi-sq.) test was used for all categorical bivariate statistical analyses to find statistically significant relationships between two categorical variables. The LHR chi-sq is used over other statistical tests for categorical variables (especially chi-square) as it is robust and used when some expected values are <5. P value <0.05 was considered significant. Microsoft Office Excel (Version 16.0, USA) was used for data entry, processing and storage. SPSS Virgin 16 for Windows (IBM SPSS Statistics, Chicago, USA) was used to analyze raw data.

Results

The questionnaire was administered only to 136 physicians

Table-1: Relationships between gender and age, speciality, exercise, and ethical dilemma.

Variables	Categories	Gender n (%)		Total n (%)	Chi-sq.	†d.f.	p-value
		Male	Female				
Age (years)	25 – 34	44 (69)	20 (31)	64 (47)	8.33	3	0.04
	35 – 44	27 (63)	16 (37)	43 (32)			
	45 – 54	14 (74)	5 (26)	19 (14)			
	55 – 65	10 (100)	0 (0)	10 (7)			
	Total	95 (70)	41 (30)	136 (100)			
Specialty	Medicine	43 (70)	18 (30)	61 (46)	13.69	3	0.003
	Surgery	42 (84)	8 (16)	50 (37)			
	Paediatrics	9 (50)	9 (50)	18 (13)			
	Obstetrics and Gynaecology	1 (20)	4 (80)	5 (4)			
	Total	95 (71)	39 (29)	*134 (100)			
Exercise	No	35 (55)	2 (45)	63 (47)	11.79	4	0.02
	Daily	14 (88)	2 (12)	16 (12)			
	Once a week	13 (77)	4 (23)	17 (12)			
	Twice a week	22 (79)	6 (21)	28 (20)			
	5 times a week	10 (83)	2 (17)	12 (9)			
	Total	94 (69)	42 (31)	136 (100)			
Toughest Ethical Dilemma	Withhold care due to high cost	16 (52)	15 (48)	31 (26)	10.42	3	0.02
	Pressured to provide therapy to patients that they do not need	22 (69)	10 (31)	32 (26)			
	Disclose or withhold therapy for patients who harm others	8 (73)	3 (27)	11 (9)			
	Suspect domestic abuse and unable to take action	40 (85)	7 (15)	47 (39)			
	Total	86 (71)	35 (29)	*121 (100)			

†d.f.= degrees of freedom; * Missing answers for 15 participants; * Missing speciality for two physicians.

Table-2: Relationship between gender and the variables “If I have to do it all over again” and “Satisfied with salary”.

Variables	Categories	Gender n (%)		Total n (%)	Chi-sq.	†d.f.	p-value
		Male	Female				
If I have to do it all over again	I'll choose the same speciality	65 (69)	(29) 31	94 (69)	0.000	1	0.99
	I'll choose another speciality	29 (69)	(13) 31	42 (31)			
	Total	94 (69)	(42) 31	136 (100)			
Satisfied with salary	Yes	54 (68)	(25) 32	79 (58)	0.003	1	0.95
	No	39 (68)	(18) 32	57 (42)			
	Total	93 (68)	(44) 32	36 (100)			

†d.f.= degrees of freedom

due to time constraints for researchers. Questionnaires were administered to 200 physicians working in one of the six hospitals. Of 200 eligible participants, 136 were willing to participate and 64 doctors were excluded from this study because of their unwillingness to participate. All participants filled in and returned the questionnaires. There were some missing answers ($\leq 20\%$). The participants' ages were 25-65 years and majority were male 95(70%) vs 41(30%) ($p=0.04$). General surgery and internal medicine were significantly prevalent specialty chosen by male physicians recording 42(84%) and 43(70%), respectively ($p=0.003$). Statistical analyses for gender with all other variables found statistically significant relationships between gender and four other variables (age, speciality,

exercise, and the toughest ethical dilemma) (Table 1).

However, there are no significant relationships with other variables (nationality, marital status, number of children, smoking, health status, current salary and job satisfaction, doing it all over again, a private clinic, hours of patient contact per week, the most rewarding aspects of the job, burnout, scores of burnout, and scores of ethics).

There is a statistically significant relationship between gender and age (Table 1). Across age groups, there are twice as many male physicians as female (L.H.R. Chi-sq.=8.32, degrees of freedom [d.f.] = 3, $p = 0.04$), except in the oldest age group (55-65 years), which has no female physicians.

There is a statistically significant relationship between gender and specialty (Table 1). There are twice as many male physicians in medicine, and four times as many male surgeons compared to female surgeons. However, there are equal numbers of male and female paediatricians, and four times as many female physicians in obstetrics and gynaecology (L.H.R. Chi-sq. = 13.69, d.f. = 3, $p = 0.003$). Gender and exercise are also statistically significant. Male physicians exercised more frequently than females in all categories of exercise (L.H.R. Chi-sq. = 11.79, d.f. = 4, $p=0.02$). Gender was statistically significant for the variable, “toughest ethical dilemma” (L.H.R. Chi-sq. = 10.41, d.f. = 3, $p=0.02$) (Table 1). Almost equal numbers of male and female physicians withhold care due to high cost while in other three categories of toughest ethical dilemmas; male physicians' responses were 3-4 times higher than female physicians were.

There are no statistically significant relationships between gender and satisfaction with salary or repeating a specialty

Table-3: Relationship between scores of burnout and the variables "Most Rewarding Aspect of My Job", and "If I have To Do It All Over Again".

Variables	Categories	Burnout n (%)			Total n (%)	Chi-Sq.	†d.f.	p-value
		Low	Moderate	High				
Burned-out	Yes	1 (2)	22 (47)	24 (51)	47 (45)	21.54	2	<0.001
	No	13 (22)	36 (62)	9 (16)	58 (55)			
	Total	14 (13)	58 (55)	33 (31)	*105 (100)			
Most rewarding aspect of the job	Professional at work	7 (13)	34 (63)	13 (24)	54 (41)	21.37	10	0.02
	Good relations with patients	2 (9)	11 (48)	10 (43)	23 (17)			
	Valuable person in the community	3 (11)	18 (64)	7 (25)	28 (21)			
	Earn a good income	1 (12)	6 (76)	1 (12)	8 (6)			
	Proud to be a physician	0 (0)	5 (50)	5 (50)	10 (8)			
	Nothing	0 (0)	1 (11)	8 (89)	9 (7)			
	Total	13 (10)	75 (57)	44 (33)	*132 (100)			
If I have to do it all over again	Choose the same specialty	11 (12)	60 (64)	23 (24)	94 (69)	8.41	2	0.02
	Choose another specialty	3 (7)	18 (43)	21 (50)	42 (31)			
	Total	14 (10)	78 (57)	44 (33)	136 (100)			

†d.f., degrees of freedom, *there were missing answers for 'yes' or 'no' questions but not for the burnout score (non-response rate ≤ 20%).

Table-4: Relationships between scores of ethics and nationality and salary satisfaction.

Variables	Categories	Gender n (%)		Total n (%)	Chi-sq.	†d.f.	p-value
		Male	Female				
Nationality	Saudi	56(89)	7(11)	63(46)	4.13	1	0.04
	Non-Saudi	56(76)	18(24)	74(54)			
	Total	112(82)	25(18)	137(100)			
Satisfied with salary	Yes	68(87)	10(13)	78(58)	3.93	1	0.03
	No	42(74)	15(26)	57(42)			
	Total	110(82)	25(18)	135(100)			

†d.f., degrees of freedom

(Table 2). The percentage of males and females in both categories for both variables are almost equal, indicating that changing specialties is not linked with salary satisfaction

Table 3 shows statistically significant relationships between scores of burnout and the burnout variables, "most rewarding aspect of my job", and "if I have to do it all over again" ($p < 0.001$, $p = 0.02$, $p = 0.02$, respectively). However, there are no statistically significant relationships between scores of burnout and other variables in the study. There is a highly significant relationship between burnout and scores of burnout, the physicians' self-assessment as burnout in all categories (L.H.R. Chi-sq. = 21.53, d.f. = 2, $p < 0.001$).

Table 3 shows a statistically significant relationship between scores of burnout and "the most rewarding aspect of the job," (L.H.R. Chi-sq. = 21.37, d.f. = 10, $p = 0.02$). For "the most rewarding aspect of the job", physicians' scores were mostly moderate for scores of burnout. For "proud being a physician", physicians scored moderate or high scores of burnout. However, for "the most rewarding aspect of the job," most physicians who replied "Nothing" were in high

(90%) and moderate (10%) burnout categories.

There is a statistically significant relationship between scores of burnout and variable "if I have to do it all over again" (L.H.R. Chi-sq. = 8.41, d.f. = 2, $p = 0.02$). There are over twice as many physicians who would choose same specialty again, who are moderately burned-out compared to highly burned-out physicians (Table 3). However, physicians who would change specialties scored almost the same in moderate and high burned-out categories.

The frequency distribution for scores of ethics showed that only two physicians scored low. Therefore, low and moderate categories were combined into 'moderate' category. Statistical analyses between scores of ethics and all other variables found statistically significant relationships only between scores of ethics and nationality (L.H.R. Chi-Sq.= 4.13, d.f. = 1, $p = 0.04$) and salary satisfaction (L.H.R. Chi-Sq.=3.93, d.f. = 1, $p = 0.03$) (Table 4). Most Saudis and non-Saudis graded 'moderate' for scores of ethics. Only 11% Saudis and 24% non-Saudis graded 'high' for scores of ethics. Physicians dissatisfied with their salary graded 'high' for scores of ethics compared to physicians satisfied with their salaries having moderate scores of ethics.

Discussion

This cross-sectional study revealed a statistically significant level of burnout among physicians from various medical specialties in Makkah, Saudi Arabia. It showed that burnout affects physicians' satisfaction and their decision to continue or change specialties. However, two-thirds of both, satisfied and unsatisfied physicians had moderate scores for ethics, regardless of nationality.

The highly significant relationship between the variables "are you burned-out" and score of burnout demonstrated that factors selected to calculate score of burnout and score of ethics are appropriate, weightage of these factors in calculating the two scores is correct and classification of scores into two categories each is appropriate too.

This highly significant relationship demonstrated that

participants were honest in their answers with a good self-understanding of 'burnout'. Our findings about physician burnout are consistent with other studies, despite variations in geographic location, work environment, experience, annual income, and cultures.^{6,21,22} Family physicians in British Columbia had a higher rate of self-reported burnout (61%) and depression (29%).²¹ However, burnout among physicians in the later study might be underestimated because it was self-reported by family physicians at a city centre. A higher prevalence is possible, if physicians from other specialties or rural areas were included. Stress, job overload, 'on-calls' and lack of facilities (especially in rural areas) might influence the level of burnout. The self-understanding of burnout²⁹ and tolerance levels of work-related stress could also indirectly affect physicians' decision about burnout levels.

Although gender is an important factor that affects burnout, published evidence is inconsistent.¹³⁻¹⁵ Emerging evidence suggested that male physicians are more likely to suffer from burnout than females.⁶ Studies underpowered and exposed to a non-response bias due to a low response rate could result in underestimation of prevalent burnout among male physicians. Consistent with published studies, our study showed the prevalence of male physicians to be twice that of female physicians, which might be related to more male physicians in challenging fields such as surgery.¹⁰ Gender difference, especially in Saudi Arabia, could be related to cultural and traditional habits.¹⁰ Our study sample had fewer women physicians. There were no female physicians in oldest age group (55-65 years) compared with younger physicians aged 25-34 years (0% vs. 31%, $p=0.04$). This could be a revolutionary cultural acceptance of female physicians in Saudi Arabia. Thus, male physicians could be at a higher risk of suffering from high-level burnout compared to female counterparts. Burnout was statistically significant and higher among male surgeons (48.9% vs. 34.2%, $p=0.04$).²³

Moreover, our study showed a statistical relationship between gender and speciality. There were twice as many male physicians in internal medicine and four times as many in surgery. In obstetrics and gynaecology, female physicians were four times higher, mirroring the working medical environment in Saudi Arabia. These variations may be influenced by cultural, Islamic and social norms in Saudi Arabia.^{24,25} For example, female patients might be more comfortable with female physicians, especially in obstetrics and gynaecology.

Another difference by gender was frequency of exercise; overall, male physicians exercised more (Table 1). This could reflect community dogma and lifestyle limitations for women in Makkah, Saudi Arabia and is consistent with

other studies.^{26,27} Despite emerging evidence that physical activity could influence the level of burnout to some degree,²⁷ high quality longitudinal or interventional studies are lacking. It could be possible that male physicians were more stressed, experience symptoms of burnout, and exercise more to alleviate this stress.²⁸

Gender was statistically related to "the toughest ethical dilemma." All physicians were almost equal in their response to "withhold care due to high cost". While in other categories (pressured to provide unneeded therapy to patients, disclose or withhold therapy for patients who harm others, and suspect domestic abuse and unable to take action), male physicians' responses were 3-4 times higher than female physicians'. This gender diversity might be related to socialization and nature of duties assigned to male physicians, especially in Saudi society, where they are more exposed to ethical dilemmas compared to female physicians; and/or female physicians are more sensitive in resolving ethical dilemmas.^{29,30} Although gender differences for ethical dilemmas are still arguable, emerging evidence from a recent meta-analysis, showed that gender plays a major role in moral reasoning among medical professionals.²⁸

For scores of ethics and nationality, non-Saudi physicians scored twice that of Saudi physicians. Scores of ethics and salary satisfaction were also statistically significant. Physicians dissatisfied with their salary had higher scores of ethics compared to those satisfied with their salary. This result is contrary to logic and expectation, as physicians satisfied with their salary should have higher scores of ethics.^{31,32}

Results for scores of burned-out and changing speciality, showed that physicians who would choose the same speciality again were moderately burned-out compared to highly burned-out physicians who would change speciality. Although there is good evidence indicating that physicians' burnout and satisfaction is associated with poor medical decisions and high job relocation,^{6,18,21} one study claimed otherwise.²² This could be exposure to response bias as a result of exaggeration in self-reported outcomes to seek attention and change health system or it could be location variation as it was conducted in rural Canada. Moreover, physicians willing to change specialties were almost equal in number for moderate and high burnout. In comparison, however, the prevalence of dissatisfied physicians almost doubled in the high burnout category.

Thus, the scores of burnout affect physicians' intent to continue or change specialties. Consistent with our findings, emerging evidence showed a significant association between level of burnout and probability of

changing professions among surgeons (37.5%, p -value=0.01).²³

The main strength of this study is the comprehensive assessment of physicians' satisfaction, ethics, and burnout. A cross-sectional study allowed examination of multiple endpoints with one relevant data collection.¹⁹ Additionally, as participants were randomly selected, it indicated high validity of the study. The diversity in physicians' specialties and seniority gives a valid estimation of subjects' characteristics,³³ creating an externally valid representative sample.

Limitations of our study include small sample size and possibility of being underpowered to identify smaller average differences in analysis as well as large percentage of male participants (70%). Although this is an imbalanced study sample, it could be representative of distribution of gender at hospitals in Saudi Arabia. Two hundred questionnaires were to be administered to physicians working at six government hospitals in Makkah, however, sample size was reduced to 136 due to time constraints. One of the limitations of our study is related to the external validity; this study was conducted in Saudi Arabia, where medical practice might be slightly different from practice in other countries. Additionally, cultural norms vary between populations. Thus, findings must be interpreted with caution as it cannot be generalized to another population with different culture. Although using questionnaires has been associated with a low response rate,¹⁹ all (136) participants completed the questionnaire. Information was missing only for a few questions, recording an acceptable non-response rate of $\leq 20\%$.

Conclusion

In conclusion, our study provided the first evidence of high frequency of burnout and career choice regret among physicians working in Makkah, Saudi Arabia. This study mirrors medical community in Saudi Arabia, where two-thirds are male physicians working in internal medicine and surgery. Female physicians work mostly in obstetrics and gynaecology.

Findings from this study would help in establishing a feasible approach in reducing emotional exhaustion and burnout among physicians not only in Makkah city but also nationwide. Addressing physicians' burnout would have a positive impact on professional efficacy and improve their job satisfaction. Thus, it will create a highly productive and positive work environment. Further research is warranted to confirm these findings in different regions in Saudi Arabia and establish whether physician burnout affects quality of healthcare nationwide. To ensure well-being of physicians in Saudi Arabia, it is vital to establish strategies

to reduce burnout levels and promote job satisfaction.

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