Predicting burnout factors among healthcare providers at private hospitals in Saudi Arabia and United Arab Emirates: A cross-sectional study

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Abstract

Background: Burnout is defined as a long-term work stress. The prevalence of burnout syndrome among nurses is 42% of nurses in England. Many countries have conducted studies to measure the level of burnout among health care providers. There is a lack of research on burnout among healthcare providers in the Arabic countries. **Aims:** This study aimed to assess the burnout level among healthcare providers in Saudi Arabia and United Arab Emirates and to predict the burnout factors of healthcare providers working in tertiary private hospitals. **Methods:** A descriptive cross-sectional survey was used to evaluate the burnout among healthcare providers. A total of 900 healthcare providers working in the clinical areas of six private hospitals in the Arabia Gulf Region were recruited for the study. A total of 892 healthcare providers were included in the study. A total of eight surveys were excluded due to major missing data. **Results:** A total of 892 healthcare providers were included in the study. The average age was 32 years ± 7 years for male and female healthcare providers. A high burnout level was found in the results. The participating female healthcare providers had a higher level of emotional exhaustion as compared with their male counterparts. Nurses had more emotional exhaustion as compared with physicians, respiratory therapists, and other colleagues. **Conclusions:** High burnout levels among healthcare providers can reflect negatively on the healthcare providers well-being, job satisfaction, and mental health. Burnout has been linked with medical errors and physician–patient relationships. We believe that it is important to deal with this issue of public health in Saudi Arabia and UAE. This study aimed to explore burnout levels among healthcare providers in Saudi Arabia and UAE. Results showed a high level of burnout among the healthcare.

Publication Details

Predicting Burnout Factors among Healthcare Providers at Private Hospitals in Saudi Arabia and United Arab Emirates: A Cross-Sectional Study

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Abstract: Background: Burnout is defined as a long-term work stress. The prevalence of burnout syndrome among nurses is 42% of nurses in England. Many countries have conducted studies to measure the level of burnout among health care providers. There is a lack of research on burnout among healthcare providers in the Arabic countries. **Aims:** This study aimed to assess the burnout level among healthcare providers in Saudi Arabia and United Arab Emirates and to predict the burnout factors of healthcare providers working in tertiary private hospitals. **Methods:** A descriptive cross-sectional survey was used to evaluate the burnout among healthcare providers. A total of 900 healthcare providers working in the clinical areas of six private hospitals in the Arabia Gulf Region were recruited for the study. A total of 892 healthcare providers were included in the study. A total of eight surveys were excluded due to major missing data. **Results:** A total of 892 healthcare providers were included in the study. The average age was 32 years ± 7 years for male and female healthcare providers. A high burnout level was found in the results. The participating female healthcare providers had a higher level of emotional exhaustion as compared with their male counterparts. Nurses had more emotional exhaustion as compared with physicians, respiratory therapists, and other colleagues. **Conclusions:** High burnout levels among healthcare providers can reflect negatively on the healthcare providers well-being, job satisfaction, and mental health. Burnout has been linked with medical errors and physician–patient relationships. We believe that it is important to deal with this issue of public health in Saudi Arabia and UAE. This study aimed to explore burnout levels among healthcare providers in Saudi Arabia and UAE. Results showed a high level of burnout among the healthcare.

Keywords: burnout; Maslach Burnout Inventory; healthcare providers; private hospitals; Saudi Arabia; UAE

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1. Background

Burnout syndrome is a state of psychological, emotional, and physical stress that results from work-related stressors [1]. High turnover rate, absences, injuries, and medical errors are comorbid characteristics with burnout syndrome [2]. The literature has shown that healthcare providers are more vulnerable to burnout syndrome [3]. The prevalence rate of burnout among medical, radiation, and surgical oncologists is 35% [4]. There are several etiologies for burnout. Heavy workload, working

without meaning, loss of autonomy, and having less time flexibility are all factors that cause burnout syndrome [4]. A study in the US found that among 7288 physicians, 45.8% doctors had experienced some symptoms of burnout syndrome. The highest rates for experiencing burnout symptoms were among the family and emergency doctors [5]. There is a significant relationship between medical errors and burnout. In the US, around 9% of 8000 surgeons reported that they made medical errors. Burnout has been found associated with substance abuse, lack of motivation, and performance, which can lead to medical errors [6,7]. There are many factors for job dissatisfaction among inpatient nurses such as dealing with death cases and a stressful work environment [8]. Burnout is defined as a long-term work stress. Reports show that 42% of nurses in England are suffering from burnout; in Greece 44% of nurses reported that they were not satisfied with their job, and they would prefer to leave their work. A study was conducted in Brazil, and they found that 10% of the nurses had burnout, and more than 50% had the potential for the syndrome [9]. Burnout among healthcare providers in the Arab World has been found moderate to high. Anxiety, irritability, mood swings, insomnia, depression, and a sense of failure are presented as consequences of burnout [10]. In this study, we aim to explore the factors of burnout among private healthcare providers in Saudi Arabia using Maslach Burnout inventory.

2. Study Purpose

The purpose of the study was to assess the burnout level among healthcare providers in Saudi Arabia and United Arab Emirates and to predict the burnout factors of healthcare providers.

3. Design

A descriptive cross-sectional design survey was used to evaluate the burnout among healthcare providers. The study was performed on 892 healthcare providers working in the clinical areas of six private hospitals in the Arabia Gulf Region. A convenience sampling techniques was used to recruit healthcare providers from different hospitals. A minimum sample size of 630 participants was chosen to allow estimation of moderate effect size at 5% significant level with 80% power. The data collection instrument included two parts, sociodemographic and the Maslach Burnout Inventory MBI. In the sociodemographic part, participants were asked to indicate their age, gender, marital status, profession, nationality, and years of experience. The MBI measures the severity of burnout by asking the respondents to indicate on a seven-point Likert Scale which was developed by Maslach et al. (1996) [11]. The MBI consisted of 22 items and considered three dimensions as follows: emotional exhaustion, nine items; accomplishment eight items, and depersonalization, five items. Emotional exhaustion has to do with a healthcare provider's feelings of being emotionally exhausted by the work. Personal accomplishment has to do with a healthcare providers' feelings of success in work. Depersonalization has to do with a healthcare provider's response of one's service. The data collection instruments were distributed in the English language.

MBI has been used extensively in many international studies in different geographical areas. The results have shown excellent coefficient reliability, for example, the alpha coefficients were 0.83 for emotional exhaustion, 0.79 for depersonalization, and 0.74 for personal accomplishment [12]. Additionally, similar results have been found for numerous smaller studies of numerous samples recruited from different locations [13,14]. Scores of each subscale is calculated by adding up all scores of all items in the subscale. Burnout is expressed by all scores of the three subscales. Emotional exhaustion and depersonalization are positive statements while personal accomplishments are negative statements. In positive statements, higher scores indicate higher levels of burnout, whereas, in negative statements, lower scores indicate higher levels of burnout. Scores range from 0 to 36 for emotional exhaustion, from 0 to 20 for depersonalization, and from 0 to 32 for personal accomplishment subscale. A total of 1150 questionnaires were sent out to five private hospitals in Saudi Arabia and one private hospital in the UAE, 900 were returned, with a response rate of 78.2% and eight questionnaires with missing data were excluded. There was a total of 892 questionnaires in the analysis.

4. Ethical Considerations

Prior to data collection, the study obtained an IRB approval from Dr. Sulaiman Al Habib Medical Group (RC18.11.21) to conduct the study. All participants were fully informed of the nature of the study, risks and benefits, and were ensured that their participation in the study was voluntary and confidential and that they did not have to include their name.

5. Data Analysis

The questionnaires' data were entered into an excel spreadsheet and, then, were imported into Statistical Package for Social Sciences SPSS version 24 for windows. Descriptive and inferential analysis were performed using SPSS. Descriptive statistics were employed using percentage and means to analyze the participants' demographic profiles and burnout occurrence. Parametric and non-parametric methods including *t.* test, ANOVA, Mann–Whitney U test, and Kruskall–Wallis were performed based on normality, of distribution, as the sampling distributions were sometimes found irregular. In addition, Spearman Correlation tests were used between numerical data to detect the nature of the relationship.

6. Results

The age of the participating healthcare providers in the study ranged from 21 to 63 years with an average of 32 years ± 7 years. Female healthcare providers compromised 73% (655) of the participants and 231 (26.1%) were men. Married healthcare providers accounted for 381 (43.7%), while, 477 (54.7%) were single, and 14 (1.6%) were divorced. The sociodemographic characteristics of the participating healthcare providers are summarized in Table 1. The healthcare providers were recruited from six private hospitals in Saudi Arabia and United Arab Emirates. The vast majority of the participating healthcare providers were nurses 616 (69.8%), physicians 115 (12.8%), and only 18 (2%) were respiratory therapists, while, 134 (15.2%) of the total sample were other healthcare providers.

Table 1. Sociodemographic characteristics of participants (n = 892).

Characteristics	Subgroups	Frequency (%)
Age	Median (*IQR*)	32 years ± 7 years
	Max	63 years
	Min	21 years
Gender	Male	231 (26.1%)
	Female	655 (73%)
	Missing	12
Marital status	Single	477 (54.7%)
	Married	381 (43.7%)
	Divorced	14 (1.6%)
	Missing	26
Profession	Physicians	115 (12.8%)
	Nurse	616 (69.8%)
	Respiratory Therapist	18 (2%)
	Others	134 (15.2%)
	Missing	15
Nationality	Saudi	84 (9.8%)
	Non-Saudi	770 (90.2%)
	Missing	44
Years of experience	1 to 5 years	406 (45.2%)
	6 to 10 years	338 (37.6%)
	11 years and above	130 (14.5%)
	Missing	24

As indicated in Table 1, healthcare providers who participated in the current study were mainly non-Saudi 770 (90.2%) and Saudi compromised 84 (9.8%). Of the total, 406 (45.2%) participants revealed that they had work experience between one to five years, 338 (37.6%) six to ten years of working experience, and 130 (14.5%) had 11 or more years of clinical experience.

Table 2 shows the results of the burnout dimensions among participating healthcare providers. Healthcare providers were at a high level of emotional exhaustion with 34.33 ± 11.87. With regards to personal accomplishment, the data analysis showed that healthcare providers had a high level of reduced personal accomplishment including beliefs of competence and successful achievement at work 32.67 ± 8.01. Participants also experienced high levels of depersonalization 12.92 ± 7.03.

Table 2. Overall mean of burnout dimensions (n = 892).

Dimensions	Min	Max	Mean (*SD*)
Emotional Exhaustion	0	54.00	34.33 (*11.87*)
Personal Accomplishment	0	48.00	32.67 (8.01)
Depersonalization	0	30.00	12.92 (7.03)

A correlation analysis between burnout dimensions among the participating healthcare providers was computed. The results demonstrated that there was a weak correlation between personal accomplishment and emotional exhaustion ($p \leq 0.0001$, r = 0.20). A strong correlation was detected between emotional exhaustion and depersonalization ($p \leq 0.0001$, r = 0.66) among healthcare providers. Analysis also revealed that there was a weak correlation between personal accomplishment and depersonalization dimension ($p \leq 0.0001$, r = 0.23) as shown in Table 3.

Table 3. Correlation analysis between burnout dimensions (n = 892).

Dimension	Emotional Exhaustion	Personal Accomplishment	Depersonalization
Emotional Exhaustion			
p **Value**			
R **Value**			
Personal Accomplishment			
p **Value**	≤0.0001		
R **Value**	0.2		
Depersonalization			
p **Value**	≤0.0001	≤0.0001	
R **Value**	0.66	0.23	

Inferential statistics were used to detect the relationship between sample demographics and burnout utilizing parametric and nonparametric methods. Inferential analysis showed that there was a statistically significant difference in the scores of emotional exhaustion dimension for male 31.73 (13.41) and female participants 35.28 (11.11), $t(855) = 3.85$, $p \leq 0.0001$. The participating female healthcare providers had a higher level of emotional exhaustion than that of their male colleagues. There also was a statistically significant difference in the scores of emotional exhaustion for Saudi 31.30 (12.77) and non-Saudi 34.53 (11.70), $t(824) = 5.98$, $p = 0.01$. Non-Saudi healthcare providers had a higher level of emotional exhaustion than that of the Saudi healthcare providers.

An ANOVA test demonstrated that there was a statistically significant effect of profession on emotional exhaustion at the $p < 0.05$ for the nurses ($F(3, 852) = 29.85$, $p \leq 0.0001$). Nurses had more emotional exhaustion than that of their physicians, respiratory therapists and other colleagues. Nonetheless, there was a statistically significant effect of profession on personal accomplishment at $p < 0.05$ for the nurses ($F(3, 853) = 6.32$, $p \leq 0.0001$(. Nurses had more reduced personal accomplishment

than other healthcare providers and nurses scored higher on the depersonalization dimension. There was a statistically significant effect of profession on depersonalization at the $p < 0.05$ for the nurses (F (3, 847) = 13.69, $p \leq 0.0001$).

The marital status variable showed that it was a statistically significant factor of burnout among healthcare providers. There was a statistically significant effect of marital status on emotional exhaustion at $p < 0.05$ for the married participants (F (2, 841) = 5.01, $p = 0.007$) as married participants showed a higher burnout level. In addition, there was a statistically significant effect of marital status on depersonalization at the $p < 0.05$ for the married participants (F (2, 841) = 7.83, $p \leq 0.0001$).

When an ANOVA test was performed, statistically significant results were detected between burnout dimensions and participants' years of experience. Burnout was higher in healthcare providers with one to 10 years of working experience.

As illustrated in Table 4, emotional exhaustion, personal accomplishment, and depersonalization were statistically and significantly higher; $p \leq 0.0001$, $p = 0.01$, and $p = 0.002$, respectively.

Table 4. Participants' sociodemographic and burnout dimensions means comparisons (n = 892).

Variables	Burnout Dimensions					
	EE		PA		Depersonalization	
	M (*SD*) *p* Value		M (*SD*) *p* Value		M (*SD*) *p* Value	
Gender						
Male	31.73 (13.41)	$p \leq 0.0001$	32.87 (9.04)	$p = 0.71$	12.87 (7.73)	$p = 0.92$
Female	35.28 (11.11)		32.64 (7.63)		12.92 (6.76)	
Marital Status						
Single	33.14 (11.76)		33.25 (7.80)		12.15 (7.11)	
Married	35.60 (11.87)	$p = 0.007$	31.95 (8.03)	$p = 0.06$	13.70 (6.86)	$p \leq 0.0001$
Divorced	37.57 (11.91)		33.21 (11.21)		17.35 (6.69)	
Profession						
Physicians	26.89 (14.79)		35.60 (7.98)		10.26 (7.80)	
Nurse	36.65 (10.30)	$p \leq 0.0001$	32.42 (7.73)	$p \leq 0.0001$	13.91 (6.64)	$p \leq 0.0001$
RT	32.55 (8.46)		34.00 (6.54)		11.25 (6.97)	
Others	30.46 (12.17)		31.52 (8.59)		10.94 (6.89)	
Nationality						
Saudi	31.30 (12.77)	$p = 0.01$	32.09 (9.13)	$p = 0.51$	13.28 (7.68)	$p = 0.50$
Non-Saudi	34.53 (11.70)		32.69 (7.83)		12.68 (6.90)	
Experience						
1 to 5 yrs	34.72 (11.22)		32.08 (7.75)		13.26 (6.51)	
6 to 10 yrs	35.68 (11.30)	$p \leq 0.0001$	32.82 (7.89)	$p = 0.01$	13.15 (7.25)	$p = 0.002$
11 yrs and more	30.01 (13.70)		34.39 (8.41)		10.75 (7.51)	

EE, emotional exhaustion; PA, personal accomplishment; RT, respiratory therapist.

7. Discussion

In this study, burnout factors were examined in a large sample of 892 healthcare providers in Saudi Arabia and UAE, and it was shown that healthcare providers had a high percentage of burnout. To our knowledge, there are few comprehensive studies on burnout among healthcare providers in both Saudi Arabia and UAE. The results show that the median age is 32 years old, the majority of the participants were female, and around 477 (54.7%) were single. This is justified by the fact that the majority of the participants were nurses (69.8%) and non-Saudi. Saudi Arabians recruit nurses from around the world, which justifies that most of the participants (i.e., 82.8%) have fewer than 10 years of work experience.

In this study, a correlation analysis between the three burnout dimensions among the participating healthcare providers was calculated. There was a strong correlation between emotional exhaustion and depersonalization ($p \leq 0.0001$, $r = 0.66$) among healthcare providers. Previous studies have identified emotional exhaustion and depersonalization as the "core dimensions", and they have found similar

results for the correlation analysis between the two dimensions [15,16]. Personal accomplishment was found to have a weak correlation with depersonalization and emotional exhaustion dimensions, unlike a previous study that found a positive correlation between emotional exhaustion and depersonalization, but a weak negative correlation between personal accomplishment and emotional exhaustion and depersonalization [16]. Several studies have reported results that are in agreement with this study, which is that females have higher emotional exhaustion than males [17–20]. In the United States, 6000 physicians participated in a burnout study; results showed that females were 60% more likely to have burnout syndrome than males [21]. Those findings can be related to the difference in salaries between females and males, lack of social support, and lack of resources.

In our study, married participants showed a higher level of emotional exhaustion and a low level of personal accomplishment. On the one hand, the literature has shown that several studies have suggested that being married or having been married show tendencies for higher levels of emotional exhaustion [19,22,23]. On the other hand, other studies have shown that single healthcare providers score higher burnout levels than married workers [20]. In addition, studies suggest that being unmarried has a lower level of personal accomplishment and a higher level of depersonalization [24]. Evidence supports that marital status is a significant factor for burnout, and the reason behind having a high level of emotional exhaustion (EE) in married and divorced workers is the work-home stress. In other words, healthcare providers could have difficulty in managing the time and balancing their time between the occupation and the family, especially, if there are children who can be stressors for the healthcare providers. Length of experience is a significant factor for burnout, and the results showed that healthcare providers who had higher years of experience were less likely to experience emotional exhaustion and depersonalization. Previous studies have shown that older nurses with more years of experience are experiencing burnout less than younger nurses [25]. In addition, older physicians have lower levels of burnout [26]. Some studies have shown opposite results to the results in this study; older physicians scored a higher level of emotional exhaustion [24]. The results of this study showed that there can be some logical reasons why more experienced healthcare providers have less emotional exhaustion and depersonalization levels which is the ability to cope with stress and time management. Healthcare providers, with fewer years of experience, have difficulty coping with stress and workload. In this study, results showed that nurses have higher burnout levels than physicians and respiratory therapists. The sample size of nurses was significantly larger than other professions, and around 90% of the participants were not Saudi citizens, which can imply that the factors of high burnout levels among nurses are adapting to living in Saudi Arabia, workload, and work environment.

The limitations of this study are several. It is a cross-sectional study that uses the MBI-HSS, and it is important to note that the MBI-HSS is a self-reported questionnaire. Hence, results rely heavily on the subjective perception of individuals instead of defined clinical diagnosis and objective methods. The sample used in the study was comprised mostly of non-Saudi females and nurses, and this could have impacted the results obtained. In addition, the research was performed on individuals practicing in the private sector only; hence, results cannot be generalized to the entire population. Burnout syndrome has become a common research interest internationally. Since there are few researches on burnout phenomena among healthcare providers in the Arab countries, this study aimed to examine burnout among healthcare providers in Saudi Arabia and UAE. Results showed high burnout levels among healthcare providers in both of the countries, which can reflect negatively on the healthcare providers' well-being, job satisfaction, and mental health. Burnout has been linked with medical errors, and the physician–patient relationships. We believe that it is important to deal with this issue for public health in Saudi Arabia and UAE.

8. What Is Already Known about This Subject?

- High burnout level among healthcare providers was found in literature review;
- There was a lack of research on burnout among healthcare provider at private hospitals in the Arab countries.

9. What This Study Adds?

- High burnout level among Saudi and non-Saudi healthcare providers in Saudi Arabia;
- It is crucial to deal with the issue for public health in Saudi Arabia and UAE;
- Certain policies and guideline should be created to assess that healthcare providers are working with a healthy psychological state.

10. What Impact This May Have on Practice or Policy?

- If the burnout level is lower, job satisfaction will be higher which will impact on the turnover rates;
- Fewer medical errors;
- More beneficial patient care.

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