

## Original Article

# Burnout and Job Satisfaction among Healthcare Providers in Aswan University Hospital, Upper Egypt

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## Abstract

**Background & Objective(s):** Job burnout and satisfaction of healthcare providers are important elements of quality of provided health services. Aim of the study: This study aimed to assess the levels of burnout and job satisfaction as well as their correlates among healthcare providers in Aswan University Hospital.

**Methods:** A cross sectional study design was applied. Interviewing questionnaire was filled from 134 physicians and 149 nurses (total 283) working in clinical departments in Aswan University Hospital. The questionnaire included personal and job characteristics, assessment of burnout using Maslach burnout inventory (MBI), evaluation of Job satisfaction by applying short form of Minnesota satisfaction questionnaire and measurement of satisfaction with life (SWLS) and flourishing status using Diner scales.

**Results:** Proportion of high level in burnout dimensions were as follows: emotional exhaustion was 50%, low personal accomplishment was 39% and depersonalization was 33%. The mean job satisfaction score among the studied population was  $63.81 \pm 15.37$  out of 100. Increasing age was a significant predictor for emotional exhaustion. Currently unmarried significantly perceived higher emotional exhaustion and depersonalization. Higher job satisfaction scores significantly predicted low perception of emotional exhaustion and depersonalization and high personal accomplishment. The significant predictors for job satisfaction were current unmarried status, working as nurse, residing outside Aswan, age increase, high personal accomplishment score and low emotional exhaustion score.

**Conclusion:** Considerable levels of burnout were detected among healthcare providers in Aswan University Hospital. Increasing age, being originally from outside Aswan Governorate and being currently unmarried were significant correlates of burnout and job dissatisfaction.

**Recommendations:** Modification in the work nature could be conducted for old aged healthcare providers. Social support activities such as recreational activities and moral incentives, should be promoted especially for those who are unmarried and residents from outside Aswan Governorate.

**Keywords:** Burnout, healthcare providers, job satisfaction

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## INTRODUCTION

Well-being of healthcare workers is an essential pillar in health service delivery. It may affect their performance at work as well as patients' safety.<sup>(1)</sup> Burnout is one of the negative work-related health conditions among healthcare workers. It is a syndrome that might develop among professional subjects who work in human service facilities and spend considerable time in intense involvement with other people.<sup>(2)</sup>

The definition of "burnout" has been revised by various psychological schools<sup>(3)</sup> Herbert Freudenberger described

burnout terminology as subjective sensation of energy depletion and being overwhelmed with numerous issues concurrently with self-dedication and commitment in work and prove oneself<sup>(4)</sup> Maslach Burnout Inventory (MBI) defined burnout as a syndrome composed of three key elements: emotional exhaustion (EE); describes the sensation of emotional overextension resulted in fatigue and overstressed in professional life, depersonalization (DP) as consequences of impersonal interactions and separation from coworkers, and low personal accomplishment (PA) which describes failure to successful coping and decreased ability to motivation of being

productive and adequate.<sup>(3,5)</sup> Burnout might affect subjects of all age and jobs, however it is highly prevalent among healthcare providers. This could be explained by the nature of their profession that obligates the continuous and intense contact with individuals receiving care,<sup>(6)</sup> exposure to occupational stressors as time pressure, excess workload, unfairness, presence of interpersonal conflicts, doubt about patient treatment decisions, and exposure to patients' suffering and death.<sup>(7,8)</sup> Other factors have been related to burnout including age, gender, working duration and type of health institution.<sup>(9)</sup>

A systematic review explored burnout prevalence in 182 studies among healthcare workers in 45 countries published between 1991 and 2018. It showed substantial inconsistency in burnout prevalence; where prevalence for each of its three main components ranged from 0% to up to nearly 90%.<sup>(10)</sup> In Egypt, levels of burnout among healthcare providers at emergency department in Tanta University Hospital in 2016 were as follows: EE was nearly 47%, depersonalization was 14.4%, while the majority (97.7%) of physicians and nurses felt high personal accomplishment.<sup>(11)</sup> The residence physicians in Suez Canal University Hospital in 2013, experienced higher burnout levels, where the EE percentage was 81% and depersonalization was 64%, while personal accomplishment was low and represented about 17%.<sup>(12)</sup> Burned-out healthcare providers are more liable to make wrong medical decisions, deal with patients in a hostile manner, and have poor relations with their co-workers. Burnout among healthcare workers increases the probability to develop depression, anxiety, disturbed sleep, tiredness, alcohol and drug abuse, marital dysfunction, premature retirement and perhaps most seriously suicide.<sup>(13)</sup>

Concurrently, Job satisfaction of healthcare workers is a key issue in health establishments. It affects the effectiveness and efficiency of subject's work in health organization.<sup>(14)</sup> Job dissatisfaction has negative consequences on the structure and work flows. It contributes to deteriorate mental and physical health, decrease work productivity, increase workers' absenteeism and turnover, and upsurge intra-organizational conflict.<sup>(15)</sup> Lack of job satisfaction among healthcare workers could be attributed to work stress, work-family conflict, unsatisfactory income, doctor-patient relationship and some personal factors.<sup>(16)</sup>

Aswan University Hospital has been recently established with the construction of the Faculty of Medicine in Aswan Governorate, Egypt in 2013. It serves patients from all over Aswan Governorate. The hospital comprises 33 clinical departments and 23 units in all the specializations. Instead of transferring patients to University hospitals in Cairo or Assiut Governorates, the patients can receive specialized qualified services in Aswan. According to the statistics of the hospital emergency facilities, patient transferring for receiving treatment outside Aswan has been decreased to less than

5%. In order to fulfill the requirements of being a university hospital, all current working physicians were recruited with certain academic and clinical qualifications either from Aswan Governorate itself or outside.<sup>(17)</sup> This study aimed to assess the levels of burnout and job satisfaction, and their correlates among healthcare providers in Aswan University Hospital.

## METHODS

A cross sectional design was used. Studied population included healthcare providers working in clinical departments in Aswan University Hospital. Resident physicians and assistant lecturers were only included. The total number of nurses and selected physicians were 326, and those who agreed to participate in the study amounted to 283 (134 physicians and 149 nurses) with response rate 86%. Data were collected from May to July 2017 by researchers themselves using an interviewing questionnaire which included:

1. Personal and job characteristics such as age, gender, original residence either from Aswan Governorate or outside, marital status, years of working, smoking status, job type either physician or nurse, average hours worked daily, and average work shifts per week.

2. Maslach burnout inventory (MBI) was used for assessment of perceived burnout.<sup>(5)</sup> It is composed of standard 22 items divided on three subscales; the emotional exhaustion (EE) subscale which includes 9 items, five items in the depersonalization (DP) subscale and the diminished personal accomplishment (PA) subscale which includes 8 items. Each item has 7 points rating scale ranging from 0 to 6 points (0= never, 1= few times a year or less, 2= monthly or less, 3= few times a month or less, 4=every week, 5= few times a week, to 6 = every day). In each subscale, the participant answers were scored, the healthcare worker was classified as having low, moderate, or high level of burnout. High level of burnout was considered if EE was  $\geq 27$ , PA was  $\leq 21$ , and DP was  $\geq 13$ ; moderate if EE was 17-26, PA was 38-22, and DP was 7-12; and low if EE was  $\leq 16$ , PA was  $\geq 39$ , and DP was  $\leq 6$ .<sup>(18, 19)</sup> The English version of the scale was translated into Arabic by the researchers, then it was revised by a psychologist and linguistic consultant.

3. Job satisfaction was assessed using the short form of Minnesota satisfaction questionnaire – validated Arabic version. It consists of 20 questions with 5-point Likert scale. Based on participants' answer, scoring of each question was as follows: 1 = Very dissatisfied, 2= dissatisfied, 3= neither/ I can't decide, 4= satisfied, 5=very satisfied. The total job satisfaction score ranged from 20 to 100, and higher scores indicated higher level of job satisfaction.<sup>(20, 21)</sup>

4. Statuses of respondents' satisfaction with life (SWLS) and flourishing were measured using Diener and his co-authors scales- validated Arabic versions. SWLS is a short 5-item instrument designed to assess general cognitive

judgments of subject satisfaction with his/her life. While flourishing scale composed of 8-items measuring participant's self-perceived functioning in important areas as relationships, self-esteem, purpose, and optimism subscales, the response of each item scored from 1 to 7 points categorized from strongly disagree to strongly agree. (22, 23)

**Pilot study:** Before starting to collect final data, a pilot study was carried out among 10 healthcare personnel (5 nurses and 5 physicians) in Aswan General Hospital - El Sadaka Hospital, which is not the study setting. No modifications were conducted in the questionnaire and these collected data were not included in the analysis.

#### Data management and statistical analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS), version 19.0 for Windows. (24) Quantitative data were expressed as mean and standard deviation, while frequencies and percentages summarized qualitative data. Reliability was assessed for used scales, Cronbach's  $\alpha$  value for the main MBI scale was 0.829, for the emotional exhaustion subscale was 0.887, for the depersonalization subscale was 0.768, and for the diminished personal accomplishment subscale was 0.891. For Minnesota satisfaction scale, Cronbach's  $\alpha$  value was 0.912. Chi square test was used to compare difference between two proportions. Based on testing normality for

quantitative data, Mann Whitney test and Spearman correlation were used to compare difference of means between two groups and test variables' correlation. To identify predictors for MBI subscales and job satisfaction, four multivariable linear regression models (enter method) were conducted. P value less than 0.05 was considered as significance cut off point for all applied statistical tests.

#### Ethical considerations

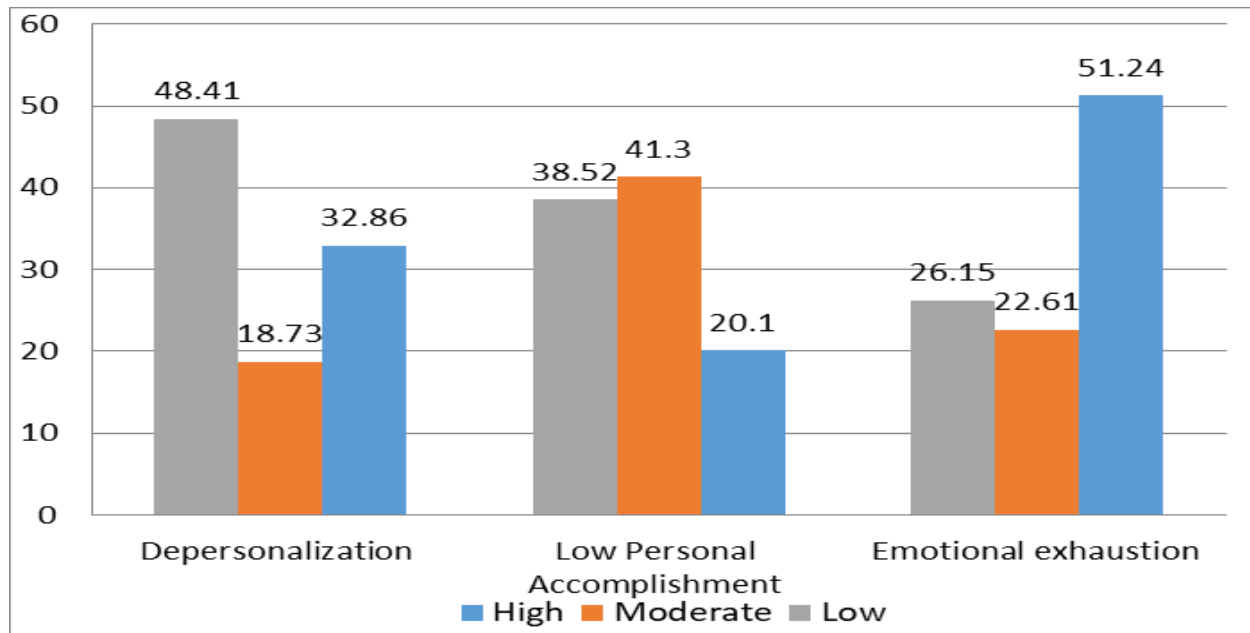
The procedures of the present study were reviewed and approved by the Medical Ethics Review Committee of Aswan University. Administrative approval of Aswan University hospital was taken for conducting the research. The study conformed to the international guidelines of research ethics and that of declaration of Helsinki. All ethical considerations were assured including obtaining informed verbal consent, voluntary participation and maintenance of participants' privacy and confidentiality.

## RESULTS

Table 1 shows the criteria of the studied sample, where mean age of the studied subjects was  $32.31 \pm 9.44$  years. Males constituted 43.5% of them. Currently married represented slightly more than half (52.7%) of the studied participants. About one third of healthcare providers were residing outside Aswan governorate.

**Table 1: Personal and job characteristics of the studied health care providers in Aswan University Hospital, 2017**

Personal and Job Characteristics	Health Care Providers (n=283)	
	No.	(%)
Age (Mean± SD)	32.31±9.44	
<b>Type of job</b>		
Physician	134	(47.4)
Nurse	149	(52.6)
<b>Gender</b>		
Male	123	(43.5)
Female	160	(56.5)
<b>Marital status</b>		
Single	119	(42.0)
Married	149	(52.7)
Widow	5	(1.8)
Divorced / separated	10	(3.5)
<b>Residence</b>		
Aswan governorate residents	192	(67.8)
From outside Aswan	91	(32.2)
<b>Smoking status</b>		
Yes	39	(13.8)
No	240	(84.8)
Ex -smoker	4	(1.4)
<b>Duration of work in years (Mean± SD)</b>	10.25 ±10.86	
<b>Number of working hours / day (Mean± SD)</b>	11.34±6.68	
<b>Number of shift per week (Mean± SD)</b>	3.93 ±2.091	



**Figure 1: The levels of burnout among health care providers in Aswan University Hospital, 2017**

Figure 1 and 2 portray levels of burnout among studied population. Nearly half (51.2%) of the studied healthcare providers perceived high level of emotional exhaustion, while low personal accomplishment was perceived by about 39% of the studied subjects. High level of depersonalization was observed in about one third (32.86%) of healthcare providers. High emotional exhaustion among physician was about 60% compared to 43.6% among nurses ( $p=0.001$ ). Physician perceived low

personal accomplishment (10.4%) less than nurses (28.9%) ( $p< 0.001$ ). On the other hand, physicians were highly depersonalized (38%) more than nurses (27.5%) ( $p= 0.001$ ). Table 2 shows that perceived emotional exhaustion, personal accomplishment and job satisfaction scores were significantly higher among physicians compared to nurses. Depersonalization score was higher among physicians in comparison to nurses. However, this difference was not significant.

**Table 2: Burnout and job satisfaction among the studied health care providers in Aswan University Hospital, 2017**

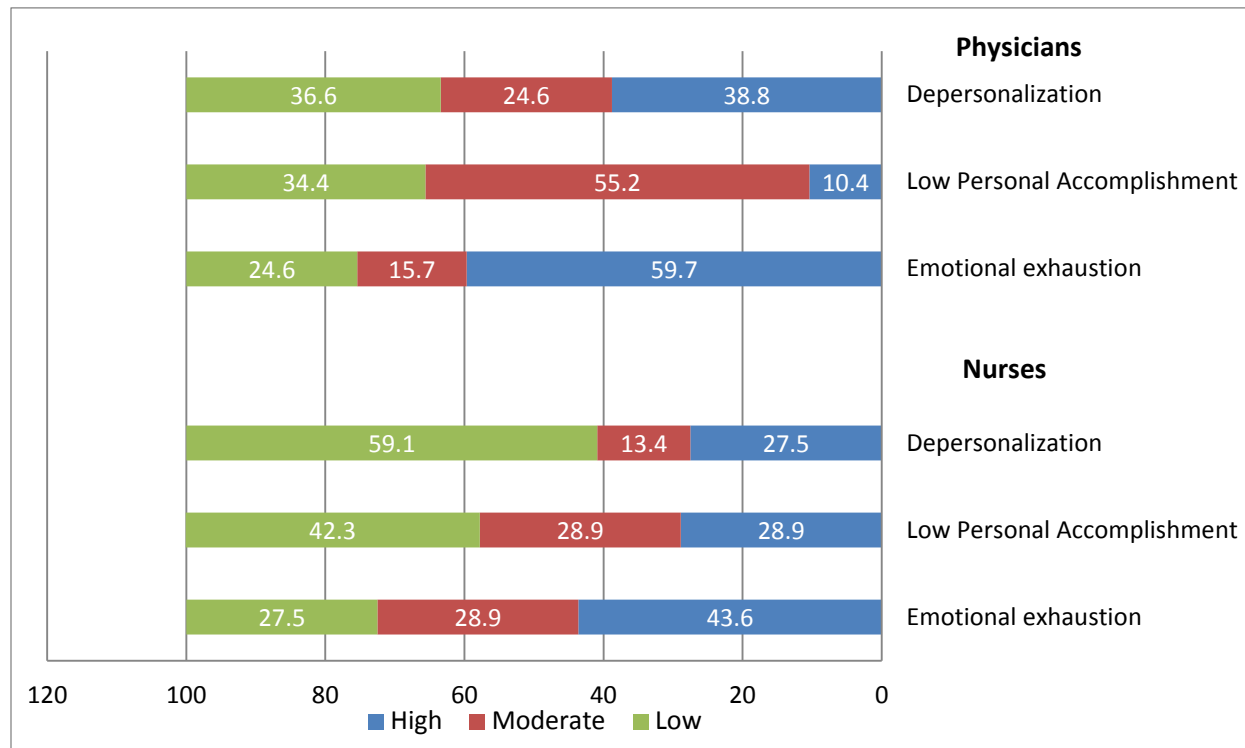
variable	Total (n=283)	Physician (n=134)	Nurse (n=149)	P value
<b>Burnout subscales (Mean± SD)</b>				
Emotional exhaustion	28.00±15.51	31.17±16.03	25.14±14.47	0.001*
Depersonalization	8.97±7.84	10.23±6.98	7.84±8.41	0.867
Personal accomplishment	32.33±13.61	33.49±10.38	31.29±15.92	0.001*
<b>Minnesota satisfaction scale (Mean± SD)</b>	<b>63.81±15.37</b>	<b>60.90±13.48</b>	<b>66.43±16.50</b>	<b>0.012*</b>

Mann Whitney test was applied

\* Significant difference between physicians and nurses

Table 3 shows the correlations between burnout subscales and job satisfaction with age, work duration, daily work hours, life satisfaction and flourishing scales. Age and work duration were significantly positively correlated with personal accomplishment and job satisfaction and significantly negatively correlated with depersonalization while no significant correlations were detected with emotional exhaustion. Life satisfaction and flourishing

scales were significantly negatively correlated with emotional exhaustion and depersonalization, while a significant positive correlation was observed between personal accomplishment and job satisfaction. Number of shifts was not correlated with job satisfaction or any of burnout subscales ( $p>0.05$ ). Daily workhours were significantly positively correlated with depersonalization ( $r=0.160$ ,  $p=0.007$ )



**Figure 2: Distribution of levels of burnout by type of job in Aswan University Hospital, 2017**

**Table 3: Table 3. Correlation of burnout and job satisfaction with personal criteria, life satisfaction and flourishing among health care providers in Aswan University Hospital, 2017**

	Emotional exhaustion		Personal accomplishment		Depersonalization		Minnesota satisfaction scale	
	r	P value	r	P value	r	P value	r	P value
Age (years)	-0.006	0.914	0.130	0.028*	-0.179	0.003*	0.125	0.035*
Duration of work (years)	-0.083	0.163	0.132	0.026*	-0.226	*P < 0.001	0.190	0.001*
Work hours per day	0.086	0.147	0.047	0.430	0.160	0.007*	-0.044	0.465
Number of shifts	0.083	0.166	-0.053	0.375	0.055	0.358	-0.054	0.364
Satisfaction of life	-0.431	< 0.001*	0.252	< 0.001*	-0.194	0.001*	0.484	< 0.001*
Flourishing scale	-0.332	< 0.001*	0.295	< 0.001*	-0.351	P < 0.001*	0.570	< 0.001*

Spearman correlation was applied \*Significant correlation was detected

Table 4 and 5 describe the predictors of burnout subscales and job satisfaction among studied healthcare providers. Age increase, current unmarried status and low job satisfaction score were significantly associated with the increase of emotional exhaustion perceptions, while gender, residence and job type had no significant impact. For personal accomplishment, job satisfaction was the only significant predictor (B= 0.282, p=0.000).

Healthcare workers who were currently unmarried, from outside Aswan Governorate and those who had low job satisfaction scores were significant predictors for depersonalization sensation (p<0.05). The significant predictors for job satisfaction were age increase, being currently unmarried, residing outside Aswan, working as nurse, and having low emotional exhaustion and high personal accomplishment scores.

**Table 4: Predictors of burnout among healthcare providers in Aswan University Hospital, 2017**

Variable	Emotional exhaustion		Personal accomplishment		Depersonalization	
	R square= 0.213		R square= 0.136		R square= 0.174	
	F=12.468		F=7.216		F=9.715	
	$\beta$	P Value	$\beta$	P Value	$\beta$	P Value
<b>Age</b>	0.247	0.019	0.122	0.206	0.036	0.511
<b>Gender</b> (females)	2.806	0.140	-0.507	0.772	1.426	0.148
<b>Marital status</b> (single, divorced/ separated)	6.496	0.001	0.770	0.668	4.750	< 0 .001
<b>Job</b> (physician)	3.906	0.068	2.884	0.142	0.248	0.823
<b>Residence</b> (from outside Aswan)	1.977	0.331	2.718	0.147	2.231	0.035
<b>Minnesota</b> satisfaction scale	-0.403	< 0 .001	0.282	< 0 .001	-0.141	< 0 .001

Adjusted linear regression models

Reference groups males, current married, nurse, and Aswan governorate residence

**Table 5: Predictors of job satisfaction among health care providers in Aswan University Hospital, 2017**

Variable	Minnesota satisfaction scale	
	R square= 0.317	
	F=15.877	
	$\beta$	P Value
<b>Age</b>	0.274	0.005
<b>Gender</b> (females)	-2.640	0.135
<b>Marital status</b> (single, divorced/ separated)	6.589	< 0 .001
<b>Job</b> (physician)	- 6.885	< 0 .001
<b>Residence</b> (residing outside Aswan)	4.077	0.032
<b>Emotional exhaustion</b>	-0.302	< 0 .001
<b>personal accomplishment</b>	0.281	< 0 .001
<b>Depersonalization</b>	-0.197	0.095

Adjusted linear regression model

Reference groups males, currently married, nurse, and Aswan governorate residence

## DISCUSSION

Burnout is a negative consequence of prolonged exposure to job stress.<sup>(25)</sup> The nature of work in healthcare field involves unique job factors and duties that make health providers more likely to develop significant burnout.<sup>(26)</sup> Healthcare providers' burnout has a negative effect on quality of healthcare; it should be addressed as a part of improving services of patient care.<sup>(27)</sup> Concurrently, Job satisfaction is a basic determinant of the productivity and efficiency of health workforce<sup>(28)</sup>, the quality of healthcare may be decreased if health workers are not satisfied.<sup>(14)</sup>

The present study revealed considerable levels of burnout either among total studied population or specifically among nurses or physicians group. Highly emotionally exhausted represented about 50% among the studied health providers; among physician were 59.7%, while among nurses were 43.6%. Those who perceived reduced personal accomplishment were 39% as overall; nurses were 42.3% while physicians were 34.4%. High level of depersonalization was detected in nearly 33% of the whole

studied group and higher among physician (38.8%) than nurses (27.5%). Compared to other Egyptian studies, lower proportions of burnout in all its subscales were reported among both physician and nurses at emergency department in Tanta University Hospital in 2016, except higher EE percentage (52.8%) was observed among nurses.<sup>(11)</sup> In Suez Canal University Hospital in 2013, the residence physicians were extremely burned out where high EE percentage was 81% and highly DP were 64%. However low PA represented about 17%.<sup>(12)</sup>

Burnout prevalence reported by studies in Arab countries showed great variability.<sup>(28)</sup> In comparison to current findings, burnout was higher among Lebanese and Jordanian nurses.<sup>(29,30)</sup> Multinational nurses in Saudi Arabia in 2010 showed nearly similar EE findings, while proportions of low PA (40.5%) and DP (42%) were much higher than the current study. This may be due to working in a foreign country.<sup>(31)</sup> In 2010, a cross-sectional study among Yamani physicians from four hospitals in Sanaa' City revealed high burnout levels as follow: EE was 63.2%, DP was 19.4%, while diminished PA was 33%.<sup>(32)</sup>

Compared to the present study, lower levels of burnout were generally recorded by Ecuadorian health professionals, and Spanish and Turkish oncologists.<sup>(33, 34)</sup> A national American study in 2012, explored burnout among 27,276 US physicians from all specialties. The study found that 37.9% of US physicians had high EE grade, 29.4% had high DP, and 12.4% had a diminished PA sensation.<sup>(35)</sup> The variability in burnout could be attributed to different factors such as the country of origin, the nature of the healthcare organization, work aspects as job hierarchy and work load, sociodemographic criteria and personality features.<sup>(36)</sup>

As regards the role of some sociodemographic criteria as predictors of burnout among healthcare providers, in the current study, increasing age significantly increased the perception of EE ( $\beta = 0.247$ ,  $p=0.019$ ), while it has no significant impact on DP or PA ( $p > 0.05$ ). Increase in age was significantly associated with high burnout scale among Tanta University Hospital providers ( $t= 5.097$ ,  $p= 0.001$ )<sup>(11)</sup> and PA perception among Lebanese nurses (30 years and plus vs 20 – 29 years,  $\beta =3.55$ ,  $p= 0.01$ ).<sup>(29)</sup> Among French critical team members in 2017, no significant difference regarding age was detected between burned-out healthcare providers and non-burned ones.<sup>(37)</sup> Gender in the present study was not a significant predictor in all burnout subscales. This result was consistent with other studies.<sup>(29, 37, 38)</sup> However, female Jordanian nurses were significantly less risky to develop emotional exhaustions than males.<sup>(30)</sup>

Currently unmarried staff in the present study were significantly more highly emotionally exhausted and depersonalized than married ones. In accordance with these findings, high burnout perception was found among single Chinese and Jordanian nurses compared to married nurses.<sup>(30, 39)</sup> In 2009, the single physicians at Turkish oncology department reported significantly high EE and DP compared to married physicians.<sup>(5)</sup> However, marital status was not significantly associated with burnout syndrome in French<sup>(37)</sup> and Ecuadorian healthcare professionals.<sup>(33)</sup>

Physicians had significantly higher means of EE and PA compared to nurses. However, adjusted regression models for burnout subscales revealed that job type was not a significant predictor in any of them. Other studies reported the absence of significant differences between physicians and nurses in burnout perception<sup>(5, 33, 38)</sup> Comparing proportion of burnout among Egyptian healthcare workers in Tanta university hospital, high EE and diminished PA were higher among nurses while physicians were significantly more depersonalized.<sup>(11)</sup> Working away from home country may significantly affect burnout perception. Non-Kuwaiti physicians had a significantly higher DP score ( $28.5 \pm 26.4$ ) compared to Kuwaiti ones ( $13.2 \pm 15.2$ ) ( $p \leq 0.001$ ). EE and PA were significantly higher among Non-Kuwaiti physicians ( $p \leq 0.001$ ).<sup>(40)</sup> However, the country of origin had no significant impact on any of the burnout aspects among

Lebanese nurses ( $p > 0.05$ ).<sup>(29)</sup> In the current study, healthcare providers originally not from Aswan perceived higher DP compared to those originally from Aswan ( $\beta = 2.231$ ,  $p=0.035$ ). Other burnout dimensions were not significantly associated with the origin of the healthcare workers.

There is an inverse relationship between job satisfaction and the experienced burnout.<sup>(41)</sup> In the present study, diminished Job satisfaction significantly increased risk for both EE and DP, while job satisfaction positively predicted higher PA scores. These findings were consistent with that among Dutch medical specialists where low job satisfaction was a predictor of EE (OR= 3.02, 95% CI 2.39–3.81), and DP (OR =2.07, 95% CI 1.69–2.55), and specialists with higher job satisfaction had a significantly higher odds ratio for PA (OR = 2.28, 95% CI 1.86–2.80).<sup>(42)</sup> Similarly, among Norwegian ICU health team in 2013, job satisfaction negatively predicted high EE scores in both simple ( $\beta = -0.02$ , 95% CI -0.03 to -0.01) and multivariate linear regression ( $\beta = -0.01$ , 95% CI -0.02 to -0.01).<sup>(38)</sup>

On the other hand, regarding burnout dimensions as predictors for job satisfaction, those with high EE score were significantly more likely to have low job satisfaction scores, and the opposite was observed with PA. DP was not a risk factor for decreased job satisfaction although a significant correlation was detected. These findings were in accordance to those reported in 2017 among Turkish health professionals in emergency department where EE was negatively associated with overall job satisfaction ( $\beta = -0.433$ ,  $p < 0.000$ ), while DP and PA showed no significant association with the overall job satisfaction dimensions.<sup>(43)</sup>

Regarding other predictors of Job satisfaction, there was a variation on the reported role of age in job satisfaction. Job satisfaction significantly increased with being older in the current study. In a Norwegian study that explored the significant work domains for job satisfaction among healthcare staff, age was negatively associated with Job satisfaction among doctors ( $\beta = -0.13$   $P = 0.01$ ), while among nurses it had no significant impact ( $\beta = 0.03$ ,  $P = 0.33$ ).<sup>(44)</sup> Similarly, age had no significant impact among Ethiopian nurses<sup>(45)</sup> and Turkish physicians.<sup>(43)</sup>

The absence of a significant difference between males and females in job satisfaction was detected in the current study and other studies.<sup>(43, 45, 46)</sup> For marital status, currently unmarried in the present study were significantly more satisfied compared to married ones. However, reported marital status had no significant role among Resident physicians in Assiut University Hospital, Egypt<sup>(47)</sup>, Spanish staff at emergency department,<sup>(48)</sup> Vientiane and Iranian healthcare workers.<sup>(14, 46)</sup> In healthcare organizations, dissatisfaction is more likely to be perceived by those who provide inferior services.<sup>(49)</sup> In Intensive Care Unit, Norwegian physicians reported significantly high job satisfaction scores compared to nurses.<sup>(38)</sup> On the contrary, physicians were significantly less satisfied with their job compared to nurses in a Chinese study<sup>(16)</sup> and in the present study ( $\beta = - 6.885$ ,  $p=0.000$ ).

Migrant healthcare workers experience various difficulties in their work, which might impact the quality of patient care and perceived job satisfaction.<sup>(50-52)</sup> Inconsistent findings were reported by the present study, where residents from outside Aswan Governorate were significantly more satisfied with their job compared to those originally from Aswan Governorate ( $\beta = 4.077$ ,  $p=0.032$ ). In fact, Aswan is an Egyptian Governorate, so healthcare workers were not from a foreign country or spoke a different language, which could explain the contradictory findings.

The results of the current study have certain limitations. First, physicians with higher academic degree were not included due to their limited number and that most of them worked as part-time, a fact related to their official mandate from other Egyptian Universities. Second, the study did not explore the role of specialty and department type in burnout and job satisfaction of healthcare providers which should be investigated in further studies.

### CONCLUSION AND RECOMMENDATIONS

Considerable level of burnout was detected among overall healthcare providers and specifically nurses and physicians. Nurses were more satisfied with their jobs than physicians. Job burnout and satisfaction were contradictory interactive domains of healthcare providers.

As a part of ensuring quality of provided healthcare, predictors of burnout and job dissatisfaction should be mitigated. In the present study, increasing age, unmarried social status and being from outside Aswan governorate were detected as risk factors of burnout. Responsibilities of work could be modified to fit increasing age of healthcare workers. More social support activities should be launched for healthcare providers who are unmarried and those residing outside Aswan Governorate. Minimizing perceived burnout among health workers would raise their job satisfaction and vice versa.

**Conflict of Interest:** None to declare.

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