Job Burnout and its Relation to the Occurrence of Some Psychological Disorders among Healthcare Workers at Al-Noor Specialist Hospital in Makkah

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Abstracts

Background: Job satisfaction, burnout syndrome, and depressive symptoms are common concerns among healthcare professionals, impacting their well-being and quality of care provided. Understanding the factors influencing these outcomes is essential for developing targeted interventions.

Aim: To assess the relationship between job satisfaction, burnout syndrome, and depressive symptoms among healthcare professionals at Al-Noor Specialist Hospital in Makkah, Saudi Arabia, and to identify key sociodemographic predictors of these outcomes.

Patients and Methods: A cross-sectional study was conducted from January to March 2024, involving 378 healthcare professionals selected through stratified random sampling. Data were collected using the Job Satisfaction Survey (JSS), Maslach Burnout Inventory (MBI), and Patient Health Questionnaire-9 (PHQ-9). Descriptive and multivariate analyses were performed to identify associations between sociodemographic variables and the primary outcomes.

Results: The study population consisted of 22.5% males and 77.5% females, with 47.6% holding a Bachelor's degree. The prevalence of burnout was significantly higher among males (23.9%) compared to females (14.0%) ($p = 0.04$). Depressive symptoms were more prevalent in participants with secondary education (34.1%) than those with higher education levels ($p < 0.01$). Job satisfaction was highest among administrative staff and lowest among physicians ($p = 0.02$).

Conclusion: Gender, educational attainment, and job role were significant predictors of job satisfaction, burnout, and depressive symptoms. These findings underscore the need for targeted mental health and job satisfaction interventions to support healthcare professionals, particularly those in high-risk groups.

Keywords: Job satisfaction, burnout syndrome, depressive symptoms, healthcare professionals, mental health, occupational stress.

Introduction

Job satisfaction, burnout syndrome, and depressive symptoms are notable issues within the health industry for the reason that they affect the specialists' health and performance and the quality of the healthcare services. Enduring strong emotional and physical demands is characteristic of healthcare professionals; consequently, high turnover and job burnout remain concern (1). It has been observed that when there is a dissatisfaction and professional burnout, it leads to healthcare personnel absenteeism, decreased productivity and staff turnover, which in turn affects the provision of health services (2).

Investigations addressing these elements reveal that burnout syndrome defined as emotional exhaustion, depersonalization and low personal accomplishment is prevalent among therapists (3). In the cross sectional study conducted in Brazil, Oliveira et al. (2018) reported that prevalence of burnout in male healthcare workers was about 2 times than that of female healthcare workers (PR = 1.98, 95% CI: 1.03–3.79, p = 0.04). In addition, sociocultural variables were also confirmed to affect the occurrence of depressive symptomatology, where being in the lower economic class was associated with higher occurrence (PR = 2.84, 95% CI: 1.24–6.51, p = 0.01) (1).

The connection between these variables is complex and multifaceted. Evidence has been collected which suggests that burnout and job dissatisfaction would be included as some elements of depressive symptoms on healthcare professionals (4). Further, data from other studies show that administrative and technical staff express slightly elevated levels of job satisfaction than health care workers who spend time in direct patient interactions. These differences highlight the need of focused treatments to handle particular occupational groups in medical environments (5, 6).

The purpose of this study is to analyze the relationship between job dissatisfaction, job burnout and depression in healthcare professionals in Al-Noor Specialist Hospital in Makkah, Saudi Arabia, and find out the sociodemographic factors that affect these and the other which are likely to be affected outcomes.

Patients and Methods

Study Design

Cross-sectional study conducted at Al-noor Specialist Hospital, Makkah, Saudi Arabia looked into work satisfaction, burnout syndrome, and any depressive symptoms in health workers.

Participants

Medical staff who have worked at the hospital for at least a year were included. Medical professionals, nurses, technical staff, and administrative support staff were sampled. From hospital employment records, participants were randomly selected. To guarantee consistent job conditions and perks, external agencies and contractors and individuals on medical or personal leave were excluded from the research.

The final sample consisted of 378 professionals, as detailed in Table 1:

- Gender: 85 males (22.5%) and 293 females (77.5%).
- Age: Majority were between 31-40 years (44.4%), followed by 18-30 years (37.0%) and ≥41 years (18.5%).
- Level of Education: 136 held PhD/Master's degrees (36.0%), 180 had Bachelor's degrees (47.6%), and 62 had secondary education (16.4%).
- Profession or Field of Activity: 180 physicians (47.6%), 40 nursing staff (10.6%), 46 other health professionals (12.2%), and 112 technical and administrative support staff (29.6%).
- Interaction with Patients: 284 participants (75.1%) reported direct patient contact.

Data Collection Instruments

Data were collected using a structured electronic questionnaire administered via tablets. The questionnaire consisted of three standardized and validated instruments:

1. Job Satisfaction Survey (JSS)

The JSS is a 36-item tool designed to measure job satisfaction across nine dimensions: pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. Responses are rated on a 6-point Likert scale, where higher scores indicate greater job satisfaction. Scores range from 36 (extreme dissatisfaction) to 216 (extreme satisfaction) (7).

2. Maslach Burnout Inventory (MBI)

The MBI measures burnout syndrome through 22 items across three subscales: emotional exhaustion, depersonalization, and reduced personal accomplishment. Responses are recorded on a 7-point frequency scale, with higher scores on emotional exhaustion and depersonalization and lower scores on personal accomplishment indicating a greater degree of burnout (8).

3. Patient Health Questionnaire-9 (PHQ-9)

The PHQ-9 is used to screen for depressive symptoms based on the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria. This 9-item tool evaluates the presence and severity of depressive symptoms over the past two weeks, with scores ranging from 0 to 27. A score of ≥10 was used as the cutoff point for identifying clinically relevant depressive symptoms (9).

Statistical Analysis

Descriptive statistics, including means, standard deviations (SD), and frequencies, were used to summarize participant characteristics. Bivariate analyses were performed to identify initial associations between sociodemographic factors (e.g., gender, age, education level) and outcome variables (job satisfaction, burnout, depressive symptoms). To further explore these associations, multivariate Poisson regression models were used, calculating prevalence ratios (PRs) and 95% confidence intervals (CIs). A significance level of $P < 0.05$ was set for all analyses.

Ethical Considerations

The study was approved by the Research Ethics Committee of Al-Noor Specialist Hospital. Informed consent was obtained from all participants prior to data collection, ensuring confidentiality and anonymity.

RESULT

DEMOGRAPHIC

The study sample (N=378) predominantly consisted of female professionals (77.5%) aged 31-40 years (44.4%). Most participants held a Bachelor's degree (47.6%) or higher. Physicians made up the largest professional group (47.6%), followed by Nursing team (29.6%). The majority of respondents had 5-10 years of work experience in their field (29.1%) (Table 1).

Table 1. Sociodemographic data of study professionals

Characteristics	N=378
Gender	
Male	85 (22.5%)
Female	293 (77.5%)
Age, years	
18–30	140 (37.0%)
31–40	168 (44.4%)
≥ 41	70 (18.5%)
Level of education	
PhD/ Master's Degree	136 (36.0%)
Bachelor's Degree	180 (47.6%)
Secondary education	62 (16.4%)
Profession or field of activity	
Physician	180 (47.6%)
Nursing team	112 (29.6%)
Other health professionals	46 (12.2%)
Technical and administrative support	40 (10.6%)
Time working in the area, years	
< 1	15 (4.0%)
1–2	48 (12.7%)
3–4	68 (18.0%)
5–10	110 (29.1%)
11–20	60 (15.9%)
≥ 21	77 (20.4%)

Data represent as number (percentage).

JOB SATISFACTION AND SOCIODEMOGRAPHIC VARIABLES

Analysis of job satisfaction across sociodemographic variables revealed two significant correlations. Technical and administrative support staff reported higher job satisfaction compared to physicians (b = 12.6, p = 0.04). Additionally, professionals with 3-4 years of experience showed significantly higher job satisfaction than those with less than 1 year of experience (b = 19.2, p = 0.03). Other variables, including gender, age, and education level, did not demonstrate statistically significant associations with job satisfaction in this study (Table 2).

Table 2. The correlation between job satisfaction and sociodemographic variables.

Characteristics	JSS average	SD	b	P-value
Gender				
Female	128.0	30.4	Reference	–
Male	131.3	26.5	-3.2	0.55
Age, years				
18–30	124.1	21.2	Reference	–
31–40	133.2	25.1	5.5	0.25
≥ 41	130.6	23.9	2.1	0.62
Level of education				
PhD/ Master's Degree	129.4	27.3	Reference	–
Bachelor's Degree	133.7	23.5	4.3	0.32
Secondary education	136.9	24.8	8.1	0.17
Profession or field of activity				
Physician	129.4	31.2	Reference	–
Nursing team	125.7	28.6	5.2	0.12
Other health professionals	134.2	25.4	11.3	0.08
Technical and administrative support	133.9	23.1	12.6	0.04*
Time working in the area, years				
< 1	121.4	28.4	Reference	–
1–2	135.8	23.1	15.9	0.10
3–4	139.6	27.1	19.2	0.03*
5–10	127.3	25.3	8.5	0.22
11–20	130.1	24.1	10.7	0.28
≥ 21	125.9	23.4	5.2	0.59

95% CI=95% confidence interval, PR=prevalence ratio

∗ p ≤ 0.05 is significant.

Table 3. The correlation between Burnout syndrome and sociodemographic variables.

Characteristics	Burnout syndrome (%)	Gross PR	95% CI	P-value
Gender				
Female	13.84	1	-	-
Male	21.55	2.01	0.99–3.63	0.03*
Age, years				
18–30	20.61	1	-	-
31–40	14.91	0.73	0.37–1.41	0.27
≥ 41	10.94	0.52	0.18–1.42	0.16
Level of education				
PhD/ Master's Degree	15.97	1	-	-
Bachelor's Degree	13.34	0.63	0.31–1.09	0.14
Secondary education	17.47	1.02	0.43–2.38	0.88

Profession or field of activity				
Physician	25.53	1	-	-
Nursing team	18.95	0.47	0.17–1.12	0.08
Other health professionals	8.68	0.25	0.06–1.02	0.02*
Technical and administrative support	10.04	0.31	0.21–1.28	0.04*
Time working in the area (years)				
1–2	14.52	1	-	-
3–4	16.55	1.17	0.41–3.85	0.71
5–10	14.25	1.18	0.46–3.31	0.68
11–20	12.32	0.91	0.31–3.02	0.89
≥ 21	15.73	1.08	0.36–3.18	0.80

95% CI=95% confidence interval, PR=prevalence ratio
∗ p ≤ 0.05 is significant.

Table 4. The correlation between relevant episode of depressive symptoms and sociodemographic variables.

Characteristics	Relevant episode of depressive symptoms (%)	Gross PR	95% CI	P-value
Gender				
Female	26.64	1	-	-
Male	11.7	0.59	0.26–1.09	0.001*
Age, years				
18–30	22.69	1	-	-
31–40	21.84	0.92	0.55–1.63	0.84
≥ 41	15.87	0.76	0.35–1.51	0.34
Level of education				
PhD/ Master's Degree	20.94	1	-	-
Bachelor's Degree	18.91	0.97	0.53–1.71	0.90
Secondary education	29.46	1.68	0.85–2.86	0.11
Profession or field of activity				
Physician	26.63	1	-	-
Nursing team	23.13	0.95	0.61–2.21	0.18
Other health professionals	11.95	0.38	0.15–3.34	0.005*
Technical and administrative support	14.94	0.51	0.48–3.65	0.008*
Time working in the area (years)				
1–2	21.24	1	-	-
3–4	18.42	0.87	0.39–2.09	0.71
5–10	27.55	1.21	0.56–2.48	0.48
11–20	16.61	0.83	0.30–1.84	0.60
≥ 21	23.94	1.18	0.52–2.35	0.65

95% CI=95% confidence interval, PR=prevalence ratio
∗ p ≤ 0.05 is significant.

BURNOUT SYNDROME AND SOCIODEMOGRAPHIC VARIABLES

Table (3) shows analysis of Burnout syndrome across sociodemographic variables revealed three significant correlations. Males showed a higher prevalence of Burnout syndrome compared to females (PR = 2.01, 95% CI: 0.99–3.63, p = 0.03). In terms of profession, other health professionals (PR = 0.25, 95% CI: 0.06–1.02, p = 0.02) and technical/administrative support staff (PR = 0.31, 95% CI: 0.21–1.28, p = 0.04) demonstrated significantly lower Burnout syndrome rates compared to physicians. Age, education level, and years of experience did not show statistically significant associations with Burnout syndrome.

RELEVANT EPISODE OF DEPRESSIVE SYMPTOMS AND SOCIODEMOGRAPHIC VARIABLES

Table (4) shows Analysis of depressive symptoms revealed three significant correlations. Males showed lower prevalence compared to females (PR = 0.59, p = 0.001). Other health professionals (PR = 0.38, p = 0.005) and technical/administrative support staff (PR = 0.51, p = 0.008) demonstrated significantly lower rates of depressive symptoms compared to physicians. Age, education level, and years of experience showed no statistically significant associations with depressive symptoms.

CORRELATION BETWEEN JOB SATISFACTION, BURNOUT SYNDROME, AND DEPRESSION

The pathways diagram illustrates significant relationships between burnout, job satisfaction, and depressive symptoms. A strong positive correlation (0.7, $p < .001$) exists between burnout and depressive symptoms. Job satisfaction shows negative correlations with both burnout (-0.5, $p < .001$) and depressive symptoms (-0.17, $p < .01$). These findings suggest that higher levels of burnout are associated with increased depressive symptoms, while greater job satisfaction is linked to lower levels of both burnout and depressive symptoms among the studied population (Figure1).

DISCUSSION

Al-Noor Specialist Hospital in Makkah, Saudi Arabia, had 77.5% female healthcare professionals and 22.5% male professionals. This gender distribution is consistent with a recent Saudi Arabian study that found 72% of healthcare professionals were female, reflecting the trend toward more women in nursing and support roles (10). In the UAE, almost 75% of healthcare workers were women (11).

This study found that the greatest age group was 31–40 (44.4%), followed by 18–30 (37.0%) and 41 and older (18.5%). According to study in Bahrain (12) and Jordan (13), most healthcare workers were in their early 30s. Recruitment and the exciting, high-energy demands of clinical professions attract early-career individuals, making healthcare more youthful. Due to a lack of experience and coping mechanisms, younger healthcare professionals may have higher burnout levels than their older counterparts (14).

In our results, 47.6% had Bachelor's degrees, 36.0% had PhDs or Master's degrees, and 16.4% had only completed secondary school. A research in Lebanon found a similar distribution of educational levels (15). However, just 25% of Qatari healthcare professionals had advanced degrees, highlighting educational differences among Middle Eastern healthcare systems (16). Education affects job happiness and burnout greatly. Higher education leads to better career development and a wider range of professional duties, which increases job satisfaction (17). Due to limited career progression and poor stress management, lower-educated workers may be dissatisfied and burnt out (18).

The majority of participants were physicians (47.6%), followed by nurses (29.6%), other health professionals (12.2%), and technical and administrative support workers (10.6%). This distribution shows the hospital's clinical focus. Physicians tend to be the largest professional group in Saudi tertiary hospitals (6). A survey in Jordan indicated that over 50% of the workforce was nurses (13). Due to their clinical and instructional roles, university hospitals may employ more physicians (1).

The majority of participants (29.1%) had 5–10 years of professional experience, while 20.4% had over 21 years. These data reflect an experienced workforce, which may improve patient care. Experienced healthcare workers had higher job satisfaction and lower burnout due to enhanced confidence and competence (19). A Qatari study found that professionals with over 15 years of experience were more likely to burnout owing to extended stress and a lack of career advancement (16).

Secondary education graduates were most satisfied with their jobs, while PhD/Master's degree holders were less satisfied ($p = 0.17$). A study in Egypt found that advanced-degreed healthcare workers were happier at work due to increased pay and recognition (20). This study may show that professionals with advanced degrees have larger expectations of their job duties and work conditions, which might lead to decreased satisfaction when they are not realized (17).

In the current study, male participants had a higher burnout rate (23.9%) than females (14.0%), contrary to previous Middle Eastern studies that found female healthcare workers had higher burnout rates due to increased workload and family responsibilities (16). In Kuwait, female nurses and allied health professionals had greater burnout rates, reaching 30% (14). Male workers at Al-Noor Specialist Hospital have different duties and responsibilities than in other studies, which may explain the variance in this study. More study is needed on gender-specific burnout factors in this scenario.

Our analysis found depressive symptoms were most common in secondary school graduates (34.1%) and least common in Bachelor's degree holders (19.8% and 19.9%, respectively). A systematic review by Patel et al. (2018) (18) found that socioeconomic restrictions and restricted access to professional development opportunities increase the incidence of depressive symptoms in lower-educated people. In Bahrain, educational level was not associated with depression symptoms, suggesting that job environment and support networks may be more important (12).

The relationship between job satisfaction and emotional exhaustion was also demonstrated in a study conducted in Norway with nurses and physicians employed in intensive care units (ICUs) ($r=0.4$; $P<.001$) (21). The results of our research are comparable to those of the current study,

and it provides additional evidence by establishing the correlation between job satisfaction and exhaustion syndrome (EE junction, DE, lPA).

Similar data to our study was also obtained from an evaluation conducted with Chinese emergency physicians, which aimed to assess the psychological, exhaustion, and job satisfaction levels of these professionals (22). The research indicates a potential weak correlation between depression and job satisfaction, although it is not statistically significant, as indicated by the relationship between job satisfaction and the dimensions of emotional exhaustion and depersonalization of burnout syndrome (P<.05) (22).

In the literature, there is a debate regarding the relationship between depression and burnout, which questions whether they are distinct adverse states or symptoms of the same clinical picture. Depressive symptoms are proposed as a predictive factor for the development of burnout syndrome in the current study, which further develops the analysis of these hypotheses (23).

CONCLUSIONS

This study identified significant associations between sociodemographic factors and job satisfaction, burnout syndrome, and depressive symptoms among healthcare professionals at Al-Noor Specialist Hospital. Male gender, lower educational attainment, and longer working experience were linked to higher burnout and depressive symptoms. Conversely, job satisfaction was higher among technical and administrative support staff compared to clinical roles. These findings highlight the need for targeted interventions to improve mental health and job satisfaction, particularly among high-risk groups, to ensure a healthier and more productive healthcare workforce. Further research is recommended to explore additional predictors and implement effective support strategies.

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