The Relationship between Psychosocial Risk Factors and Burnout among Primary Healthcare Workers in Saudi Arabia

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ABSTRACT

Aim: This study explored the relationship between burnout and psychosocial risk factors in primary healthcare workers in Saudi Arabia's public hospitals.

Methods: Across-sectional studywas conducted through October and November 2024using a validated self-reportedonline questionnaire, including the Maslach Burnout Inventory and Copenhagen Psychosocial Questionnaire.

Results: Participants showed lowoverall burnout levels. Some of the psychosocial risk factors showed a significant correlation with the burnout scale, whereas workers aged 28 years or below had more work-related insecurities than older workers(P=0.038).

Conclusion: The findings showed that Saudi healthcare workers are less prone to burnout and psychosocial risk factors.

Keywords: Psychosocial, burnout, healthcare workers, cross-sectional, Saudi Arabia

INTRODUCTION

Burnout is a recognized outcome of prolonged and heavy employee exposure to psychological stressors, including emotional, organizational, and interpersonal,without any chance for physical or emotional recovery (Okwarajiet al., 2014).Since the 80s, the term "psychosocial risk factor"has been established and described as an outcome of the complex interlinked engagement between work environment,management, jobcharacteristics, and employee self-development and competencies. Consequently, employees' general and mental health is affected (International Labour Office (ILO), 1986).Healthcare workers are especially vulnerable to psychosocial risk factors at higher rates than the general population. This is attributed to the nature of work, challenging working conditions, and dissatisfaction with one's job, which involve high workplace physical and emotional demands, erratic schedule modifications, overtime or rotational shifts, worker shortages, limited resources, and low salaries (Fuss et al., 2008). Thesefactors result in lower healthcare service quality, less calm patient handling,poor performance, commitment, and satisfaction (Zhou et al., 2013). Additionally, psychosocial risk factors and burnoutfinancially burden any healthcare system because of high turnover rates and sick leaves associated with low quality of life among healthcare workers (Schwab, 1996).Globally, burnout is a growing concern among healthcare staff and is common in medical settings (Zhou et al., 2013). A survey conducted among physicians in Germany revealed that over one-third of the respondents were suffering from professional burnout (Janus et al., 2007).Moreover, American emergency care physicians have reported increasing burnout symptoms in recent years. Also, Chinese physicians expressed their dissatisfaction with their demanding jobs (Liang et al., 2015).In the Gulf countries, including Saudi Arabia and the United Arab Emirates, the studies

revealed a high incidence rate of burnout, which reached 60% among healthcare workers, specifically nurses (Al-Omari et al.,2019).Clearly, there is a crucial need for comprehensive data about the most prevalent psychosocial risk factors, causes, and professions most prone to burnout to implement proper strategies and create a more comfortable work environment required for maintaining the workers' mental health, thereby providing efficient,high-quality medical care to their patients.However, minimal studies have assessed thenegative psychosocial factors and burnout andtheir effect on primary healthcare (PHC) workers. None of those studies were performed in Saudi Arabia.Therefore, this study aimed to determine the relationship between psychosocial risk factors and burnout among PHC workers in Saudi Arabia's public hospitals.

METHODOLOGY

This study employed an observational cross-sectional study through October and November 2024. The study included all PHC workers in public hospitals in Saudi Arabia. Workers with major health conditionsand psychiatric disorders who refused to share in the study were excluded. A convenient sampling technique was followed. Using the Raosoft online sample size calculator, considering a marginal error of 10%, a confidence level of 90%, maximum uncertainty (50% positive responses), and a drop rate of 10%, 75 participants were invited to participate in the study.Data was collected using a validated self-administered electronic questionnaire distributed to the PHC workers in public hospitals in Saudi Arabia through a link to a Google form on social media platforms. The questionnaire included three sections: first, demographics (age,marital status, gender, profession, years of experience, type of contract, and work shift). The second section contains 22 burnout questions using the Maslach Burnout Inventory (MBI) questionnaire (9 emotional exhaustion, 5 depersonalization, and 8 personal accomplishment) (Maslachet al., 1997).The third section contains 31 questions about psychological factors using the Copenhagen Psychosocial Questionnaire (COPSOQ) (Copenhagen Psychosocial Questionnaire (COPSOQ), accessed 2024).Data was cleaned and inserted into an Excel sheet. All statistical analysis was conducted using SPSS (Statistical Package for Social Science) software version 26.0. Descriptive statistics presented the dataas frequencies and percentages for categorical variables. Not normally numerical variables were described as a median and inter-quartile range (IQR). A correlation test was established to determine the relation between the psychosocial risk factors and burnout. The Chi-square test assessed the association between demographics and burnout levels of the healthcare workers. The Mann-Whitney or Kruskal-Wallis tests were used to evaluate the association between demographics and the highest risk domains of the psychosocial risk factors. A test was considered significant if the p-value was<0.05.For classifying correlation strength, R ≥ 0.6 is defined as "Strong correlations," 0.4–0.59 as "moderate," and < 0.4 as "weak."The MBI's scoring system was as follows: 0 = never; 1 = a few times a year; 2 = once a month; 3 = a few times a month; 4 = once a week; 5 = a few times a week, and 6 = every day. The emotional exhaustion subscale will be interpreted as High (≥ 27), Moderate (19-26), and Low (0-18). The depersonalization subscale was interpreted as High (≥ 10), Moderate (6-9), and Low (0-5). Personal accomplishments were interpreted as High (0-33), Moderate (34-39), and Low (≥ 40). High burnout was considered if high scores were on the first two scales and low scores in the last subscale (Abdo et al., 2016).Regarding the scoring system of the COPSOQ, it was as follows: All questions had matching answers measured on a 1~5 Likert scale. The scores were transformed into a weight of 0, 25, 50, 75, and a maximum of 100. The domain values were calculated by considering the average number of scale items in a domain (Asante et al., 2019).Written consent wastaken from each participant before the information was sharedin the study. Confidentiality was maintained through all research steps. The study objectives were mentioned at the beginning of the questionnaire. The data collection was completely anonymous.

RESULTS

The study involved 98 healthcare workers, of whom 53.1% were aged between 29 and 39 and 59.2% were nurses. Most participants were male (75.5%) and married (55.1%).Among the workers,57.1% had fixed schedules, 75.5% held full-time contracts, and 65.3% worked morning shifts. Table 1 shows more details.

Table 1: Demographic characteristics of the study healthcare workers (N=98)

Characteristic	Category	Number	Percentage
Age (years)	≤28	37	37.8
	29-39	52	53.1
	40-50	8	8.2
	>50	1	1.0
Gender	Male	74	75.5
	Female	24	24.5
Marital status	Married	54	55.1
	Single	42	42.9
	Divorced or widowed	2	2.0

Profession	Nurse	58	59.2
	Physician	11	11.2
	Physiotherapist	9	9.2
	Pharmacist	3	3.1
	Dentist	2	2.0
	Others	10	10.2
Years of experience	< 1 year	14	14.3
	1-3 years	26	26.5
	4-7 years	24	24.5
	More than 7 years	34	34.7
Employment type	Full-time	74	75.5
	Part-time	22	22.4
	Over-time	2	2.0
Contract type	Fixed term	56	57.1
	Not fixed	42	42.9
Monthly salary (Saudi Riyal)	< 2000	11	11.2
	2000-7000	16	16.3
	>7000	71	72.4
Work shift	Morning	64	65.3
	Evening	5	5.1
	Night	6	6.1
	Not fixed shift	23	23.5

The MBI subscales reported by the involved healthcare workers showed median (IQR) scores of emotional exhaustion 17 (14) higher than depersonalization 7 (6) and personal accomplishment 16 (14), as presented in Table 2. Emotional exhaustion was the most prominent subscale, with 49 (64.5%) participants having low scores, while 31 (40.8%) had low depersonalization scores. On the other hand, 71 (93.4%)showed a high personal accomplishment score, resulting in an overall low burnout level among the 76 healthcare workers, as shown in Figure 1.

Table 2: The total scores of the burnout scale (MBI) reported by thehealthcare workers (N=76)

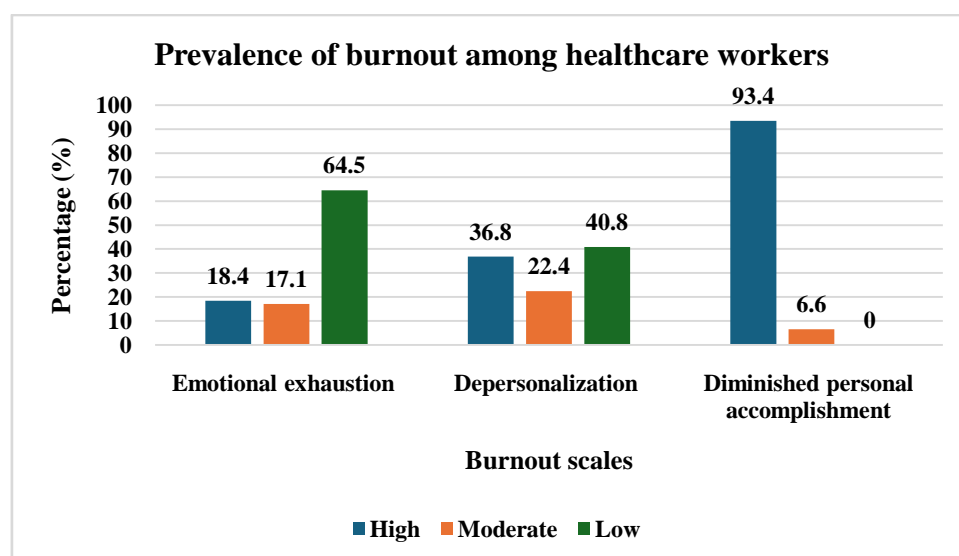| Scale	Mean (SD)	Median (IQR)	Min-Max scores	Min-Max attainable scores
Emotional exhaustion (n=9)	17.55 (10.34)	17 (14)	0-43	0-54
Diminished personal accomplishment (n=8)	17.03 (10)	16 (14)	0-39	0-48
Depersonalization (n=5)	7.84 (6)	7 (6)	0-25	0-30
n: Number of items, SD: Standard deviation, IQR: Interquartile range				

Figure 1: Prevalence of burnout among healthcare workers based on burnout subscales (N=76)

The COPSOQ indicated that most domains scored approximately average median levels, showing moderate psychosocial risk, as demonstrated in Table 3. However, domains such as the meaning of work, commitment to the workplace, job satisfaction, leadership quality, and general health scored below the average median, explaining lower risk in these areas (Table 3).

Table 3: The total scores of the psychosocial risk factors(COPSOQ)reported by the healthcare workers (N=76)

Scale	Median (IQR)
Demands (n=6)	50 (25)
Influence at work (n=3)	50 (25)
Possibilities for development (n=2)	50 (25)
Degree of freedom at work (n=1)	50 (25)
Meaning of work (n=2)	25 (37)
Commitment to the workplace (n=2)	43.75 (37.5)
Predictability (n=2)	50 (12.5)
Quality of leadership (n=2)	37.5 (25)
Social support (n=2)	50 (34.4)
Feedback at work (n=2)	50 (25)
Sense of community (n=2)	50 (50)
Insecurity at work (n=4)	50 (50)
Job satisfaction (n=4)	25 (23.44)
General health (n=1)	25 (50)
Mental health (n=5)	55 (15)
Vitality (n=4)	50 (6.25)
Possible transformed score for each scale between 0(minimum) and 100(maximum) n: Number of items, IQR: Interquartile Range	

The correlations between job burnout (MBI subscales) and psychosocial risk factors (COPSOQ domains) are illustrated in Table 4. A marked positive correlation was found between job demands and all burnout domains (P<0.0001).In detail, emotional exhaustion (R: 0.715) showed a strong correlation, while depersonalization (R: 0.558) and diminished personal accomplishment (R: 0.587) showed a moderate correlation. However, apotentialnegative correlation was found between both influence at work and possibilities for developmentand all burnout domains, whereas emotional exhaustion showed astrong correlation(R:-0.616 and R: -0.629,respectively, P<0.001). While diminished personal accomplishment (R: - 0.585 and R: -0.557, respectively, P<0.001), as well as depersonalization (R: -0.552 and R: -0.441, respectively, P<0.001), showed a moderate correlation.Diminished personal accomplishment also demonstrateda moderately significant negative correlation with the degree of freedom at work(R: -0.413, P<0.0001). Conversely, depersonalization had a moderatelysignificant positivecorrelation with the meaning of work(R: 0.419, P<0.0001).Commitment to the workplace significantlypositively correlated moderatelywith emotional exhaustion(R: 0.581, P<0.001) and depersonalization(R: 0.448, P<0.0001)and weakly with diminished personal accomplishment(R: 0.361, P=0.001).Social support (R = -0.526, -0.547, and -0.400, respectively, P<0.0001) and sense of community (R = -0.528, -0.615, and -0.365, respectively, P<0.0001)were also significantly negatively correlated with all burnout domains.

Table 4: Correlation between scales of COPSOQ& MBI

Scale	Emotional exhaustion		Diminished personal accomplishment		Depersonalization	
	r	p-value	r	p-value	R	p-value
Demands	0.715	<0.0001*	0.587	<0.0001*	0.558	<0.0001*
Influence at work	-0.616	<0.0001*	-0.585	<0.0001*	-0.552	<0.0001*
Possibilities for development	-0.629	<0.0001*	-0.557	<0.0001*	-0.441	<0.0001*
Degree of freedom at work	-0.284	0.013	-0.413	<0.0001*	-0.267	0.02
Meaning of work	0.281	0.014	0.203	0.08	0.419	<0.0001*
Commitment to the workplace	0.581	<0.0001*	0.361	0.001*	0.448	<0.0001*
Predictability	0.115	0.323	0.177	0.125	0.035	0.762
Quality of leadership	0.485	<0.0001*	0.306	0.007*	0.434	<0.0001*
Social support	-0.526	<0.0001*	-0.547	<0.0001*	-0.40	<0.0001*
Feedback at work	0.486	<0.0001*	0.493	<0.0001*	0.378	0.001*
Sense of community	-0.528	<0.0001*	-0.615	<0.0001*	-0.365	0.001*
Insecurity at work	-0.071	0.539	-0.104	0.371	0.138	0.234

Job satisfaction	0.279	0.015	0.156	0.18	0.235	0.041
General Health	0.139	0.230	-0.052	0.654	0.217	0.06
Mental health	-0.014	0.903	-0.211	0.068	-0.055	0.639
Vitality	0.167	0.149	0.004	0.975	0.11	0.343
*Significant Correlation (P-value< 0.01)						

Table 5 shows that the demographics of the healthcare workers revealed no significant association with the median scores of the burnout scales.

Table 5: Impact of healthcare workers' demographics on the median scores of the burnout scales

Factors		Emotional exhaustion	P value	Diminished personal accomplishment	P value	Depersonalization	P value
Gender	Female	18 (10)	0.406	16 (10)	0.560	10 (6)	0.339
	Male	17 (15)		16 (15)		7 (7)	
Age (years)	≤28	15 (13)	0.612	16 (13)	0.248	8 (7)	0.273
	29-50	18 (15)		16 (15)		6.5 (6)	
Marital status	Unmarried	15 (12)	0.962	16 (13)	0.804	7 (7)	0.735
	Married	18 (16)		16 (15)		7 (8)	
Profession	Nurse	17 (15)	0.732	16 (14)	0.588	7 (8)	0.443
	Other healthcare workers	17 (14)		18 (15)		7 (7)	
Years of experience	< 1 year	12 (11)	0.142	12.5 (16)	0.291	7.5 (11)	0.894
	1-7 years	17 (20)		17 (15)		7 (8)	
	More than 7 years	18 (13)		16 (14)		7 (7)	
Monthly salary (Saudi Riyal)	<2000	11 (12)	0.161	12 (19)	0.287	7 (11)	0.735
	2000 or more	18 (13)		16 (14)		7 (6)	
Work shift	Morning	18 (14)	0.794	16 (14)	0.389	8 (6)	0.560
	Other shifts	15 (15)		16 (18)		6 (9)	
Values presented as median (IQR), *: Significance level below 0.05							

Only age showed a significant association with work-related insecurity, whereas workers aged 28 years or below reported higher levels of insecurity (P=0.038), as represented in Table 6.

Table 6: Association between demographics and high-risk exposure to psychosocial factors

Factors		Mental health	Influence at work	Social support	Insecurity at work
Gender	Female	55 (15)	58.3 (25)	50 (25)	50 (75)
	Male	55 (15)	50 (33.3)	62.5 (37.5)	50 (63)
p-value*		0.488	0.255	0.333	0.440
Age (years)	≤28	55 (15)	58.3 (41.6)	62.5 (50)	75 (50)
	29-50	52.5 (15)	50 (23)	50 (22)	50 (69)
p-value*		0.704	0.199	0.443	**0.038*****
Marital status	Unmarried	55 (15)	54.2 (16.6)	62.5 (12.5)	50 (50)
	Married	50 (15)	50 (41.6)	50 (50)	50 (69)
p-value*		0.356	0.575	0.404	0.633
Profession	Nurse	55 (15)	50 (33.3)	50 (12.5)	50 (75)
	Other healthcare workers	55 (18)	58.3 (25)	50 (43.8)	50 (50)
p-value*		0.468	0.313	0.939	0.731
Years of experience	< 1 year	55 (21)	75 (43.75)	62.5 (43.8)	62.5 (31)
	1-7 years	55 (15)	50 (29.1)	62.5 (18.8)	50 (100)
	More than 7 years	50 (15)	50 (25)	50 (73.5)	50 (50)

p-value**		0.604	0.706	0.204	0.546
Monthly salary (Saudi Riyal)	<2000	60 (25)	66.6 (37.5)	50 (18.8)	75 (38)
	≥2000	55 (15)	50 (33.3)	50 (37.5)	50 (50)
p-value*		0.375	0.161	0.870	0.165
Work shift	Morning	55 (15)	50 (33.3)	50 (37.5)	50 (50)
	Other shifts	55 (15)	58.3 (25)	62.5 (25)	50 (75)
p-value*		0.38	0.220	0.197	0.606
All values are presented as Median (IQR), *Mann-Whitney test, **Kruskal-Wallis test, ***Significance level below 0.05					

DISCUSSION

According to the literature, the absence of social support, which is recognized as one of the important psychosocial factors, either from peers or management at work, could lead to occupational burnout and depression. Specifically, healthcare workers are the most affected population because their highly demanding jobs lead to emotional and physical exhaustion. Therefore, this study aimed to assess the relationship between psychosocial risk factors and burnout among PHC workers in Saudi Arabia's public hospitals.Burnout scales in our study revealed that emotional exhaustion was the most prominent domain, with mean scores of 17.55 ± 10.34 compared to depersonalization, 7.84 ± 6, and diminished personal accomplishment, 17.03 ± 10. This aligned with a Brazilian study that showed higher mean scores for emotional exhaustion, 24.5, compared to depersonalization, 9.0 (Al-Omari et al.,2019). Conversely, Rostamabadi et al.found that depersonalization was higher than the two other burnout domains among the participants (Rostamabadi et al. 2019).Overall, burnout level is low in this study; particularly, the prevalence of burnout among PHC workers showed low emotional exhaustion scores (64.5%), depersonalization (40.8%), and high scores of personal accomplishments (93.4%). In contrast toAl-Owa et al., who reported a high prevalence of 67% in emotional exhaustion, 60% in depersonalization had high burnout scores,and only 15% in personal accomplishments had low scores (Al Owa et al., 2021).Additionally, our findings are lower than those of Salimi et al., who found that 42% of Iranian nurses had high-risk levels of burnout and secondary traumatic stress (Salimi et al.,2019).

Regarding psychosocial risk factors, our PHC workers reported average score values for work demands and influence. In contrast, low risk was found for the meaning of work, commitment to the workplace, leadership quality, job satisfaction, and general health domains. The results contradict those of Asante et al. since there were high score values for work demand and job satisfaction, which could be attributed to the highly stressed working environment among PHC workers in rural areas of China (Asante et al.,2019).The correlation between burnout and psychosocial risk factors was found to be notable. A positive significant (P<0.0001) correlation existed between the demands and all MBI subscales.Additionally, as commitment to the workplace increases, it significantly (P<0.0001) increases emotional exhaustion, (P=0.001) diminishes personal accomplishment, and affects (P<0.0001) depersonalization. This is aligned with a study that found job demands positively correlated with all dimensions of burnout[Error! Bookmark not defined.].Furthermore, this study demonstrated that social support had a significant (P<0.0001) negative correlation with all burnout dimensions, aligning with the results of Escriba et al.(Escriba et al.,2006).Notably, PHC workers aged 28 years or below had significantly (P=0.038) more work-related insecurities than older workers. This is consistent with some studiesdocumentingthat younger workershad higher levels of job insecurity (Keim et al., 2014),while others have observed that older workershad higher levels of job insecurity (Yeves et al., 2019). For clarification, younger workers are mostly affected by insecurities because they will likelyfocus more on development goals. Conversely, the limited career path and time restrict those developmental goals in older workers (Van der Heijdenet al., 2024).

This study harbors some limitations, including the small sample size, which could affect the reliability and the generalizability of the study. The cross-sectional nature and sampling techniquerestrict causation and introduce biases.This is not addressed as a limitation here or elsewhere.

CONCLUSION

This study showed a significant relationship between some of the domains of psychosocial risk factors and the burnout scaleamong healthcare workers. Although Saudi healthcare workers are less prone to burnout and psychosocial risk factors, the findings highlight the effect of physical and psychological job demands on all burnout dimensions.Future research should be conducted to explore causative pathways, with expanded sample sizes and considering variables such as quality of life to provide a better understanding of burnout. Appropriate actions are recommended to decrease mental and physical job demands while enhancing social support and job control.

Conflict of interest
All authors declared that there is no conflict of interest in this study.

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