Research Article

Prevalence and Correlates of Burnout and Mental Distress among Healthcare Professionals of a Public Sector Hospital in Lahore: A Cross-sectional Study

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Abstract

Background: Healthcare worker burnout and mental distress represent significant challenges to healthcare delivery systems worldwide, particularly in resource-limited settings. In Pakistan, where healthcare workers face unique challenges including high patient volumes and resource constraints, understanding these issues is crucial. Taking into consideration the serious implications of burnout and mental distress on the well-being of healthcare providers and the quality of patient care, and the limited evidence from healthcare settings in Pakistan, this study addresses a critical knowledge gap in understanding occupational mental health among healthcare workers in developing healthcare systems.

Objectives: To determine the prevalence of mental distress and burnout among healthcare professionals of a public sector hospital in Lahore and to investigate their associations with demographic characteristics.

Methods: This cross-sectional study was conducted at a public sector hospital in Lahore, from February to September, 2024. Using an expected prevalence of 71.9% (95% CI: 66.3-77.5%), and absolute precision of 5.6%, a sample size of 250 was calculated. Data were collected through printed forms containing validated instruments including the Maslach Burnout Inventory (MBI) and General Health Questionnaire-12 (GHQ-12). The MBI assessed three dimensions: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA), while GHQ-12 measured psychological distress. High burnout was defined as high scores in EE (≥ 30) or DP (≥ 12) or low PA scores (≤ 33). Data were analyzed using SPSS version 27, employing descriptive statistics, Chi-square tests, and logistic regression analysis ($p<0.05$).

Results: Among the 250 participants, predominantly female (75.6%) and aged 20-30 years (92.0%), 70% scored for high burnout in at least one subscale, while 9.2% reported high burnout in all three subscales of MBI. Mental distress was prevalent, with 8.8% (95% CI: 5.3-12.3%) reporting high levels. A statistically significant association between any Burnout and High Mental Distress was found ($p=0.001$). Healthcare roles significantly influenced mental distress levels ($p<0.001$), with physicians reporting higher rates of severe burnout (14.6%) compared to nurses (4.8%).

Conclusion: The high prevalence of burnout (70%) among healthcare professionals in this public hospital setting in Pakistan highlights an urgent need for intervention. We recommend implementing systematic changes including: (1) structured workload management programs, (2) profession-specific mental health support services, and (3) regular burnout screening and monitoring protocols. These findings have important implications for healthcare policy in developing countries and suggest the need for institutional-level interventions to protect healthcare worker wellbeing and ensure optimal patient care.

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Keywords | Professional Burnout, Occupational Burnout, psychological distress, health care providers

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Introduction

Burnout among healthcare workers represents a critical global healthcare challenge that threatens both provider wellbeing and patient care quality. Characterized by emotional exhaustion, depersonalization, and reduced personal accomp-

lishment, burnout has been recognized as an occupational phenomenon in the 11th revision of the International Classification of Diseases (ICD-11), defined as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed" (WHO, 2019). Healthcare worker burnout is a major global issue that has a detrimental impact on both the providers' well-being and the standard of patient treatment. Emotional instability, detachment, and a decreased sense of fulfillment are hallmarks of burnout. Despite extensive research, no universally accepted set of criteria for diagnosis of burnout has been devised. Burnout is officially recognized as a mental and physical condition by the International Classification of diseases ICD-10, which calls it "a state of vital exhaustion."[1]

Recent systematic reviews and meta-analyses have revealed concerning trends in healthcare worker burnout globally. A comprehensive meta-analysis of 182 studies involving 109,628 physicians across 45 countries reported a pooled burnout prevalence of 51.0% (95% CI: 45.0–57.0%), highlighting the universal nature of this challenge (Rotenstein et al., 2023). Health care workers have frighteningly high rates of burnout due to the emotionally and physically taxing nature of their jobs; prior research has shown that rates can reach 54.3% for professionals and 45% for medical students (2, 3). A meta-analysis conducted in 2019 using data from 22,778 residents revealed that one in two had experienced burnout.[2]

The relationship between burnout and psychological distress among healthcare workers is particularly concerning in resource-limited settings. In such contexts, healthcare providers face unique challenges including high patient volumes, resource constraints, and limited support systems (West et al., 2018). It is common for healthcare providers, particularly nurses, to experience psychological anguish.[4] Due to the nature of their employment, nurses were constantly caring for patients who were chronically ill, which increased their burden and put them in danger of acquiring various communicable diseases.[4] Research concerning residents in emergency departments has supported the notion that a growing need for care, challenges in exercising because of the absence of downstream systems and the growing complexity of treatment, and progressively challenging working circumstances have affected their psychological well-being significantly.[5] The COVID-19 pandemic has further exacerbated these challenges, with studies reporting increased rates of burnout and psychological distress among healthcare workers globally (Prasad et al., 2021). In particular, post-pandemic workload and fear of getting in contact with infections have exacerbated the prevalence of burnout in medical health professionals.[6]

Mental health stigma remains a significant barrier to addressing burnout and psychological distress in healthcare settings, particularly in South Asian contexts where mental health discussions are often culturally stigmatized (Knaak et al., 2017). The stigma associated with mental illness is the main obstacle to productive management.[7] Due to the existence of unfavorable attitudes in the community, burnout continues to be highly stigmatized despite several attempts implemented worldwide.[8] This mindset of burnout might obstruct a lot of life's prospects.[9] Burnout among medical personnel has been linked to concerns about patient safety and inadequate care.[10] Research results differ between high- and low-income nations because of the important contributor in burnout.[11]

The healthcare context in Pakistan presents unique challenges that may influence burnout and mental distress differently from other settings. These include a high doctor-to-patient ratio (1:1300 compared to the WHO recommended 1:1000), limited healthcare spending (1% of GDP), and increasing healthcare demands from a growing population (Pakistan Economic Survey, 2023). While extensive research has been conducted worldwide, there are few studies that address this issue in Pakistan, where certain factors may influence burnout differently. Additionally, fewer studies assess the relationship between burnout and mental distress, which leaves a gap in understanding how the elements interact in a setting with limited resources.

In order to close the gap, our study aims to: (1) determine the prevalence of burnout and mental distress among healthcare workers in a major public hospital in Lahore, Pakistan, (2)evaluate associations between demographic characteristics and burnout/mental distress, and (3) examine the relationship between burnout and mental distress in this setting. Our findings will inform evidence-based interventions to address these challenges in resource-limited healthcare settings.

Methods

This cross-sectional study was conducted at a public sector Hospital in Lahore from February to September, 2024, after obtaining ethical approval from relevant Institutional Review Board. Using an expected prevalence of 71.9%, a 95% confidence interval, and a 5.6% margin of error, the sample size was calculated to be 248, rounded up to 250 for statistical robustness, and participants were recruited through consecutive non-probability sampling. The study population included medical and paramedical staff with at least six months of active clinical service, excluding those above 60 years of age or on extended leave. Data collection was performed using a structured questionnaire that incorporated the Maslach Burnout Inventory (MBI) and the General Health Questionnaire-12 (GHQ-12). The MBI, consisting of 22 items across three dimensions—Emotional Exhaustion, Depersonalization,

and Personal Accomplishment—showed high reliability with Cronbach's alpha values of 0.89, 0.84, and 0.81, respectively. The GHQ-12, scored on a 4-point Likert scale, also demonstrated high reliability with a Cronbach's alpha of 0.85. Data analysis was conducted using IBM SPSS Statistics version 27, employing descriptive statistics, Chi-square tests for associations, and binary logistic regression to identify predictors of burnout and mental distress, with statistical significance set at $p<0.05$.

The study was carried out at Ethical approval from the Institutional Review Board of King Edward Medical University was acquired prior to the initiation of this study.

Results

Among the 250 participants, females constituted the majority (n=189, 75.6%, 95% CI: 70.1-81.1%). The age distribution showed a predominance of young healthcare professionals, with 92.0% (n=230, 95% CI: 88.7-95.3%) aged 20-30 years. The professional composition included doctors (41.2%, n=103), nurses (42.0%, n=105), technicians (1.6%, n=4), and other healthcare workers (15.2%, n=38). Most participants (89.2%, n=223) had 0-5 years of experience.

A high proportion of participants (n=175, 70.0%, 95% CI: 64.3-75.7%) experienced high burnout in at least one of the three MBI subscales. Depersonalization was the most prevalent dimension (59.6%, 95% CI: 53.5-65.7%), followed by low personal achievement (44.0%, 95% CI: 37.8-50.2%) and emotional exhaustion (15.2%, 95% CI: 10.8-19.6%). Severe burnout, defined as high burnout levels in all three subscales, was reported by 9.2% (n=23, 95% CI: 5.6-12.8%) of participants.

Table 1: *Sociodemographic Characteristics of Healthcare Professionals (N=250)*

	Variables	Frequency (Percentage)
Age Distribution	20-30 year	230(92.0%)
	31-40 years	18(7.2%)
	41-50 years	1(.4%)
	51-60 years	1(.4%)
Gender	Male	61(24.4%)
	Female	189(75.6%)
Professional Composition	Doctor	103(41.2%)
	Nurse	105(42.0%)
	Technician	4(1.6%)
	Other	38(15.2%)
Work Experience	0-5 years	223(89.2%)
	6-10 years	19(7.6%)
	11-15 years	7(2.8%)
	16-20 years	1(.4%)
	21 years and above	0(0.0%)

Among male participants, 73.8% (n=45) reported any burnout compared to 68.8% (n=130) of females. Severe burnout was observed in 14.8% (n=9) of males and 7.4% (n=14) of

Table 2: *Distribution of Burnout Dimensions and Mental Distress by Gender (N=250)*

	Frequency	Males(n=61)	Females(n=189)	P (Chi-square test)
MBI Section A: Emotional Exhaustion				
Low level Burnout	137(54.8%)	36(59.0%)	101(53.4%)	
Moderate Level Burnout	75(30.0%)	13(21.3%)	62(32.8%)	.187
High Level Burnout	38(15.2%)	12(19.7%)	26(13.8%)	
MBI Section B: Depersonalization				
Low level Burnout	33(13.2%)	9(14.8%)	24(12.7%)	
Moderate Level Burnout	68(27.2%)	12(19.7%)	56(29.6%)	.315
High Level Burnout	149(59.6)	40(65.6%)	109(57.7%)	
MBI Section C: Personal Achievement				
Low level Burnout (High personal achievement score)	99(39.6%)	17(27.9%)	82(43.4%)	
Moderate Level Burnout	41(16.4%)	10(16.4%)	31(16.4%)	.070
High Level Burnout (Low Personal Achievement Score	110(44%)	34(55.7%)	76(40.2%)	
Overall Burnout				
Any Burnout	175(70%)	45(73.8%)	130(68.8%)	.460
Severe Burnout	23(9.2%)	9(14.8%)	14(7.4%)	.084
GHQ-12: Mental Distress				
Mild Distress	112(44.8%)	22(36.1%)	90(47.6%)	
Moderate Distress	116(46.4%)	30(49.2%)	86(45.5%)	.093
High Distress	22(8.8%)	9(14.8%)	13(6.9%)	

females. However, these gender differences were not statistically significant (p=0.460 for any burnout, p=0.084 for severe burnout).

High mental distress levels were reported by 8.8% (n=22, 95% CI: 5.3-12.3%) of participants, with significant variations across professional roles (p<0.001). Doctors showed higher rates of both severe burnout (14.6%, n=15) and high mental distress (12.6%, n=13) compared to nurses (4.8%, n=5 and 3.8%, n=4, respectively). Moderate distress levels were reported by 46.4% (n=116) of participants.

A significant association was found between burnout and high mental distress (p=0.001), with all participants reporting high mental distress (n=22) also showing positive for any burnout. Additionally, among those with severe burnout (n=23), 39.1% (n=9) reported high mental distress levels (p<0.001).

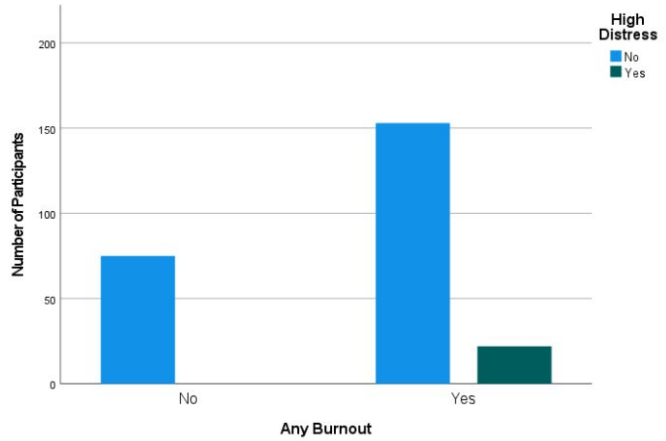

Figure 1: *Relationship between Overall Burnout and High Mental Distress Levels among Healthcare Professionals*

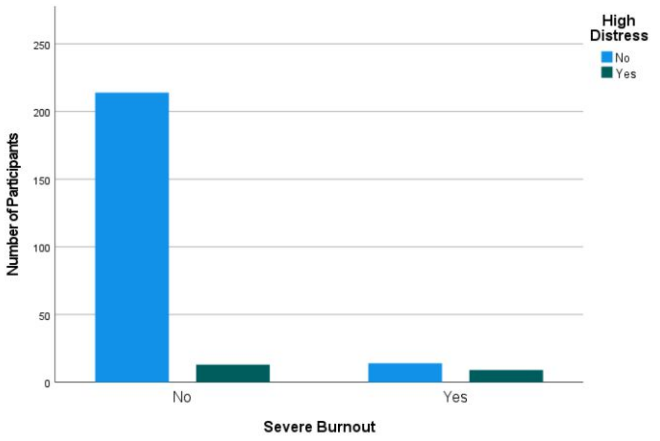

Figure 2: *Association between Severe Burnout and High Mental Distress Levels*

Discussion:

The results of this study underscore the critical issue of burnout and mental distress among health care professionals in Lahore, Pakistan. The concerning finding that 70% of participants experienced burnout in at least one subscale of Maslach Burnout Inventory (MBI), with depersonalization being the most common symptom (59.6%, 95% CI: 53.5-65.7%), warrants immediate attention. The higher levels of burnout are in agreement with the results of previous similar studies like the one conducted on pediatric health care personnel in the United States where nearly half of the participants scored for high burnout in any one subscale[13]. Most notably, a Chinese cross-sectional study showed comparable results with 60.8% of the participants' positive for burnout in any one subscale[15]. Similar results were found in some other

Table 3: *Association between Demographic Variables and Burnout/Mental Distress Outcomes*

Variables	n (%)	Any Burnout		Severe Burnout		High Mental distress	
		n	p	n	p	n	P
Age							
20-30 years	230(92.0%)	162(70.4%)		22(9.6%)		20(8.7%)	
31-40 years	18(7.2%)	11(61.1%)	.670	1(5.6%)	.913	2(11.1%)	.874
41-50 years	1(.4%)	1(100%)		0(0.0%)		0(0.0%)	
51-60 years	1(.4%)	1(100%)		0(0.0%)		0(0.0%)	
Profession							
Doctor	103(41.2%)	80(77.7%)		15(14.6%)		13(12.6%)	
Nurse	105(42.0%)	65(61.9%)	.101	5(4.8%)	.089	4(3.8%)	<0.001
Technician	4(1.6%)	3(75.0%)		0(0.0%)		0(0.0%)	
Other	38(15.2%)	27(71.1%)		3(7.9%)		5(13.2%)	
Years of Experience							
0-5 years	223(89.2%)	160(71.7%)		22(9.9%)		20(9.0%)	
6-10 years	19(7.6%)	10(52.6%)	.258	1(5.3%)	.734	0(0.0%)	.243
11-15 years	7(2.8%)	4(57.1%)		0(0.0%)		2(28.6%)	
16-20 years	1(.4%)	1(100%)		0(0.0%)		0(0.0%)	

studies as well.[12,16,17] This consistently high rate of burnout across different healthcare settings suggests a systemic issue that impairs healthcare delivery and jeopardizes patient safety.[18]

Interestingly, no significant gender difference was observed in overall burnout rates (p=0.460), which implies that both male and females are equally susceptible to burnout. This finding is in accordance with a study conducted in China.[19] However, the noteworthy trend of more severe burnout in males (14.8%) compared to females (7.4%) suggests potential underlying gender-specific vulnerabilities and may warrant further investigation into gender-specific stressors and coping mechanisms.

A particularly concerning finding was that mental distress was highly prevalent, with 8.8% of participants indicating high levels of stress, and demonstrated a strong association with burnout in any subscale (p=0.001), findings consistent with a similar study conducted in India.[20] Of significant clinical importance, the study revealed substantial differences in mental distress between different professional roles (p< 0.001). Specifically, doctors reported higher rates of severe burnout (14.6%) and mental distress (12.6%) compared to nurses (4.8% and 3.8% respectively). This marked disparity may indicate that physicians often experience higher levels of emotional exhaustion and depersonalization due to the demanding nature of their roles. Therefore, interventions aimed at addressing burnout must consider these profession-specific challenges and tailor strategies accordingly.

The robust association between profession and mental distress (p<0.001) highlights the importance of targeted mental health interventions that account for unique stressors encountered by different healthcare roles. Evidence suggests that tailored support, such as peer support programs and profession-specific mental health resources, can be particularly effective in mitigating burnout and improving mental well-being among the healthcare professionals.

The study recommends evidence-based strategies at the organizational level, including the implementation of workload management systems, establishment of dedicated mental health support units, and the introduction of flexible scheduling and protected break times. Professional development should incorporate mandatory stress management and resilience training programs, profession-specific peer support networks, and regular professional development opportunities to enhance job satisfaction. Policy implications include the development of national guidelines for healthcare worker mental health protection, integration of mental health support into workforce policies, allocation of dedicated funding for wellness programs, and establishment of standardized working hour regulations. Practice recommendations involve regular assessment of workplace stressors, implementation of rotation systems to reduce continuous high-stress exposure, creation of dedicated rest areas and wellness spaces, and development of clear protocols for accessing mental health support services. Future initiatives should focus on implementing and evaluating these interventions, considering the unique challenges faced by different healthcare roles. Regular monitoring and adjustment of these interventions will be crucial for ensuring their effectiveness in reducing burnout and improving mental well-being among healthcare professionals in Pakistan.

While the results are insightful, several methodological limitations warrant consideration. First, the cross-sectional design hinders the ability to establish any causal relationship between burnout and mental distress. Second, self-reported data may introduce response bias as the participants might have underreported or overreported their symptoms due to recall bias or social undesirability. Third, as the study was conducted in Lahore, Pakistan, generalizability may be limited to other areas within the country or internationally. Furthermore, the burnout rates might be influenced probably by the unique characteristics of healthcare system in Lahore, Punjab and the results may vary in other settings with different healthcare structures and stressors. The future studies should use a longitudinal approach to better comprehend the dynamics of burnout over time and include a broader set of variables to capture the intricate interplay of factors contributing to burnout. Additionally, multi-center studies across different healthcare settings would provide more generalizable findings.

Conclusion

This study reveals an alarming prevalence of burnout (70.0%) and mental distress among healthcare providers in this public sector hospital in Lahore, Pakistan with significant variations across professional roles (p<0.001). The strong association between burnout and mental distress (p=0.001) underscores the urgent need for targeted interventions.

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