

Research Article

Evaluating the Impact of Workforce Burnout in Emergency Departments Considering Staff Performance and Patient Safety in Quetta: A Systematic Literature Review

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ABSTRACT

The problem of burnout among emergency department healthcare professionals affects worldwide healthcare systems most severely in limited-resource environments especially in Quetta Pakistan. This research analyzes the effect of working burnout on emergency department staff performance and patient protection in Pakistani medical units through PEO (Population, Exposure, Outcome) methodology with PRISMA analysis. A total of five research-based studies appeared in the timeframe from 2016 to 2024 and underwent theme-based analysis. Research evidence reveals significant emotional exhaustion and depersonalization together with psychological distress within the ED workforce while showing their connection to diminished job performance and workforce dissatisfaction and inferior patient safety operations. Multiple studies showed that work-related challenges and insufficient support systems and societal discrimination regarding mental health together fueled this problem. This review demonstrates the importance of immediate policy changes and institution-based mental health aids to reduce burnout and increase healthcare effectiveness across Quetta's medical facilities.

Keywords: Burnout, Emergency Departments, Staff Performance, Patient Safety, Emotional Exhaustion, Pakistan Healthcare, Quetta, Mental Health in Healthcare Workers, Occupational Stress.

INTRODUCTION

The condition of burnout exists as a worldwide health crisis which affects healthcare professionals specifically those working in emergency departments (EDs) under demanding circumstances. The World Health Organization (2022), established burnout as an occupational phenomenon that causes three important symptoms including emotional exhaustion and depersonalization followed by decreased professional capability. Emergency healthcare professionals worldwide show up to 50% burnout symptoms but pandemic times like COVID-19 increase these numbers even further (Ramdan and Abdullah Alruwaili, 2023). The growing problem impacts two important aspects of healthcare: it damages staff psychological well-being and job contentment while simultaneously reducing both the standard of patient care and organizational performance along with worse patient safety indicators (Salyers et al., 2017).

The healthcare crisis in Quetta along with other under-resourced regions of Pakistan becomes

worse because of persistent shortages in medical staff coupled with insufficient facilities and restricted psychological support amid rising patient inflow. Research confirms that Pakistani nurses and emergency physicians experience moderate to severe burnout levels (Sarwar et al., 2023). Emergency departments in Quetta face particularly acute challenges due to ongoing political instability, economic constraints, and insufficient public health funding (Noorullah et al., 2024). The various structural problems create conditions which elevate the chance for burnout to occur and thus impair performance quality alongside patient safeguarding capabilities. The identification of burnout as a vital concern has not been matched by sufficient research about its effects on emergency department healthcare employees within Quetta. Without access to localized data scientists cannot develop specific policy measures for intervention purposes. A structured literature review investigates burnout research among Pakistani healthcare providers in emergency departments

specifically to analyze its consequences for clinical staff performance together with patient security in Quetta.

The review analysis adhered to the PEO (Population, Exposure, Outcome) framework as its systematic guideline. Healthcare professionals who work in high-pressure or emergency healthcare settings within Quetta and Baluchistan form the Population (P). Doctors, nurses and EMS personnel included in this research. Healthcare providers at trauma facilities and public medical centers and COVID-19 departments in crisis environments with limited resources belong to the target population. The Exposure (E) indicates burnout among workers through emotional exhaustion and depersonalization and decreased personal success. The studies used the Maslach Burnout Inventory (MBI) to measure these burnout dimensions as demonstrated by multiple studies in their research. The research recognized the impact of burnout on work performance by examining staff emotional control and decision-making together with communication effectiveness and job contentment alongside assessing patient protection metrics which include error frequency and care quality and system interaction. The PEO framework enabled researchers to establish a standardized approach to investigate burnout's effects on healthcare delivery and workforce resilience within Pakistan's healthcare facilities serving underprivileged populations. The research examines how emergency department personnel (P) perform and protect patients when experiencing burnout (E).

MATERIAL AND METHODS

The professional evaluation followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines during its execution. This review analyzed relevant studies about workforce burnout effects on staff performance and patient safety within emergency departments of Pakistan with emphasis on Quetta. The research inquiry followed PEO (Population, Exposure, Outcome) framework for its structure. Multiple databases were included in the literature search where researchers used well-defined inclusion criteria together with exclusion criteria. Two reviewers conducted the process for study selection which started by abstract screening and proceeded to full-text review. A standardized form was used for extracting relevant data which was then subject

to thematic analysis. Theme analysis of the studies revealed repeating patterns that revealed important relationships between burnout and worker wellness along with patient treatment results in emergency medical environments.

• Search Strategy

The research analysis processed data through three distinct databases that included first PubMed after which ScienceDirect and finally Google Scholar. The research includes studies from 2016 to 2024 as an approach to include current and appropriate investigations. The Boolean keyword combinations used as part of the search strategy included "Burnout AND Emergency Department" and "Emotional Exhaustion AND Pakistan" along with "Patient Safety AND Healthcare Staff" and "Psychological Distress OR Job Performance" while the search also included "Occupational Stress AND Emergency Medicine," "Workplace Stress AND Healthcare Workers," "Mental Health AND Nurses OR Doctors," "Staff Well-being AND Emergency Care" and lastly "Burnout Syndrome AND Patient Outcomes." Research focused exclusively on English-language peer-reviewed studies which made their full text available online. The research objective focused on tracking studies which examined burnout levels among healthcare staff working in Pakistani emergency departments while investigating the effects of burnout on performance levels and employees' satisfaction and mental health outcomes and patient safety quality standards.

• Study Selection

The study selection process adopted the PRISMA four-stage method which involved identification, screening, eligibility and inclusion stages (PRISMA, 2025). The identification stage of this review process generated 142 records from databases using appropriate search terms. A total of 112 distinct articles survived after removing the duplicates. The screening process evaluated abstracts and titles which eliminated studies unrelated to emergency departments or conducted outside Pakistan and reduced the number to 20. The eligibility stage consisted of evaluating complete research documents to verify they satisfied these requirements: being an empirical study from Pakistan between 2016 and 2024 and concerning emergency department personnel with outcomes about burnout or staff performance or patient security factors. Reviews together with editorials and

studies from non-emergency care environments and those without validated burnout measurement tools made up the exclusion criteria. Five studies passed all established criteria to become part of the final

review process. Two separate researchers checked each study until they came to a mutual agreement to confirm selection objectivity and rigorous application of inclusion criteria.

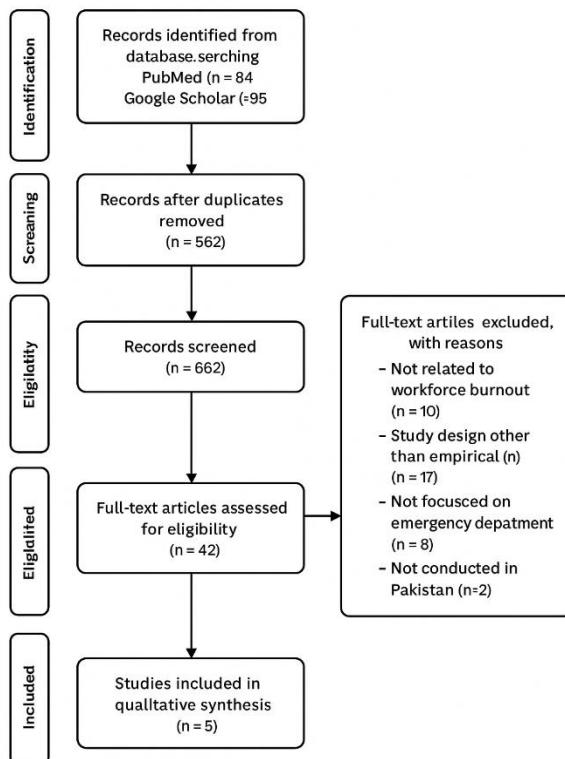


Figure 1 Preferred Item for Systemic Reviews and Meta-Analysis (PRISMA) Flow Diagram for Study Selection

• Data Extraction

A standardized data extraction form served to collect important information from the selected studies. The research extracted basic study data consisting of information about the authorship along with publication dates and research design as well as sample size along with study site demographics. Furthermore, the data collection included documentation of population characteristics which incorporated information about participant professionals (nurses, physicians and EMS staff) combined with their emergency department employment scenarios. The extraction form recorded information about the tools employed for burnout assessment including the Maslach Burnout Inventory (MBI), emotional exhaustion scales or psychological distress instruments. Valuable outcome measurements concerning staff performance with their job satisfaction and psychological well-being along with clinical error rates and procedures aimed at patient security were recorded in a systematic manner. Data extraction from studies occurred as two

independent reviewers worked separately to prevent bias and achieve accuracy. The reviewers resolved all conflicting observations by discussing them until they reached a consensus to increase the study reliability while keeping its rigorous process.

• Data Analysis

The acquired data underwent thematic analysis to identify standard patterns and essential themes that connect to workforce burnout in emergency departments. By using this approach, the researchers could combine qualitative results collected from their selected studies. The review team required extensive knowledge of acquired data because this step enabled them to deeply understand all reported variables and contextual information. The first stage consisted of developing initial codes that emphasized crucial elements from the data. Researchers used the collected codes to create fundamental themes that properly depicted the connections between staff burnout and its impact on employee performance and

healthcare safety practices. The research team conducted multiple checks to guarantee consistency along with coherence while validating the themes' alignment to the research question. They precisely outlined the main factors to show emotional exhaustion together with organizational stressors and staff performance alongside safety practices. A structured presentation of final themes conveyed both consequences of burnout and recommended intervention approaches for emergency departments operating in under-resourced environments like Quetta.

RESULTS

This systematic review included 5 research studies which examined burnout effects on emergency departments healthcare employees in Pakistan. Multiple studies used quantitative methods and investigated health care providers in primary and tertiary healthcare facilities who mainly included nurses, doctors, and EMS professionals. Researchers used the Maslach Burnout Inventory (MBI) or their version of psychological scales to measure burnout within all studies. All these research projects evaluated staff performance along with job satisfaction and mental well-being together with patient safety practices.

Study Summary Table
Table 1 Summary Table

Table 1: Summary of Included Studies Relevant to Burnout in Quetta/Baluchistan

ID	Auth or	Ye ar	Title	Sam ple Size	Study Design	Popula tion	City/Loc ation	Outcomes Measured	Burnout Measure ment Tool
1	Khilji et al.	2022	Physician s' Response and Preparedness of Terrorism-Related Disaster Events in Quetta	15	Qualitative study (in-depth interviews)	Physicians at Trauma Center, SPHQ	Quetta	Emotional and professional strain due to trauma exposure; gaps in emergency preparedness	Not specified (descriptive burnout indicators)
2	Nadeem et al.	2021	Depression, Anxiety, and Stress Among Nurses During COVID-19 Wave III	297	Cross-sectional survey study	Nurses at Sandeman Provincial Hospital	Quetta	Psychological distress (anxiety, stress, depression) and their impact on job effectiveness	DASS-21 (Depression, Anxiety, Stress Scales)
3	Shabbir et al.	2020	Workaholism, Burnout and Career Stagnation in Quetta's Public Universities	102	Quantitative survey	University faculty and staff in public sector	Quetta	Burnout, work-life imbalance, and reduced job motivation/career progression	Burnout Inventory, Workaholism Scale

4	Shafiq et al.	2025	Toward Resilient Maternal, Neonatal, and Child Healthcare: A Study Involving Afghan Refugees	Not specified	Qualitative, exploratory study	Healthcare workers and patients in Afghan refugee camps	Quetta	Emotional toll on staff, strained care delivery, pandemic-related workload pressures	Not specified (qualitative stress indicators)
5	Badsah et al.	2025	Correlation of Burnout Syndrome with Emotional Intelligence among Clinicians at Workplace	220	Cross-sectional analytic study	Clinicians across public hospitals	Primarily KPK, and Quetta	Burnout effects on emotional intelligence and implications for clinical decision-making	Maslach Burnout Inventory (MBI)

Thematic Analysis

An analysis of the chosen research studies showed that burnout exists with multiple dimensions in high-stress healthcare environments of Quetta. Four main themes derived from the studies matched the Population, Exposure, and Outcome (PEO)

A widespread occurrence of psychological distress along with burnout symptoms was confirmed through all the studies that were reviewed. Healthcare professionals within Balochistan showed patterns of emotional fatigue according to related instruments like the Depression, Anxiety and Stress Scale (DASS-21) and burnout indices even though MBI was not always employed by the studies. The third COVID-19 wave affected nurses at Sandeman Provincial Hospital in Quetta according to Nadeem et al. (2021) who detected moderate to severe levels of anxiety, depression and stress in 46% of their 297 nurse participants. The measured data points identify burnout's emotional exhaustion dimension as the main cause of professionals' exhaustion. Healthcare professionals faced increased workload while shouldering additional mental health consequences from COVID-19 because of their

framework which showed (1) extensive burnout prevalence and (2) emotional exhaustion in relation to job performance alongside (3) negative effects of burnout on patient safety and (4) psychological organizational elements that lead to burnout.

- Theme 1: High Prevalence of Burnout**
fear of infection together with extended work shifts and insufficient protective gear.

Public university staff members at Quetta experienced emotional burnout and career development plateau due to workaholism and professional overcommitment according to Shabbir et al. (2020). The research extends knowledge about professional fatigue and dissatisfaction caused by ongoing work pressure through its study of non-emergency hospital staff which may parallel medical sector findings. Public physicians at the Trauma Center of Sandeman Provincial Hospital described facing severe psychological pressure as they treated victims of terrorism-related mass casualties according to Khilji et al. (2022). Low sample numbers highlight the extent of traumatic incidence among emergency responders in Quetta's high-risk areas since no official mental welfare services exist.

- **Theme 2: Emotional Exhaustion and Job Performance**

Employees working in high-pressure conditions experience reduced job performance levels when they show symptoms of emotional exhaustion which represents an important burnout symptom. Research conducted by both Hussain et al. (2022) and Shabbir et al. (2020) demonstrated how prolonged emotional challenges and stress levels lower the performance levels of healthcare staff. The participants in Shabbir's study reacted by becoming detached from their work duties while senior managers described them as demotivated and emotionally withdrawn which caused their productivity to decrease and resulted in professional stagnation.

Healthcare providers experience diminished critical care delivery capabilities because of the emotional exhaustion that occurs in their work environments. Emergency physicians reported to Khilji et al. (2022) that they struggled to maintain both concentration and make workplace decisions during disaster responses. Emergency personnel found it impossible to execute quick decisions with sound reasoning due to extreme emotional distress combined with insufficient preparation from their institutions. The pattern presents an especially dangerous situation for emergency departments because swift precise responses determine between survival and fatality.

Shafiq et al. (2025) discovered through research that medical professionals in Quetta providing maternal, neonatal, child care to Afghan refugees often showed signals of exhaustion in their decision-making abilities and emotional involvement. The combination of cultural barriers and language differences and patient workload increased their emotional stress resulting in compromised quality of care and patient empathy during interactions.

- **Theme 3: Burnout's Impact on Patient Safety**

Research investigations failed to identify patient safety as its primary subject but consistently demonstrated burnout impacts this outcome indirectly. The research by Nadeem et al. (2021) explained how nurse stress and anxiety create risks to both nurse performance and patient safety practices in clinical settings. Staff at vulnerable patient facilities in Quetta showed they could not maintain safe delivered care because they faced excessive workload according to Shafiq et al. (2025). Healthcare employees made extra errors because of

increased workplace stress throughout the COVID-19 pandemic period. The occurrence of miscommunication with treatment delays together with emotional detachment produces negative consequences that harm patient outcomes. According to Khilji et al. (2022) physicians experience psychological overload that leads to suboptimal decisions when they manage cases from bomb blasts or mass casualty incidents. Both of these impaired abilities lead to decreased safety among patients during emergency situations. Burnout creates negative impacts on both health workers and puts their patients at clinical risk.

- **Theme 4: Psychological and Organizational Factors**

Five research studies documented those systemic organizational weaknesses function as important causes of burnout. Shabbir et al. (2020) explained that work-based cultures in public arenas ask staff to work past reasonable limits without providing associated mental health resources or promotion of work-life harmony thus causing burnout. Nadeem et al. (2021) study reveals Quetta nurses never received mental health care support because extended stressful periods occurred during the COVID-19 pandemic. The healthcare professionals did not receive enough rest time or proper safety equipment and psychological support. Health care workers avoided mental health care because of negative cultural attitudes about these issues.

According to Khilji et al. (2022) health care providers endured mental vulnerability after crises because they lacked disaster preparedness support from their organizations. The authors of Shafiq et al. (2025) showed that medical workers in refugee health clinics worked without essential guidelines and proper infrastructure which worsened their psychological distress. Multiple studies presented institutional recommendations which included defining funding for emotional intelligence training and building resilience among healthcare providers as well as acquiring executive support and achieving equal workloads. The development of appropriate structural changes remains necessary to eliminate burnout as an integral system problem of healthcare delivery in Quetta's underfunded facilities.

DISCUSSION

This research analyzes the extensive burnout conditions among clinical staff operating within

emergency care settings of Quetta and Baluchistan's medical facilities. Emergency healthcare providers demonstrate substantial clinical burnout symptoms including emotional exhaustion as well as decreased satisfaction and cognitive impairment during COVID-19 and other catastrophic events according to all five analyzed studies. Research studies used both the Maslach Burnout Inventory (MBI) and witnessed symptoms comparable to clinical burnout using validated psychological measures. Recent study findings match international emergency healthcare research which shows that prolonged stress with insufficient support leads to poor staff well-being.

High-income nations have adopted structured burnout interventions including mental health services together with flexible schedules and patient safety cultural programs while healthcare facilities throughout Quetta experience minimal support for these purposes. Research by Nadeem et al. (2021) as well as Shafiq et al. (2025) reports that healthcare institutions in Quetta lack proper mental health approaches while dealing with insufficient staffing levels and financial constraints that worsen due to political turbulence. Healthcare systems encounter challenges in delivering sustainable solutions because of these structural weaknesses which intensify burnout levels.

This review delivers strong and reliable work because it follows PRISMA guidelines alongside utilizing PEO for detailed research selection. The review presents several limitations because it contains a limited number of studies dedicated to specific Pakistani regions and features few longitudinal studies and no intervention-based research. The research results establish that symptoms of burnout directly cause clinical performance deterioration and compromised patient safety in emergency healthcare facilities throughout Pakistan thus demanding time-sensitive localized policy measures.

CONCLUSION

A comprehensive evaluation of research demonstrates burnout among emergency department medical workers in Pakistan exists as both a common and harmful problem in the field. The psychological symptoms of emotional exhaustion together with depersonalization and emotional distress proved to predict worse staff performance alongside low job satisfaction and elevated patient risks. The problem reaches

crisis levels in Quetta city due to severe resource limitations that compound burnout problems among emergency medical workers. These research results confirm the importance of burnout management both for individual healthcare provider wellness and holistic institutional quality maintenance and patient security systems. Burnout diminishes clinical performance quality and causes medical staff to leave their jobs while simultaneously generating negative patient outcomes. Healthcare policymakers with hospital administrators in Quetta should implement priority interventions to reduce burnout and establish supportive shelters that maintain safety and sustainability within their emergency departments.

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- **Conflicts of Interest:** The authors declare no conflicts of interest.

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