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BURNOUT AMONG HEALTHCARE WORKERS: CAUSES, CONSEQUENCES, AND PREVENTION STRATEGIES – A SYSTEMATIC REVIEW

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ABSTRACT

Background: Burnout has long been recognized as a critical occupational health issue, particularly within healthcare settings. Defined by emotional exhaustion, depersonalization, and reduced personal accomplishment, it emerges as a response to chronic work-related stress. Burnout is associated with substantial psychological, physical, and organizational consequences, including reduced job satisfaction, mental-health symptoms, and compromised patient safety. The COVID-19 pandemic intensified these risks by dramatically increasing workloads, accelerating organizational disruptions, and exposing healthcare professionals to prolonged stress and patient suffering.

Objective: To synthesize recent evidence on the causes, consequences, and prevention of occupational burnout among healthcare professionals, and to evaluate implications for workforce wellbeing, healthcare quality, and organizational policy.

Methods: A narrative review was conducted using PubMed, Scopus, and Google Scholar. Eligible publications included systematic reviews, meta-analyses, and observational studies examining determinants, outcomes, and preventive strategies related to burnout in healthcare workers. Keywords used in the search included: burnout, occupational stress, healthcare professionals, emotional exhaustion, depersonalization, mental health, COVID-19, resilience, organizational support, preventive interventions.

Results: Across studies, burnout was consistently linked to a combination of individual, organizational, and environmental determinants. High workload, insufficient autonomy, inadequate managerial support, interpersonal conflict, and poor work-life balance emerged as key predictors. Consequences encompassed increased rates of depression, anxiety, chronic fatigue, sleep disturbances, absenteeism, staff turnover, and reduced quality of patient care. Evidence suggests that preventive strategies are most effective when integrating individual-level interventions—such as resilience training, stress-management techniques, and psychological support—with systemic measures including workload optimization, mentoring, flexible scheduling, and supportive leadership. Emerging digital tools, such as mobile mental-health applications and telemedicine-based support systems, show promise as complementary preventive resources.

Conclusions: Burnout in healthcare professionals represents a multifaceted challenge with significant implications for individual wellbeing and healthcare-system performance. Comprehensive, multilevel prevention strategies—addressing both personal competencies and organizational structures—are necessary to mitigate its impact. Future research should prioritize longitudinal designs and systematic evaluations of innovative intervention models to inform evidence-based policy and to ensure sustainable workforce health.

KEYWORDS

Burnout, Healthcare Professionals, Occupational Stress, Mental Health, COVID-19, Organizational Support, Resilience, Prevention Strategies

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Introduction

Burnout is chronic work-related stress that manifests itself in emotional exhaustion, distancing oneself from patients, and a sense of decline in one's own achievements (Fajardo-Lazo, 2021). In recent decades, this problem has become a serious challenge to the health and well-being of healthcare workers. Burnout was first described in the 1970s, and its definition and measurement were later refined by Maslach and Jackson. It is now considered a complex syndrome that affects not only the psyche, but also relationships with others, behaviour at work and long-term career prospects (Freudenberger, 1974; Maslach & Jackson, 1981).

Burnout is particularly relevant in healthcare work, as it requires employees to make difficult decisions, ensure patient safety and deal with suffering, uncertainty and ethical issues on a daily basis (Hall et al., 2016). Research shows that burnout does not depend solely on personality traits. It is the result of a combination of personal factors, organisational problems and systemic pressures (Peng et al., 2022; Cohen, 2023).

Individual traits such as perfectionism or high expectations of oneself can increase susceptibility to burnout. However, it is mainly organisational problems that cause emotional exhaustion and distancing from work, including heavy workloads, excessive administrative duties, limited autonomy and team conflicts (Peng et al., 2022). Work environments with staff shortages, unclear roles, and poor management support significantly increase the risk of burnout among nurses, doctors, and other healthcare workers (Occupational Risk Factors for Burnout, 2024; Cohen, 2023).

Burnout affects not only employees, but also patients and the functioning of the entire organisation. People affected by burnout often experience depression, anxiety, sleep problems and chronic fatigue, which can impair communication, reduce empathy and increase the risk of medical errors (De Hert, 2023). Burnout also contributes to absenteeism, staff turnover and decreased team productivity, creating systemic problems in healthcare (Mossburg, 2021). Research also shows that burnout is associated with reduced spiritual and mental well-being, highlighting the need for a comprehensive approach to this problem (Chirico, 2023).

The COVID-19 pandemic has exacerbated these difficulties, exposing workers to prolonged work in difficult conditions, rapid changes in procedures, and moral distress resulting from resource shortages and patient suffering (Amiri, 2024). Studies in various settings, including regional hospitals, show that frontline staff, particularly nurses and paramedics, have experienced a significant increase in burnout during the pandemic (Batanda, 2024). This confirms that burnout is not just an individual problem, but a systemic occupational problem, dependent on organisation, available resources and support.

Factors that can protect against burnout include supportive leadership, a good team atmosphere, mentoring, opportunities for professional development, flexible work schedules, and access to mental health support (Lee, 2022; Peng et al., 2022; Cohen, 2023). Combining such individual-level measures with organisational reforms is a multi-level approach that is increasingly recommended in the literature (Chirico, 2023). It aims to increase the sustainability of the medical workforce by addressing both coping skills and stressors in the system.

Given the growing complexity of healthcare systems and staff shortages, it is important to summarise the available evidence on the causes, effects and prevention of burnout. This review provides up-to-date knowledge, highlights the main mechanisms of burnout and identifies areas for further research and action in clinical and organisational practice.

Methods

The review was based on articles obtained from PubMed, Scopus and Google Scholar databases, with particular emphasis on recent systematic reviews and meta-analyses examining the causes, effects and prevention strategies for burnout among healthcare workers.

The literature search was conducted using the following keywords: burnout, occupational stress, healthcare workers, emotional exhaustion, depersonalisation, sense of personal accomplishment, COVID-19, mental health, resilience, organisational support, preventive interventions.

Causes of burnout

The causes of burnout among healthcare workers are multidimensional and result from the dynamic interaction between individual characteristics, interpersonal relationships, organisational functioning and systemic pressure. Contemporary models emphasise that burnout is not solely the result of personality traits; rather, it reflects chronic overload between job demands and available resources and the gradual depletion of emotional, cognitive, and motivational reserves (Maslach et al., 2001; Schaufeli & Greenglass, 2001; Salvagioni et al., 2017).

At the individual level, certain psychological traits and behaviours may increase susceptibility to burnout, although they are not the main cause. Perfectionism, high conscientiousness, excessive self-demands, a strong sense of responsibility, difficulty setting boundaries, low stress resilience, and a tendency to suppress emotions or ruminate are associated with higher emotional exhaustion and depersonalisation (Panagioti et al., 2017; Halbesleben & Buckley, 2004). Personality traits typical of healthcare workers, such as high empathy, strong commitment to patient care, and internalisation of professional ideals, may paradoxically increase the risk of burnout when organisational demands exceed available resources (Maslach et al., 2001; Figley, 2012). In addition, individuals with low tolerance for uncertainty and variability at work may experience greater stress in a rapidly changing clinical environment, which increases the cognitive load of decision-making (Lee, 2022).

However, research increasingly indicates that organisational and systemic factors are the main determinants of burnout. Chronic work overload, time pressure, staff shortages, long shifts and excessive

administrative duties are strongly associated with high levels of burnout among doctors, nurses and paramedics (Amiri, 2024; De Hert, 2023; Rotenstein et al., 2018; Taranu, 2022; Wu, 2024). Lack of autonomy, limited influence over work schedules, unclear role expectations, and limited opportunities to participate in decisions increase stress, especially when employees feel they cannot keep up with demands (Fajardo-Lazo, 2021; Panagioti et al., 2017).

Environmental risk factors include frequent interruptions, noise, chaotic ward organisation, and non-ergonomic conditions. Conflicts in the workplace, poor communication, and a toxic interpersonal climate are additional high-risk stressors. Numerous studies document strong links between burnout and bullying, rudeness, and violence in the medical environment, which undermine psychological safety and team cohesion (Workplace Bullying in Healthcare, 2023; Salvagioni et al., 2017). Combined with insufficient recognition — financial, symbolic or relational — the imbalance between effort and reward significantly predisposes to burnout and job dissatisfaction (Siegrist, 1996).

Healthcare-specific stressors include regular exposure to suffering, traumatic events, ethical dilemmas, palliative care, and life-and-death decisions. These experiences increase emotional strain, and phenomena such as compassion fatigue, secondary trauma, and moral distress are powerful predictors of emotional exhaustion and depersonalisation (Figley, 2012; De Hert, 2023; Ulaş, 2025; Wilkinson, 2017). Even individuals with high psychological resilience can accumulate stress when institutional support is insufficient or inconsistent (Maslach et al., 2001; Fajardo-Lazo, 2021).

The COVID-19 pandemic has exposed and exacerbated many existing weaknesses in healthcare systems. Sudden organisational changes, rapidly changing guidelines, extreme workloads, shortages of staff and protective equipment, and high patient mortality rates have created unprecedented stressful conditions (Morgantini, 2020; Amiri, 2024). Frontline workers felt intense anxiety about their own safety and that of their loved ones, experienced moral injury related to resource constraints, and extreme fatigue resulting from prolonged crisis mode. Numerous studies have reported not only an increase in burnout, but also an intensification of symptoms of anxiety, insomnia, depression and PTSD among medical staff during and after the pandemic (Dyrbye et al., 2020; De Hert, 2023; Batanda, 2024).

The literature indicates that individual personality traits may increase susceptibility, but the main determinants of burnout are structural, cultural and organisational in nature (Rotenstein et al., 2018; Salvagioni et al., 2017; O'Connor, 2018; Stoian-Bălăşoiu, 2025; Wright, 2022). The main risk factors include work overload, chronic organisational stress, lack of resources, exposure to suffering and trauma, conflicts at work, and pressure resulting from the combination of professional and private life.

Consequences of burnout

Burnout is a problem that affects many healthcare workers and has serious consequences for both them and the entire healthcare system. People experiencing burnout often feel emotionally exhausted, disconnect from patients and lose their sense of job satisfaction. This is accompanied by mental and physical symptoms such as depression, anxiety, sleep disorders, chronic fatigue, headaches and stomach problems (De Hert, 2023; Brindley, 2019; Occupational Risk Factors for Burnout, 2024; Maslach et al., 2001). These ailments not only reduce the quality of life of employees, but also make it difficult for them to perform their daily duties, which can lead to a decline in the quality of patient care.

People who are emotionally burnt out often distance themselves from patients and become disengaged from their work. This leads to poorer communication, less empathy and an increased risk of medical errors (Rotenstein et al., 2018; Panagioti et al., 2017; Delgado, 2023; Garcia, 2019). Long-term burnout can also cause cynicism towards patients, increasing job dissatisfaction and reducing the quality of care (De Hert, 2020).

The consequences of burnout are also visible in the work of the entire organisation. Burnout syndrome increases the number of sick days, staff turnover and a decline in the productivity of medical teams (Mossburg, 2021; Prevalence of Burnout During COVID-19, 2025; Lee, 2022). High turnover causes staff shortages, which increase the workload of remaining employees and, as a result, contribute to further cases of burnout. In practice, this makes it difficult to maintain consistent and effective teams and provide high-quality care (Gualano, 2021; Mossburg, 2021).

Burnout also affects employees' private lives. Studies show that people experiencing burnout syndrome have poorer family relationships, lower life satisfaction and more often feel socially isolated (Peng et al., 2022; Lee, 2022; Brindley, 2019). Chronic stress at work disrupts the work-life balance and, in the long term, leads to emotional exhaustion outside the workplace as well (Marković, 2024; O'Connor, 2018).

The effects of burnout are cumulative and systemic. Employees affected by this problem are less motivated, less likely to show initiative and less cooperative within the team. This, in turn, worsens the atmosphere at work and increases tensions between colleagues (Maslach et al., 2001; Panagioti et al., 2017; Ladino, 2023). In this way, burnout ceases to be solely an individual problem and becomes a serious challenge for the entire healthcare system, with consequences for both staff and patients.

The COVID-19 pandemic has further exacerbated the problem. Frontline staff, including nurses and emergency medical personnel, have experienced heavy workloads, constant changes in clinical guidelines, and moral distress related to limited resources and patient suffering (Amiri, 2024; Batanda, 2024; Stodolska, 2023; Gualano, 2021). Studies have shown a marked increase in the prevalence of burnout and severe symptoms of anxiety, insomnia, depression, and PTSD among healthcare personnel during the pandemic (Dyrbye et al., 2020; De Hert, 2023; Gualano, 2021; Stodolska, 2023).

The literature emphasises that the effects of burnout are important not only for the health of employees, but also for patient safety and quality of care (Garcia, 2019; Mossburg, 2021; Brindley, 2019). Burnout syndrome reduces empathy, impairs communication and increases the risk of errors, and in a broader sense leads to a decline in team performance and staff turnover (Delgado, 2023; Gualano, 2021; O'Connor, 2018; Spencer-Hwang, 2024).

Strategies for preventing professional burnout

Burnout in healthcare is a multifaceted problem that stems from both the individual characteristics of the employee and the working environment. Therefore, strategies to prevent and reduce burnout must be multidimensional and include both individual and systemic measures in the workplace. Understanding the causes of burnout allows for the development of effective targeted interventions that take into account the employee's psyche, their psychosocial competences and environmental factors such as workload, role ambiguity, lack of team support or pressure related to responsibility for patients (De Hert, 2023; Maslach et al., 2001; Brindley, 2019; Occupational Risk Factors for Burnout, 2024).

Individual interventions

At the individual level, strategies focus on strengthening mental resources, developing stress management skills and interpersonal skills. Research shows that mindfulness techniques, meditation and mindfulness programmes significantly reduce emotional exhaustion and improve the mental well-being of healthcare workers (Klein et al., 2020; Salvado et al., 2021). Yoga is equally effective, promoting relaxation, emotional balance and increasing resistance to occupational stress (Cocchiara et al., 2019).

The development of psychosocial skills, such as assertiveness, time management and conflict resolution, enables employees to cope better with the demands of their work, reduces their distance from patients and limits the risk of emotional exhaustion (Panagioti et al., 2017; Shanafelt et al., 2019; Maresca et al., 2022).

In recent years, digital support tools that enable mood monitoring, the use of online mindfulness programmes and participation in virtual support groups have become increasingly important. Such applications allow healthcare workers to flexibly access help even with irregular working hours, which increases the availability of support and improves the effectiveness of preventive measures (Adam et al., 2023; Ladino et al., 2023; Maki et al., 2022; West et al., 2020).

Artistic interventions, such as poetry workshops, art therapy classes, and other creative activities, also play an important role in burnout prevention. Research shows that these activities increase empathy, improve relationships with patients and reduce stress, while also having a positive impact on job satisfaction (Engel et al., 2023; Schoonover et al., 2020).

Organizational interventions

At the organisational level, burnout prevention strategies focus on modifying the work environment, which is often the main source of chronic stress among healthcare workers. Key measures include optimising workloads, planning work schedules, introducing clear accountability structures, and increasing decision-making autonomy. Such changes increase the sense of control, improve job satisfaction, and reduce the risk of emotional exhaustion (De Hert, 2023; Amiri, 2024; Maslach et al., 2001; Panagioti et al., 2017).

Team support systems, including regular supervision, mentoring, professional development and experience-sharing programmes, enable employees to cope with stress and strengthen their psychosocial competencies, reducing the risk of burnout (Lee et al., 2022; Dyrbye et al., 2020; Cohen et al., 2023).

Organisations should also counteract negative workplace behaviours such as bullying and violence, promote work-life balance, and implement wellbeing policies and flexible working schedules. Research shows that institutions that invest in staff development and mental health support achieve lower levels of burnout, higher job satisfaction, and better quality of patient care (Shanafelt et al., 2017; Occupational Risk Factors for Burnout, 2024; Amiri, 2024; Peng et al., 2022).

Combined interventions

The most effective approaches to preventing and reducing burnout in healthcare combine individual and organizational measures. Comprehensive programs integrate mental resilience training, access to psychological support, flexible working schedules, and organizational reforms that reduce staff workload (Occupational Risk Factors for Burnout, 2024; Panagioti et al., 2017; West et al., 2020; Mossburg et al., 2021). This integrated approach not only strengthens employees' stress management skills but also creates a work environment that promotes well-being, reduces absenteeism, and stabilizes healthcare teams (Mossburg et al., 2021; Lee, 2022).

Modern support methods, such as mindfulness, yoga, artistic interventions, and digital tools, can be effectively combined with traditional psychosocial programs. Research indicates that integrating digital interventions with face-to-face sessions or psychosocial training enhances the effectiveness of preventive strategies. These combined interventions not only reduce burnout symptoms but also improve empathy, engagement at work, and overall job satisfaction (Razai et al., 2023; Maresca et al., 2022; Adam et al., 2023; Ladino et al., 2023; Engel et al., 2023; Schoonover et al., 2020).

The evidence strongly supports the use of combined individual and organizational interventions alongside modern support methods, creating a holistic approach that addresses both personal coping skills and systemic workplace stressors.

Future prospects and challenges

The problem of burnout in healthcare will remain significant, and its dynamics may change under the influence of new factors. First, digitization and the development of telemedicine introduce both new sources of stress—the need to operate electronic systems, online multitasking, and constant availability—and potential prevention tools, such as stress monitoring applications and routine task automation (West et al., 2020; Maki et al., 2022).

Staff shortages and increasing professional demands, especially in countries with aging populations, increase the risk of overload and burnout (Rotenstein et al., 2018; Amiri, 2024). In addition, employees increasingly expect flexible schedules, psychological support, and wellbeing programs; failure to adapt to these needs can lead to higher turnover and recruitment difficulties (Shanafelt & Noseworthy, 2017; Panagioti et al., 2017).

An equally important challenge is diversity and inclusivity in the workplace. People from minority groups may experience additional stressors, such as discrimination, isolation, or lack of mentoring, which increases the risk of burnout. Implementing inclusive policies and mentoring programs can serve as a protective measure (Dyrbye et al., 2020).

Research perspectives include longitudinal studies and evaluations of the effectiveness of new prevention strategies, allowing for a better understanding of the interaction between individual and organizational factors and the design of more effective interventions (Moss et al., 2021; Fajardo-Lazo, 2021).

In summary, the future of burnout prevention requires a holistic approach that combines technology, organizational policies, psychological support, a work culture conducive to well-being, and scientific research, allowing for the adaptation of measures to the changing healthcare environment.

Discussion

The findings of this review highlight the complex and multifactorial nature of occupational burnout among healthcare professionals, emphasizing the interaction between individual, organizational, and environmental factors. Across studies, burnout consistently emerged as a consequence of high workload, limited autonomy, insufficient support, and exposure to emotionally demanding situations. However, the intensity and manifestation of burnout varied depending on professional role, work setting, and personal coping resources. Taken together, the evidence suggests that addressing burnout requires tailored interventions that consider both the specific characteristics of healthcare professions and the broader organizational context.

The COVID-19 pandemic amplified existing stressors, with healthcare workers experiencing increased workload, rapid organizational changes, and heightened exposure to patient suffering and infection risk. These conditions led to a marked increase in burnout prevalence across all healthcare professions, particularly among frontline staff in emergency departments and intensive care units. The pandemic also highlighted structural inequalities within healthcare systems, as professionals in under-resourced settings were disproportionately affected, suggesting that organizational preparedness and support mechanisms are critical determinants of resilience.

Evidence indicates that both individual and organizational factors play a bidirectional role in burnout. While personal traits such as perfectionism, high achievement motivation, or low stress tolerance may increase susceptibility, structural issues—such as staffing shortages, unclear roles, lack of supervision, and poor work-life balance—are the primary drivers of chronic occupational stress. Interventions focusing solely on individual resilience are insufficient if systemic stressors remain unaddressed. Notably, combined approaches integrating personal coping strategies with organizational reforms were found to be the most effective in reducing burnout, improving well-being, and stabilizing healthcare teams.

Burnout also has wide-ranging consequences beyond individual health, affecting patient care, team functioning, and institutional performance. Emotional exhaustion and depersonalization reduce empathy and engagement, which can increase medical errors, compromise patient safety, and decrease satisfaction with care. Furthermore, burnout negatively impacts workplace dynamics, contributing to higher absenteeism, staff turnover, and reduced productivity, creating a feedback loop that perpetuates stress and workforce instability.

Despite these insights, several limitations remain in the current literature. Many studies rely on self-reported measures of burnout, which may be subject to reporting bias. Cross-sectional designs limit causal inference, and cultural or healthcare system differences may affect the generalizability of findings. Additionally, evolving healthcare practices, digitalization, and changing patient expectations introduce new stressors that are not fully captured in existing research.

Overall, the results of this review underscore the need for holistic strategies to prevent and mitigate burnout in healthcare settings. Policies should combine organizational reforms, adequate staffing, support systems, and leadership engagement with programs promoting resilience, stress management, and professional development. Future research should prioritize longitudinal and intervention-based designs to evaluate the effectiveness of combined strategies and to identify contextual factors that influence burnout risk and recovery.

Conclusions

Burnout among healthcare professionals represents a multifaceted challenge with significant implications for both individual wellbeing and the quality of patient care. This review highlights that burnout arises from a dynamic interplay of personal, organizational, and environmental factors, including high workload, lack of autonomy, insufficient support, exposure to traumatic events, and organizational stressors such as mobbing or inadequate work-life balance. Individuals exhibiting traits such as perfectionism, high achievement orientation, or low stress tolerance may be more vulnerable, but even highly resilient professionals are at risk when systemic support is lacking.

The consequences of burnout are extensive, encompassing emotional exhaustion, depersonalization, reduced professional efficacy, and a range of physical and psychological health issues. At the organizational level, burnout contributes to increased absenteeism, higher staff turnover, reduced team productivity, and lower quality of care. Additionally, the effects extend to personal life, impacting relationships, life satisfaction, and overall wellbeing.

Evidence indicates that effective prevention and mitigation require holistic strategies that combine individual-level interventions, such as resilience training, stress management, and psychological support, with organizational measures including workload optimization, supportive leadership, mentoring, flexible schedules, and the promotion of a positive work culture. Integrated interventions consistently show the greatest impact, reducing burnout prevalence, improving employee wellbeing, and enhancing workforce stability.

Looking forward, the future of burnout prevention in healthcare demands adaptation to evolving challenges, including technological changes, telemedicine, growing patient demand, workforce shortages, and increasing expectations for employee wellbeing and inclusivity. Research should focus on longitudinal and interventional studies to better understand causal mechanisms, identify at-risk populations, and evaluate the effectiveness of novel interventions. Special attention should be paid to organizational culture and leadership practices, as supportive and inclusive environments have been shown to buffer the negative effects of chronic stress.

In practice, these findings underscore the need for proactive strategies at multiple levels: organizations must foster environments that promote psychological safety, professional development, and work-life balance; leaders should prioritize supportive and transparent management; and individuals should have access to tools and programs that enhance coping skills and resilience. Only through a coordinated, evidence-based approach can healthcare systems sustainably reduce burnout, safeguard the wellbeing of their workforce, and maintain high-quality patient care.

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