



A Narrative Review on Nurse Burnout: Prevalence, Determinants, and Protective Mechanisms

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Abstract

Introduction: Nurse burnout is a pervasive occupational health concern characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. It arises from excessive workloads, inadequate staffing, and psychosocial stressors, with serious consequences for nurses' well-being, workforce stability, and patient safety.

Methods: A narrative review was conducted using PubMed as the primary database. The search included peer-reviewed original studies, randomized controlled trials, systematic reviews, meta-analyses, and narrative reviews published between 2020 and 2025. Eligible articles focused on burnout prevalence, determinants, and protective factors among nursing populations. The evidence was synthesized into thematic categories covering sociodemographic, occupational, organizational, and psychosocial influences.

Results: Burnout prevalence varied widely, ranging from 14% to over 80%, with the highest levels reported in intensive care, emergency, and COVID-19 units. Younger nurses, women, and those with limited social support were at greater risk. High workload, long shifts, insufficient staffing, and authoritarian leadership emerged as consistent predictors. Protective factors included resilience, collegial and organizational support, professional recognition, and positive work environments. Individual-focused interventions, such as mindfulness and cognitive-behavioral therapy, reduced emotional exhaustion but showed limited long-term effectiveness in the absence of systemic changes.

Conclusion: Burnout in nursing is driven by both individual vulnerabilities and structural workplace factors. Sustainable solutions require multi-level approaches that integrate resilience-building strategies with organizational reforms to protect nurse well-being and ensure safe, effective patient care.

Keywords: Nurse burnout, Occupational stress, Risk factors, Resilience, Workforce stability

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Introduction

Burnout has emerged as a major occupational health concern in nursing, reflecting the cumulative effects of prolonged workplace stress on psychological, physical, and professional well-being. Conceptually, burnout is most commonly understood as a multidimensional syndrome encompassing emotional exhaustion, depersonalization, and diminished personal accomplishment (1). Although initially introduced in psychology by Freudenberger and later operationalized by Maslach, subsequent theoretical models have emphasized its complex and progressive nature, shaped by individual vulnerabilities, organizational demands, and broader social dynamics (1, 2). The World Health Organization (WHO) formally recognized burnout in the *ICD-11* as an occupational phenomenon linked to chronic workplace stress that has not been successfully managed, underscoring its significance as a systemic rather than merely individual problem (3, 4).

In the nursing profession, burnout has become particularly widespread. Nurses face persistent high-intensity demands, including long working hours, rotating shifts, emotionally charged interactions, and life-or-death responsibilities, placing them at heightened risk compared with many other healthcare workers (5, 6). These work-related demands directly impair cognitive functioning, decision-making accuracy, and emotional regulation, thereby undermining professional performance and clinical effectiveness. Prevalence estimates vary depending on the measurement tools used, with higher rates reported when the Copenhagen Burnout Inventory is applied (7). Globally, pooled data suggest that one-third to one-half of nurses experience clinically significant burnout, with marked increases observed during the coronavirus disease 2019 (COVID-19) pandemic (8). Evidence from national surveys further indicates that burnout is not only a personal health concern but also a leading cause of workforce

attrition, with nearly one-third of U.S. nurses reporting burnout as a reason for leaving their positions (9).

The implications of burnout in nursing extend beyond individual suffering. Burnout is consistently associated with poorer nurse quality of life, deterioration in mental health, and reduced resilience among nurses (10-12). At the organizational level, it contributes to absenteeism, turnover, and reduced productivity, creating substantial financial burdens and threatening workforce stability (12). From a process-oriented perspective, burnout disrupts workflow continuity, weakens interdisciplinary collaboration, and reduces adherence to care protocols, all of which negatively affect professional performance. More critically, patient care and safety are directly affected, and systematic reviews have linked nurse burnout to higher rates of medical errors, adverse events, and lower patient satisfaction (13). This dual impact—on both providers and recipients of care—underscores burnout as a significant determinant of healthcare system performance.

Burnout in nurses arises from a complex interplay of sociodemographic, occupational, organizational, and psychosocial factors, further compounded by context-specific stressors such as pandemics, resource shortages, and repeated exposure to trauma (5, 14, 15). Frequently reported determinants include excessive workload, inadequate staffing, role ambiguity, limited autonomy, effort-reward imbalance, and unsupportive managerial practices, all of which intensify chronic occupational stress. Early-career nurses appear to be particularly vulnerable, with burnout episodes in the first years of practice linked to long-term cognitive, emotional, and sleep-related dysfunctions (11). Protective influences such as resilience, social support, and supportive leadership can mitigate these risks; however, structural deficiencies within healthcare environments often limit their effectiveness (8, 12).

Given these multifaceted determinants and far-reaching consequences, synthesizing current evidence on nurse burnout is essential for informing policy, organizational reforms, and targeted interventions. This narrative review, therefore, explores the prevalence and determinants of burnout among nurses by mapping sociodemographic, occupational, organizational, and psychosocial contributors, while also identifying protective and resilience factors that are critical for sustaining the nursing workforce.

Materials and Methods

This narrative review was carried out in accordance with recognized methodological approaches for evidence synthesis in occupational health. The primary aim was to explore the prevalence of burnout among nurses and to identify key determinants, with a focus on sociodemographic, occupational, organizational, and psychosocial influences, as well as protective elements that foster resilience. To this end, a structured literature search was conducted in *PubMed*, selected for its comprehensive coverage of biomedical and nursing research. No

additional databases were searched. The search strategy combined controlled vocabulary and free-text terms using the following Boolean strategy: (“burnout” OR “occupational burnout”) AND (“determinants” OR “risk factors”) AND (“nurse”). To ensure relevance, the search was limited to journals within the nursing and occupational health domains.

Only studies published between 2020 and 2025 were included to capture the most up-to-date evidence, particularly in the post-COVID-19 period during which burnout patterns and associated determinants underwent profound changes. Studies were included if they were published in English, were freely accessible in full text, and employed rigorous designs such as clinical trials, randomized controlled trials, systematic reviews, meta-analyses, or narrative reviews. Eligible articles specifically examined burnout in nursing populations and reported burnout prevalence, risk factors, or resilience-related aspects. The inclusion criteria were studies addressing nurse burnout with clear reporting of prevalence or determinants. Studies were excluded if they did not focus on nurses, were published in languages other than English, or addressed occupational outcomes unrelated to burnout.

Study selection followed a structured process. After initial identification of potentially relevant records through PubMed, duplicates were removed, titles and abstracts were screened for relevance, and full texts were subsequently evaluated against the inclusion and exclusion criteria. This process resulted in 23 articles included in the final synthesis.

Data extraction was performed systematically and with attention to detail. Each article was fully reviewed, and key information was extracted on study design, participant characteristics, study setting, assessment tools (e.g., Maslach Burnout Inventory, Copenhagen Burnout Inventory), prevalence estimates, determinants, and resilience/protective factors. To strengthen reliability, overlapping findings were cross-checked across studies, and inconsistencies were addressed through comparative interpretation.

Since this was a narrative review rather than a systematic review, a formal quality appraisal was not undertaken. However, the focus on high-quality evidence (e.g., clinical trials and systematic reviews) was intended to enhance the robustness of the findings. Extracted data were organized thematically into sociodemographic, occupational, organizational, and psychosocial categories, consistent with the conceptual framework outlined in the introduction. This structure enabled an integrative synthesis, which is detailed in the Results section.

Results

Prevalence of Burnout Among Nurses

The reviewed studies consistently demonstrated a high prevalence of burnout among nurses, although estimates varied according to clinical setting, specialty, and measurement tools. Reported prevalence ranged

from 14.3% to over 80% across specialties and countries (16). For example, in intensive care units (ICUs), the prevalence of high emotional exhaustion reached 31%, depersonalization 18%, and low personal accomplishment 46% (17). During the COVID-19 pandemic, prevalence increased substantially, with pooled estimates reaching 59.5% overall (18) and as high as 80.2% among nurses in Asia (19). In palliative care nursing, nearly one-third of nurses reported significant burnout symptoms (20). Similarly, among emergency department staff, burnout affected 43% overall, with nurses representing the most affected professional group (21).

Sociodemographic Determinants

Several sociodemographic factors were consistently associated with burnout. Younger nurses frequently reported higher levels of emotional exhaustion and depersonalization (17, 22), although contradictory results were observed in pediatric ICUs, where both younger and older age were linked to increased risk in different studies (23). Female gender was repeatedly associated with higher burnout, particularly in relation to emotional exhaustion (22, 24, 25). Being single, living alone, and having limited social relationships further heightened vulnerability (17, 26). Personal characteristics such as neuroticism, low self-esteem, and poor coping capacity were also significant predictors of burnout (20, 27).

Occupational and Workload-Related Determinants

Occupational stressors emerged as some of the strongest contributors to burnout. High workload, long working hours, rotating shifts, and inadequate staffing consistently increased burnout risk (16, 20, 28). Nurses working in high-acuity environments such as ICUs, emergency departments, and COVID-19 wards reported significantly higher prevalence of burnout than those in other clinical settings (17, 21, 29). Exposure to frequent death, grief, and traumatic events—particularly in palliative, obstetric, and critical care contexts—further exacerbated emotional exhaustion and compassion fatigue (20, 30). The redeployment of non-specialist staff to ICUs during the pandemic also emerged as a notable occupational determinant (29).

Organizational and Environmental Determinants

Organizational culture and work environment strongly shaped burnout outcomes. Insufficient resources, lack of personal protective equipment (PPE), inadequate training, and poor administrative support were recurrent stressors during pandemic conditions (31–33). Workplace violence, including both verbal and physical abuse, was also strongly associated with emotional exhaustion and depersonalization, disproportionately affecting nurses in high-stress specialties (24). Leadership style and perceived organizational support were particularly influential, with authoritarian leadership, lack of recognition, and value misalignment contributing significantly to burnout (34, 35). Conversely, supportive leadership, professional

recognition, and empowerment were identified as important protective factors (29, 36).

Psychosocial and Interpersonal Determinants

Burnout was closely linked to psychosocial stressors, including fear of infection, stigma, and concern for family members during infectious disease outbreaks (26, 31). Depression, anxiety, insomnia, and moral distress frequently co-occurred with burnout, thereby worsening emotional exhaustion (32, 37). Social support from colleagues, family members, and peers consistently emerged as a protective factor, reducing risk and enhancing resilience (22, 25, 36). In contrast, lack of social support was a strong predictor of burnout (26).

Protective and Resilience Factors

Despite the widespread risk, several protective factors were identified. Resilience, psychological empowerment, emotional intelligence, and self-efficacy were consistently associated with lower burnout levels (17, 27, 36). Social and organizational support, adequate PPE, effective coping strategies, and professional recognition also buffered against emotional exhaustion (22, 29). Spirituality and religious practices, including prayer and meditation, were found to mitigate burnout in several contexts (38). In addition, opportunities for personal growth and professional development appeared to help nurses adapt more effectively to high-stress work environments (36).

Discussion

This narrative review underscores that burnout in nursing is not merely an individual challenge but a systemic occupational health issue with profound implications for healthcare delivery. Consistent with prior research, the reviewed evidence confirms that high workload, insufficient staffing, inadequate leadership, and emotionally demanding environments remain major drivers of burnout (39, 40). These findings directly correspond to the occupational and workload-related determinants and the organizational and environmental factors identified in the results, highlighting their consistent influence across diverse healthcare settings. The studies collectively highlight that burnout manifests heterogeneously across contexts, as seen in the latent profiles identified among oncology nurses in China and the variable prevalence rates reported across European and Middle Eastern hospitals (41, 42). Such variation reflects the multifactorial etiology of burnout, shaped by individual vulnerabilities, organizational culture, and external crises such as the COVID-19 pandemic. Importantly, this review reaffirms that burnout compromises not only nurses' psychological and physical health but also the quality and safety of patient care, contributing to adverse events, medical errors, and mortality (42, 43). This dual burden situates burnout as both a workforce retention challenge and a critical determinant of health system performance.

A striking theme emerging from the evidence is the role of psychosocial factors—particularly loneliness, insomnia,

and limited social connectedness—in exacerbating burnout. The longitudinal findings of Świtaj et al extend the Job Demands–Resources (JD–R) model by identifying loneliness and insomnia as mediators of exhaustion and cynicism, highlighting that social and sleep health are often neglected but potent determinants of resilience (44). These psychosocial pathways are consistent with the present review’s results, which highlighted fear of infection, depression, anxiety, and moral distress as significant contributors. Similarly, the mediating role of compassion satisfaction between burnout and patient safety management activities, reported by Ryu and Shim, points to the buffering effects of positive psychological states (45). Such protective mechanisms reflect the resilience-related factors identified in our results, including social support, professional recognition, and opportunities for personal growth. Collectively, these insights broaden the burnout discourse beyond structural constraints alone, underscoring the need to foster both interpersonal support systems and individual psychological resources. However, the persistence of high burnout prevalence across specialties suggests that, without organizational reforms, individual resilience and coping strategies cannot yield sustainable improvements (46, 47).

Another critical finding of this review is the strong and consistent association between the nursing work environment and burnout outcomes. Favorable environments characterized by adequate staffing, collaborative leadership, and association recognition mechanisms consistently reduce burnout and enhance engagement (40). Conversely, toxic environments, poor nurse–physician collaboration, and authoritarian leadership styles accelerate exhaustion and depersonalization (39). Schlak et al further demonstrated that supportive environments—exemplified by Magnet hospitals—attenuate the adverse impact of burnout on patient mortality and safety outcomes, providing compelling evidence that organizational culture acts as a structural determinant of both clinician well-being and patient outcomes (43). These results align with the organizational and environmental determinants detailed in the results section, including leadership style, resource availability, and workplace violence. These findings suggest that improving organizational environments, rather than relying narrowly on individual-level interventions, represents one of the most sustainable pathways to reducing burnout prevalence and mitigating its downstream consequences.

Intervention research reveals both progress and limitations. Mindfulness-based interventions, cognitive-behavioral therapy, yoga, and professional development programs demonstrate generally consistent short-term benefits in reducing emotional exhaustion and depersonalization (48–50). However, effects on personal accomplishment are inconsistent and often unsustainable, likely because this burnout dimension is heavily shaped by systemic workplace conditions rather

than individual coping capacity alone. Notably, many interventions remain individual-focused, with limited emphasis on structural reforms, despite increasing evidence that organizational-level strategies—such as workload optimization, supportive leadership practices, and staffing improvements—are more effective in the long term (46, 47). While blended and digital approaches offer accessibility and scalability, high attrition rates and limited long-term follow-up reduce confidence in their sustained effectiveness (47). Taken together, these findings suggest that multi-level strategies that combine individual resilience-building approaches with organizational reform are needed to meaningfully reduce burnout and protect patient safety. This aligns with the protective and resilience factors identified in the results, illustrating that systemic and personal interventions are both crucial.

This review has several strengths. By synthesizing recent evidence, including systematic reviews, longitudinal studies, and large-scale surveys, it provides an up-to-date and relatively comprehensive overview of burnout prevalence, determinants, protective factors, and intervention strategies. The inclusion of diverse healthcare contexts—from oncology hospitals in China to European and Middle Eastern settings—enhances the generalizability of findings and reinforces the global nature of nurse burnout (41, 42, 44). Moreover, integrating both individual-level factors (e.g., loneliness, insomnia, compassion satisfaction) and system-level determinants (e.g., leadership, staffing, organizational culture) allows for a more nuanced understanding that avoids reductionist interpretations.

Nonetheless, several limitations must be acknowledged. First, the predominance of cross-sectional design restricts causal inference, making it difficult to determine whether burnout is the cause or consequence of factors such as missed care, absenteeism, or adverse events (39, 40). Second, reliance on self-reported measures introduces the risk of bias, particularly in studies examining sensitive domains such as patient safety (42). Third, geographic representation remains uneven, with a concentration of studies from Asia and Europe, which may limit transferability to low- and middle-income countries where structural challenges may be even more pronounced (40). Intervention studies also show methodological shortcomings, including short follow-up periods, small sample sizes, and high dropout rates, thereby limiting conclusions regarding long-term efficacy (47, 48). Finally, because this study used a narrative review design, while offering thematic depth, it did not include a formal quality appraisal, which may reduce the strength of certainty that can be placed on the conclusions.

Future research should prioritize longitudinal and mixed-method designs to clarify causal relationships between workplace factors, psychosocial stressors, and burnout trajectories. Greater attention should be directed toward underexplored determinants such as loneliness, sleep disruption, and digital work-related stress, which may have

become increasingly salient in post-pandemic contexts (44). Intervention research must also move beyond individual stress-management programs to evaluate organizational-level strategies, including workload redesign, improved staffing ratios, and participatory leadership models. Importantly, multicomponent interventions that combine psychoeducational approaches with systemic reforms appear particularly promising (50). Future studies should also expand their geographic scope to include low-resource settings, where structural constraints are often most severe, and should incorporate longer follow-up periods to assess the sustainability of intervention effects. Finally, integrating objective indicators such as absenteeism, turnover, and clinical performance with self-reported measures would strengthen the evidence base and better inform effective policies. These recommendations directly stem from the dimensions and determinants outlined in the results section, thereby ensuring alignment between the study findings and discussion.

Conclusion

Nurse burnout is a complex occupational health concern with significant consequences for individual well-being, organizational performance, and patient safety. Key risk factors include excessive workload, inadequate staffing, unsupportive leadership, and psychosocial stressors, while resilience, social support, and positive work environments provide protection. Burnout is consistently associated with reduced professional efficacy, increased likelihood of errors, and compromised patient care. Although individual-level interventions, such as mindfulness, cognitive-behavioral therapy, and resilience training, may reduce emotional exhaustion and depersonalization, their impact remains limited in the absence of structural support. Organizational strategies, including adequate staffing, supportive leadership, and healthy practice environments, are essential for sustainable improvement. Addressing burnout as a systemic issue rather than an individual failing is crucial for enhancing nurse well-being and strengthening healthcare systems.

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Competing Interests

None.

Ethical Approval

This narrative review relied exclusively on previously published literature and did not involve direct interaction with human participants, animals, or confidential personal information. Therefore, formal approval from an institutional review board (IRB) or ethics committee was not required. All included studies were drawn from publicly accessible databases and were limited to peer-reviewed, full-text articles published in English in order to maintain transparency and reliability. The review process adhered to international ethical standards for secondary research, in line with the principles of the Declaration of Helsinki and the guidelines of the Committee on Publication Ethics (COPE). Throughout the review, care was taken to accurately represent findings,

appropriately acknowledge original authors, and avoid plagiarism or selective reporting. The evidence synthesis was conducted with integrity, accountability, and respect for the scholarly contributions of others, ensuring alignment with established ethical standards in academic publishing.

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