Determinants of Nurses' Burnout; A Systematic Review

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Information of Article

Article history:
Received: Nov 2025
Revised: Dec 2025
Accepted: Jan 2025
Available online: Jan 2025

Keywords:
Nurses' burnout; determinants; work environment; leadership; patient safety; systematic review.

Abstract
Nurses' burnout has become a pressing global issue with serious consequences for workforce sustainability, patient safety, and overall healthcare system performance. In the wake of increasing clinical complexity, persistent staffing shortages, demanding shift schedules, and mounting organizational pressures particularly in the post-pandemic landscape nurses face elevated risks of burnout across various roles and settings. This systematic review synthesizes recent evidence concerning the factors that contribute to nurses' burnout and explores the resulting outcomes at the individual, organizational, and system levels. Following PRISMA 2020 guidelines, a comprehensive search of multiple electronic databases was conducted to identify peer-reviewed studies involving registered nurses and examining burnout determinants and consequences. The included studies, spanning quantitative, qualitative, and mixed-methods designs, were narratively synthesized and summarized in a review matrix. Findings highlight burnout as a complex, multifactorial phenomenon shaped by the interplay of individual conditions such as fatigue, poor sleep quality, and limited resilience; organizational influences including excessive workload, inadequate staffing, unsupportive leadership, and negative work environments; and broader contextual stressors like those introduced by the COVID-19 pandemic. Emotional exhaustion emerged as the most prevalent and consistently reported dimension of burnout. Burnout was strongly linked to negative outcomes such as diminished job satisfaction, higher turnover intentions, mental health deterioration, and reduced patient safety. Addressing burnout effectively requires multi-level strategies that go beyond individual coping mechanisms and target systemic issues through improved organizational structures, proactive leadership, and supportive workforce policies. Sustainable interventions are essential to protecting nurses' well-being, promoting staff retention, and ensuring the continued delivery of safe, high-quality care.

1. Introduction

Nurses' burnout has emerged as a critical occupational health concern with far-reaching implications for individual well-being, patient safety, and healthcare system sustainability. Burnout is commonly conceptualized as a multidimensional syndrome characterized by emotional exhaustion,

depersonalization, and reduced personal accomplishment, particularly in professions that require sustained interpersonal engagement. Among nurses, high levels of burnout have been consistently documented across clinical settings, reflecting the cumulative impact of emotional labor, workload intensity, and organizational pressures (Phillips et al., 2022). Empirical evidence indicates that burnout among nurses is not an isolated phenomenon but a widespread and persistent issue affecting diverse healthcare contexts. High prevalence rates have been reported in acute care, emergency departments, oncology units, and critical care environments, with burnout frequently exceeding moderate levels (Kabunga & Okalo, 2021). During periods of heightened system strain, such as the COVID-19 pandemic, burnout risk intensified substantially due to increased workload, resource scarcity, and prolonged exposure to critically ill patients (Khan et al., 2022). These findings highlight burnout as both an individual and systemic challenge that demands comprehensive investigation.

The consequences of nurses' burnout extend beyond psychological distress and include adverse professional and organizational outcomes. Burnout has been associated with increased turnover intention, reduced workforce stability, and compromised quality of care delivery (Zheng et al., 2024). In educational and early-career contexts, burnout has also been linked to diminished academic performance and higher dropout risk among nursing students, raising concerns about the long-term sustainability of the nursing workforce (Arian et al., 2023). Such outcomes underscore the urgency of identifying modifiable determinants that contribute to burnout across the nursing career trajectory. Existing research suggests that nurses' burnout arises from a complex interplay of behavioral, organizational, and contextual factors. Individual-level determinants such as resilience, coping capacity, sleep disturbance, and psychological stress have been shown to influence vulnerability to burnout (Młynarska et al., 2022). Organizational factors, including staffing adequacy, workload distribution, leadership style, and work environment characteristics, have also been identified as central drivers of emotional exhaustion and depersonalization (Diehl et al., 2021). Moreover, system-level stressors, such as pandemic-related policy changes and resource constraints, further exacerbate burnout risk by altering working conditions and expectations (Hur et al., 2022).

Despite the growing volume of primary studies examining nurses' burnout, the literature remains fragmented, with variability in study designs, populations, and measured determinants. While several reviews have addressed burnout in specific contexts, such as emergency nursing or COVID-19-related stress, a comprehensive synthesis focusing explicitly on the determinants of nurses' burnout across settings and roles remains limited (Gribben & Semple, 2021). Additionally, inconsistencies in how determinants are categorized and interpreted hinder the translation of evidence into targeted interventions. Therefore, a systematic synthesis of existing evidence is needed to consolidate current knowledge, identify consistent determinants of nurses' burnout, and inform practice, leadership, and policy responses. This systematic review aims to examine and synthesize the determinants of nurses' burnout reported in the empirical literature, with particular attention to individual, organizational, and system-level factors. By clarifying these determinants, the review seeks to support the development of evidence-based strategies to mitigate burnout and strengthen the resilience and sustainability of the nursing workforce.

2. Methodology

This study adopted a systematic review design to synthesize existing empirical evidence on the determinants of nurses' burnout. The review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure methodological transparency, rigor, and reproducibility throughout the review process (Tang et al., 2022). The PRISMA framework guided all stages of the review, including literature identification, screening, eligibility assessment, and final study inclusion. A comprehensive literature search was undertaken using major electronic databases relevant to nursing and healthcare research, including PubMed, CINAHL, Scopus, and Web of Science. The search strategy combined controlled vocabulary and free-text terms related to nurses, burnout, emotional exhaustion, occupational stress, and determinants. The search timeframe was selected to capture contemporary evidence, particularly studies conducted during periods of heightened healthcare system strain such as the COVID-19 pandemic, which has been shown to substantially influence burnout risk among nurses (Khan et al., 2022).

Studies were included if they focused on registered nurses or nursing students and explicitly examined burnout or its core dimensions, including emotional exhaustion, depersonalization, or reduced personal accomplishment. Eligible study designs included quantitative, qualitative, and mixed-methods research, as well as systematic reviews that provided determinant-level evidence relevant to nurses. Only studies published in English were considered. Studies that did not explicitly assess burnout, focused on non-nursing populations, or lacked empirical findings were excluded from the review (Hur et al., 2022). Following database searching, all retrieved records were imported into a reference management system, and duplicate records were removed. Titles and abstracts were screened to assess relevance to the review objectives, followed by full-text screening of potentially eligible studies to confirm inclusion. The study selection process was conducted systematically to ensure consistency with the predefined eligibility criteria, and discrepancies were resolved through consensus (Arian et al., 2023). The overall study selection process is presented visually in Figure 1 using the PRISMA 2020 flow diagram.

Relevant data were extracted from the included studies using a structured data extraction approach. Extracted information included authorship, year of publication, study setting, design, sample characteristics, burnout measurement tools, and reported determinants of burnout. To facilitate systematic comparison and synthesis, the extracted data were organized into a Literature Review Matrix, allowing for the identification of recurring determinants and patterns across studies (Phillips et al., 2022). The methodological quality of included studies was appraised using appropriate critical appraisal criteria aligned with study design, focusing on sampling adequacy, validity of measurement instruments, and robustness of analytical methods. Quality appraisal was undertaken to inform interpretation of findings rather than to exclude studies solely based on methodological limitations (Diehl et al., 2021).

Due to substantial heterogeneity in study designs, populations, settings, and burnout measurement tools, a meta-analysis was not feasible. Instead, a narrative synthesis approach was employed to integrate findings across studies. Determinants of nurses' burnout were synthesized thematically and categorized into individual, organizational, and system-level factors to support structured interpretation and meaningful comparison across healthcare contexts (Gribben & Semple, 2021). Figure 1 presents the PRISMA 2020 flow diagram illustrating the identification, screening, eligibility, and inclusion stages of the study selection process.

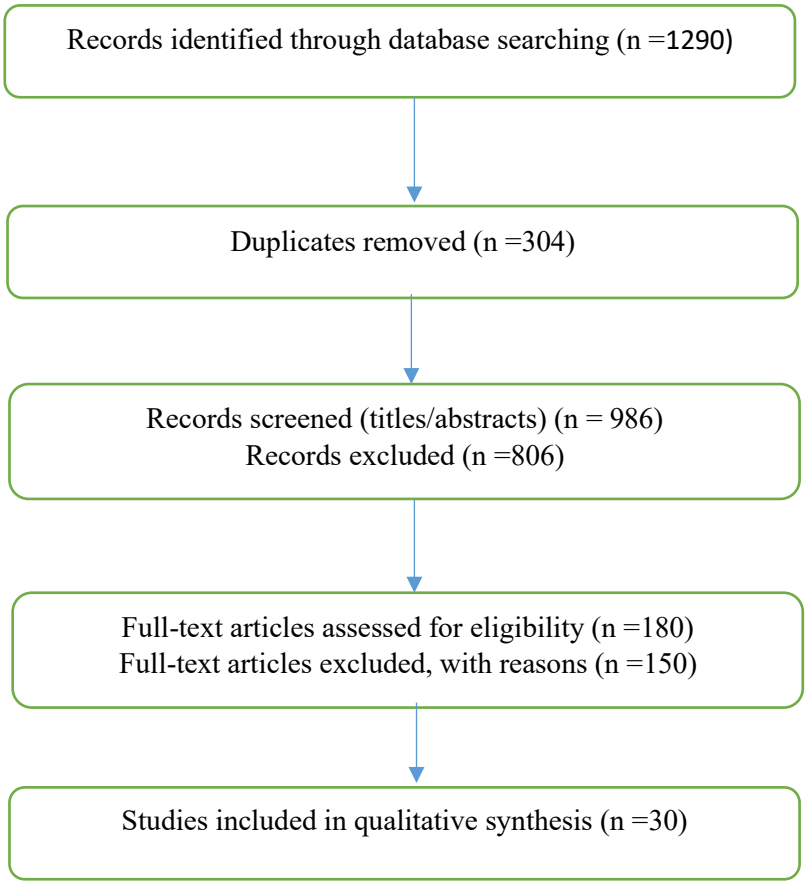

Figure 1. PRISMA-style flow diagram of article search, screening, and selection process

3. Results

3.1 Study Selection and Characteristics

The systematic search and screening process resulted in the inclusion of 30 studies that met the predefined eligibility criteria. The study selection process, including identification, screening, eligibility assessment, and final inclusion, is summarized in Figure 1 (PRISMA 2020 Flow Diagram). The included studies represent a diverse body of evidence examining nurses' burnout across multiple healthcare settings, professional roles, and geographical contexts. The characteristics of the included studies are summarized in Table 1 (Literature Review Matrix). The majority of studies employed cross-sectional quantitative designs, reflecting the predominance of survey-based research in burnout literature. Several studies adopted systematic review or meta-analytic designs, contributing higher-level synthesized evidence on burnout prevalence, determinants, and related outcomes. Qualitative and mixed-methods studies were also included, offering contextual insights into work environment stressors and organizational dynamics.

The included studies were conducted across a wide range of countries, including China, Oman, Belgium, Uganda, Ghana, Australia, South Africa, Poland, Brazil, and the United States, indicating the global

relevance of nurses' burnout. Clinical settings represented in the sample included emergency departments, oncology units, critical care units, general hospital wards, and primary care environments. Some studies also focused on nursing students and nurse managers, expanding the scope of burnout determinants across different stages of the nursing career pathway (Arian et al., 2023). Burnout was most commonly measured using validated instruments, particularly the Maslach Burnout Inventory and its variants, ensuring consistency in the assessment of emotional exhaustion, depersonalization, and personal accomplishment across studies (Wang et al., 2024). Several studies also incorporated additional standardized measures to assess related constructs such as stress, resilience, leadership, organizational support, workload, and mental health outcomes, enabling multidimensional analysis of burnout determinants (Młynarska et al., 2022).

As presented in Table 1, burnout and stress were explicitly examined in all included studies, confirming burnout as the central outcome of interest. Organizational and job-related factors, particularly staffing levels, workload intensity, shift work, and work environment characteristics, were among the most frequently reported determinants (Diehl et al., 2021). Leadership and management variables, including authentic leadership, ethical leadership, and destructive leadership, were examined in several studies and were consistently associated with variations in burnout levels (Al Sabei et al., 2023). Demographic characteristics such as age, gender, nationality, and years of experience were reported as determinants or covariates in multiple studies, although their influence on burnout varied across contexts (Khan et al., 2022). Organizational support and system-level factors, including pandemic-related policy changes and resource constraints, were also prominently featured, particularly in studies conducted during the COVID-19 period (Hur et al., 2022).

Table 1. Literature Review Matrix

No.	Author(s) & Year	Burnout / Stress	Job Satisfaction	Work Environment / Climate	Leadership / Management	Staffing / Workload	Demographics (Age/Gender/SES)	Organizational Support	Policy / System Factors	Turnover Intention
1	Phillips et al. (2022)	✓		✓	✓	✓		✓		✓
2	Młynarska et al. (2022)	✓				✓	✓			
3	Kabunga & Okalo (2021)	✓				✓	✓		✓	
4	Wang et al. (2024)	✓				✓	✓		✓	
5	Tomaszewska et al. (2022)	✓				✓	✓		✓	
6	Arian et al. (2023)	✓					✓			✓
7	Lartey et al. (2021)	✓					✓	✓		
8	Maresca et al. (2022)	✓						✓		

No.	Author(s) & Year	Burnout / Stress	Job Satisfaction	Work Environment / Climate	Leadership / Management	Staffing / Workload	Demographics (Age/Gender/SES)	Organizational Support	Policy / System Factors	Turnover Intention
9	Castillo-González et al. (2024)	✓				✓	✓			
10	Al Sabei et al. (2022)	✓		✓	✓	✓		✓	✓	✓
11	Gribben & Semple (2021)	✓		✓		✓	✓			
12	Diehl et al. (2021)	✓			✓	✓		✓		
13	Al Sabei et al. (2025)	✓				✓	✓			
14	Cheng et al. (2023)	✓				✓	✓			
15	Al Sabei et al. (2023)	✓		✓	✓	✓		✓		
16	Luo et al. (2022)	✓			✓			✓	✓	
17	Palvimo et al. (2023)	✓			✓	✓		✓		
18	Parkinson-Zarb et al. (2023)	✓		✓	✓	✓	✓			
19	Tsukamoto et al. (2022)	✓								
20	Shi et al. (2023)		✓	✓					✓	
21	Williams et al. (2025)	✓	✓	✓		✓			✓	✓
22	Lambert et al. (2024)	✓			✓					✓
23	Van Zyl-Cillié et al. (2024)	✓			✓		✓			
24	Haun (2025)					✓			✓	
25	Mawuena & Mannion (2022)	✓				✓			✓	
26	Hur et al. (2022)	✓					✓		✓	
27	Khan et al. (2022)	✓				✓	✓		✓	
28	Tang et al. (2022)	✓							✓	
29	Qtait et al. (2025)	✓		✓		✓		✓		
30	Zheng et al. (2024)	✓								✓

3.2 Determinants of Nurses' Burnout

The findings from the included studies indicate that nurses' burnout is a multidimensional phenomenon influenced by a combination of individual, organizational, and system-level determinants. Across diverse healthcare settings and geographical contexts, burnout was consistently associated with elevated levels

of emotional exhaustion, depersonalization, and reduced personal accomplishment, reflecting sustained exposure to occupational stressors inherent in nursing practice (Phillips et al., 2022). Individual-level determinants were frequently reported as significant contributors to burnout. Psychological stress, sleep disturbance, and mental health challenges emerged as prominent risk factors, particularly among nurses working rotating shifts or prolonged hours. Sleep disorders were identified as independent predictors of burnout, highlighting the critical role of circadian disruption in emotional exhaustion and reduced coping capacity (Młynarska et al., 2022). During high-pressure periods such as the COVID-19 pandemic, nurses' exposure to fear of infection, emotional strain, and prolonged vigilance further intensified burnout risk (Tomaszewska et al., 2022). Demographic characteristics, including age, gender, nationality, and years of experience, were also examined, although their effects on burnout varied across studies and settings (Khan et al., 2022).

Organizational and job-related determinants were among the most consistently reported factors influencing nurses' burnout. High workload, staffing shortages, and inadequate rest were repeatedly associated with increased emotional exhaustion and depersonalization. Studies conducted during the COVID-19 pandemic demonstrated that both increased and uneven workload distributions significantly elevated burnout risk, underscoring the importance of workload balance rather than workload volume alone (Kabunga & Okalo, 2021). Rotating shift work and night shifts were also strongly linked to burnout, particularly emotional exhaustion, due to their disruptive effects on sleep patterns and work–life balance (Qtait et al., 2025). Work environment characteristics played a central role in shaping burnout outcomes. Unfavorable practice environments, high job demands, workplace violence, and exposure to aggressive behavior were associated with higher burnout levels among nurses. Experiences of verbal abuse and physical violence were shown to significantly increase emotional exhaustion and depersonalization, emphasizing the psychological toll of unsafe work environments (Tsukamoto et al., 2022). In specialized settings such as oncology and emergency care, emotional demands related to patient acuity and end-of-life care further compounded burnout risk (Gribben & Semple, 2021).

Leadership and management factors emerged as critical determinants of burnout across multiple studies. Authentic and ethical leadership styles were consistently associated with lower burnout levels, whereas destructive or unsupportive leadership amplified emotional exhaustion. Effective leadership behaviors, including transparency, ethical conduct, and managerial support, were shown to mitigate burnout by fostering trust and psychological safety within nursing teams (Al Sabei et al., 2023). Conversely, destructive leadership and poor managerial practices intensified the negative effects of job demands on burnout (Palvimo et al., 2023). Organizational support was identified as a protective factor that buffered the relationship between occupational stressors and burnout. Perceived organizational support, access to resources, and supportive teamwork reduced burnout by enhancing nurses' sense of value and resilience. Among nurse managers, organizational support indirectly reduced burnout through its positive influence on leadership capacity and resilience, illustrating the interconnected nature of organizational determinants (Luo et al., 2022).

Coping strategies supported at the organizational level, such as emotional support and physical self-care initiatives, were also associated with reduced burnout symptoms (Maresca et al., 2022). System-level and policy-related determinants further influenced burnout, particularly during periods of healthcare

system disruption. Resource constraints, inadequate personal protective equipment, and rapid policy changes during the COVID-19 pandemic significantly increased burnout risk by altering working conditions and increasing uncertainty (Khan et al., 2022). Post-pandemic workforce policies, including staffing models and retention strategies, were also highlighted as influential in shaping burnout trajectories and workforce sustainability (Haun, 2025).

3.3 Outcomes Associated with Nurses' Burnout

The findings from the included studies demonstrate that nurses' burnout is associated with a wide range of adverse outcomes affecting individuals, healthcare organizations, and health systems. At the individual level, burnout was consistently linked to psychological distress, emotional exhaustion, and deteriorating mental health, which undermined nurses' ability to cope with professional demands. Elevated burnout levels were associated with increased stress, fatigue, sleep disturbance, and emotional depletion, particularly among nurses exposed to prolonged workload and shift-related disruptions (Młynarska et al., 2022). Several studies highlighted the negative impact of burnout on nurses' professional functioning and well-being. Burnout was shown to impair work engagement, resilience, and perceived competence, increasing vulnerability to emotional exhaustion and depersonalization. Nurses experiencing high burnout reported reduced capacity to manage job demands and sustain motivation, particularly in high-intensity clinical environments such as emergency and critical care settings (Phillips et al., 2022). Among nursing students, burnout was associated with diminished academic performance and increased risk of attrition, raising concerns about long-term workforce sustainability (Arian et al., 2023).

Workforce-related outcomes were prominently reported across the reviewed literature. Burnout was strongly associated with increased turnover intention and reduced intent to remain in the profession. Studies examining turnover dynamics demonstrated that emotional exhaustion and reduced personal accomplishment were central drivers of nurses' intentions to leave their positions, particularly when combined with unfavorable work environments and limited organizational support (Zheng et al., 2024). Ethical and supportive leadership was shown to mitigate these effects, whereas exposure to bullying and workplace incivility intensified burnout and increased nurses' likelihood of quitting (Lambert et al., 2024). Patient safety and quality of care outcomes were also affected by nurses' burnout. Burnout was associated with increased incidence of adverse patient events, reduced vigilance, and compromised clinical performance. In critical care settings, emotional exhaustion among nurses was linked to higher rates of nurse-reported adverse events, underscoring the implications of burnout for patient safety and care quality (Al Sabei et al., 2025).

Burnout-related fatigue and cognitive strain further contributed to reduced attention and impaired decision-making in complex clinical environments. Organizational and system-level outcomes were evident in studies conducted during periods of healthcare system strain. Burnout contributed to workforce instability, staffing shortages, and reduced organizational performance, particularly during the COVID-19 pandemic. High burnout prevalence among nurses was associated with increased absenteeism, reduced productivity, and weakened capacity of healthcare systems to respond effectively to public health crises (Hur et al., 2022). Policy-level consequences, including the "great resignation" and increased

reliance on temporary staffing models, were highlighted as downstream effects of sustained burnout exposure (Haun, 2025).

4. Discussion

4.1 Synthesis of Key Findings and Interplay of Determinants

This systematic review synthesizes evidence demonstrating that nurses' burnout is a multifactorial phenomenon shaped by the dynamic interaction of individual, organizational, and contextual determinants. Across diverse clinical settings and geographic regions, burnout consistently emerged as a response to sustained exposure to high job demands combined with insufficient personal and organizational resources. Emotional exhaustion was identified as the most prominent burnout dimension, frequently arising when workload intensity, staffing shortages, and time pressure exceeded nurses' coping capacity (Diehl et al., 2021). At the individual level, psychological and physiological factors played a critical role in shaping burnout vulnerability. Sleep disturbances, fatigue, and stress were repeatedly associated with elevated burnout risk, particularly among nurses engaged in shift work and rotating schedules that disrupted circadian rhythms (Młynarska et al., 2022). Personal resilience and coping capacity functioned as protective mechanisms, with higher resilience buffering the negative effects of chronic stressors and reducing emotional exhaustion and depersonalization (Castillo-González et al., 2024). However, resilience alone was insufficient to offset burnout in environments characterized by persistent organizational strain.

Organizational determinants emerged as central drivers of burnout, particularly staffing adequacy, leadership quality, and work environment characteristics. Inadequate staffing and excessive workload intensified emotional exhaustion and reduced nurses' sense of professional accomplishment, especially in high-acuity settings such as emergency and critical care units (Al Sabei et al., 2025). Leadership style significantly shaped burnout outcomes, with authentic and ethical leadership associated with lower burnout through enhanced managerial support, transparency, and ethical conduct (Al Sabei et al., 2023). Conversely, destructive leadership and workplace bullying exacerbated burnout by eroding psychological safety and increasing emotional strain (Lambert et al., 2024). The interplay between job demands and job resources was particularly evident in studies applying the Job Demands–Resources framework. High job demands such as workload, emotional labor, workplace violence, and exposure to critically ill patients increased burnout risk, while job resources including teamwork, recognition, autonomy, and organizational support mitigated these effects (Palvimo et al., 2023).

Supportive peer relationships and effective interprofessional collaboration further moderated burnout, highlighting the importance of relational work environments in sustaining nurse well-being (Shi et al., 2023). Contextual and situational factors, especially during the COVID-19 pandemic, amplified existing burnout determinants and introduced new stressors. Shortages of personal protective equipment, rapid changes in work conditions, and prolonged exposure to pandemic-related uncertainty significantly increased burnout prevalence across healthcare systems (Kabunga & Okalo, 2021). Pandemic-related

workload fluctuations, whether excessive or insufficient, disrupted nurses' sense of control and professional stability, further intensifying burnout risk (Khan et al., 2022). These findings illustrate how external shocks can exacerbate burnout by destabilizing both individual coping mechanisms and organizational support structures.

4.2 Policy, Practice, and Theoretical Implications

The findings of this systematic review carry important implications for health policy, nursing practice, and theoretical advancement in burnout research. At the policy level, the consistent association between burnout and staffing inadequacy highlights the urgent need for workforce policies that prioritize safe nurse-to-patient ratios and sustainable workload distribution. Evidence showing strong links between emotional exhaustion and adverse patient events underscores burnout as not only a workforce issue but also a patient safety concern, warranting inclusion in national healthcare quality and safety agendas (Al Sabei et al., 2025). Policymakers should therefore integrate nurse well-being indicators into workforce planning and regulatory frameworks to strengthen healthcare system resilience.

Health policy responses must also address crisis preparedness and system shocks, as the COVID-19 pandemic revealed how rapidly burnout escalates when protective resources are insufficient. Studies documenting elevated burnout due to personal protective equipment shortages and rapidly changing work conditions emphasize the need for emergency preparedness policies that ensure resource continuity and psychological support for nurses during public health emergencies (Kabunga & Okalo, 2021). Long-term policy strategies should move beyond short-term staffing solutions and focus on structural reforms that enhance retention, reduce turnover, and stabilize the nursing workforce (Haun, 2025).

From a practice perspective, the review highlights the pivotal role of leadership and work environment in shaping burnout outcomes. Supportive, authentic, and ethical leadership practices were consistently associated with lower burnout levels, suggesting that leadership development should be a core component of organizational burnout mitigation strategies (Al Sabei et al., 2023). Nurse managers and healthcare leaders should be equipped with leadership competencies that foster psychological safety, transparency, and ethical conduct, particularly in high-stress clinical settings. Addressing workplace bullying and incivility through clear reporting mechanisms and zero-tolerance policies is also essential, given their demonstrated impact on burnout and turnover intention (Lambert et al., 2024).

Clinical practice interventions should additionally focus on strengthening job resources that buffer the effects of high job demands. Enhancing teamwork, peer support, and interprofessional collaboration has been shown to mitigate emotional exhaustion and promote work engagement (Palvimo et al., 2023). Organizational initiatives that promote adequate rest, flexible scheduling, and sleep hygiene are particularly relevant for nurses engaged in shift and night work, given the strong association between sleep disruption and burnout (Młynarska et al., 2022). Resilience-building programs may further support nurses' coping capacity, but the evidence suggests that such interventions are most effective when embedded within supportive organizational structures rather than implemented in isolation (Castillo-González et al., 2024).

Theoretical implications of this review reinforce and extend existing burnout frameworks, particularly the Job Demands–Resources model. The synthesis demonstrates that burnout among nurses arises from the imbalance between escalating job demands and insufficient job resources, with leadership, organizational support, and team climate functioning as critical moderating factors (Diehl et al., 2021). The observed mediating roles of leadership and resilience in the relationship between organizational support and burnout further support the integration of relational and psychosocial constructs into burnout theory (Luo et al., 2022). These findings suggest that future theoretical models should adopt multilevel perspectives that account for individual, organizational, and system-level interactions.

4.3 Comparison with Existing Reviews, Limitations, and Future Research Directions

The findings of this systematic review are broadly consistent with existing reviews that have documented high prevalence and multifactorial determinants of burnout among nurses, while also extending prior evidence by integrating recent post-pandemic studies and diverse analytical approaches. Similar to earlier reviews, this synthesis confirms that emotional exhaustion is the dominant burnout dimension among nurses and is closely linked to excessive workload, shift work, and psychological stress (Hur et al., 2022). In line with systematic evidence focusing on COVID-19–related burnout, this review reinforces that pandemic conditions amplified pre-existing occupational stressors rather than introducing entirely new determinants (Tang et al., 2022).

Compared with prior reviews that primarily emphasized individual and occupational stressors, the present review places greater emphasis on organizational and relational determinants. Reviews examining coping strategies and resilience highlighted the protective role of personal resources, which aligns with the current findings regarding resilience as a buffering factor against burnout (Maresca et al., 2022). However, this review advances existing literature by demonstrating that resilience is most effective when supported by favorable leadership and work environments, rather than as a standalone individual attribute (Castillo-González et al., 2024). This multilevel perspective strengthens theoretical coherence across studies. Despite the breadth of evidence included, several limitations should be acknowledged. Most of the primary studies employed cross-sectional designs, limiting causal inference and making it difficult to determine the temporal direction of relationships between burnout and its determinants. This limitation was also noted in prior reviews examining burnout during health crises, highlighting a persistent methodological gap in the literature (Hur et al., 2022). Additionally, heavy reliance on self-reported measures such as the Maslach Burnout Inventory introduces the potential for response bias and common method variance, particularly in high-stress contexts.

Another limitation relates to heterogeneity across studies in terms of settings, measurement tools, and population characteristics. Differences in healthcare systems, cultural contexts, and organizational structures reduce the comparability of findings and limit the generalizability of conclusions across regions. Although some studies employed advanced analytical approaches, including network analysis and machine learning, these methods remain underutilized in burnout research and require further validation across diverse nursing populations (Van Zyl-Cillié et al., 2024). Furthermore, relatively few studies focused on nurse managers, students, or specialized nursing roles, indicating an imbalance in population coverage.

Future research should prioritize longitudinal and mixed-method designs to clarify causal pathways and capture the dynamic evolution of burnout over time. Prospective studies are particularly needed to examine how organizational interventions, leadership development, and staffing reforms influence burnout trajectories and workforce retention. Research examining rotating shift work and scheduling practices should incorporate standardized burnout measures and objective workload indicators to improve comparability and rigor (Qtait et al., 2025). Expanding the use of multilevel modeling and systems-based approaches may further illuminate interactions between individual, organizational, and policy-level determinants.

In addition, future reviews and empirical studies should more explicitly integrate theoretical frameworks such as the Job Demands–Resources model and conservation of resources theory to enhance conceptual clarity and cumulative knowledge development. There is also a need for intervention-focused research evaluating the effectiveness of policy-driven and organizational-level strategies, particularly in post-pandemic healthcare systems facing workforce shortages and increased service demand (Haun, 2025). Addressing these gaps will strengthen the evidence base and support the development of sustainable, evidence-informed strategies to mitigate nurses' burnout.

5. Conclusion

This systematic review provides a comprehensive synthesis of the determinants and outcomes of nurses' burnout, highlighting its persistent and multifaceted nature across diverse healthcare settings. The evidence demonstrates that burnout is primarily driven by the cumulative interaction of individual vulnerabilities, demanding work conditions, and organizational shortcomings, rather than by isolated factors. Emotional exhaustion emerged as the most prevalent dimension of burnout, reflecting the sustained psychological and physical strain experienced by nurses in environments characterized by high workload, staffing shortages, shift work, and exposure to complex patient care demands. The review further shows that nurses' burnout is associated with significant adverse consequences at individual, organizational, and system levels. Burnout undermines nurses' mental well-being, work engagement, and professional fulfillment, while simultaneously increasing turnover intention and workforce instability.

At the organizational level, burnout contributes to compromised patient safety, reduced quality of care, and diminished healthcare system performance, particularly during periods of crisis such as the COVID-19 pandemic. These findings underscore burnout as a critical issue that extends beyond personal distress to threaten the sustainability of healthcare delivery. Importantly, the synthesis indicates that protective factors such as supportive leadership, adequate staffing, positive work environments, and organizational support can mitigate burnout when implemented in a coordinated and systemic manner. While individual-level strategies such as resilience and coping skills play a role, they are insufficient in isolation and must be complemented by structural and policy-level interventions. Addressing nurses' burnout therefore requires an integrated approach that aligns workforce planning, leadership development, and organizational culture with the goal of promoting nurse well-being.

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