

Toward a Unified Framework of Burnout and Workload in Emergency Care Nursing: A Systematic Review and Conceptual Integration

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ABSTRACT

Background: Due to the urgent and unpredictable nature of their clinical settings, emergency care nurses are frequently exposed to high work demands. These persistent pressures can contribute to emotional exhaustion, reduced job satisfaction, and, ultimately, burnout, which significantly impacts their mental health and overall performance. **Objectives:** This study aims to synthesize the existing theory of burnout and workload in emergency nursing and integrate it into a framework model, addressing gaps in the existing literature. **Methods:** A systematic literature review was conducted using PRISMA guidelines. A total of 900 relevant articles published between 2022 and 2024 from the Scopus and Science Direct databases were analyzed. This review includes studies on burnout and workload models relevant to emergency nursing. **Results:** This review identified 11 relevant articles highlighting the link between burnout and workload. It deliberately prioritized studies that concurrently address validated theoretical models of burnout, operational definitions or measurements of workload, and empirical data from emergency department nurses. This tripartite criterion ensured conceptual coherence and contextual relevance, aligning with our aim to develop an integrated framework. **Conclusion:** This review underscores that burnout among emergency nurses is inextricably linked to multidimensional workload drivers ranging from shift intensity and patient acuity to environmental stressors and cannot be effectively mitigated through isolated interventions. By synthesizing empirical evidence into a unified theoretical framework, this study provides a foundation for context-sensitive, system-level strategies that simultaneously address structural demands and enhance psychological resilience, ultimately safeguarding both workforce well-being and patient care quality in high-acuity settings.

Keywords: *Burnout Professional; Emergency Nursing; Healthcare Workforce; Workload*

INTRODUCTION

Emergency Departments (EDs) represent high-acuity clinical environments characterized by unpredictable patient inflows, time-critical interventions, and complex decision-making under pressure. These inherent demands are further intensified by staffing shortages, resource constraints, and the emotional toll of managing life-threatening conditions (Galanis *et al.*, 2021; Li *et al.*, 2024). Effective management of such demands requires robust organizational support, clear role delineation, and evidence-based workflow protocols to sustain both staff well-being and patient safety. Prolonged exposure to these elevated job demands, without adequate buffering resources, significantly increases the risk of burnout among emergency nurses. Burnout, manifested through emotional exhaustion, depersonalization, and reduced personal accomplishment, compromises not only individual mental health but also the quality and continuity of patient care (Caulfield *et al.*, 2023; Huang *et al.*, 2024). Health workers face dire consequences, have their dignity degraded, experience significant fatigue, and consume psychological resources when their work and professional environment are

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not properly organized (Nagel *et al.*, 2025; Soola *et al.*, 2022). On a global level, in high-risk work environments such as emergency units, physical and mental fatigue often occurs due to the high workload experienced by nurses (Galanis *et al.*, 2021; Li *et al.*, 2024; Wu *et al.*, 2025). Understanding the interplay between workload dynamics and burnout mechanisms is therefore critical for developing context-sensitive interventions in emergency nursing.

Numerous studies have found that emergency nurses have a higher risk of burnout than nurses in other units. Emergency nurses have developmental potential from work stress, including acute stress disorder, physical exhaustion, emotional exhaustion, and post-traumatic stress, as well as secondary trauma stress (Caulfield *et al.*, 2023; Jachmann *et al.*, 2025). However, high resilience or adequate employee preparation for future attacks has been shown to reduce the risk of burnout and perceived stress (Edú-valsania *et al.*, 2022). Management is important in preventing violence and its consequences on emergency nurses (Pien *et al.*, 2025; Schablon *et al.*, 2022).

The strong relationship between high job demands and decreased nurse well-being has been underscored by workload theories such as the Demand-Control Model and JD-R. In nursing, controlling a high workload has been shown to increase job satisfaction and reduce negative emotions (Junaković & Macuka, 2021). Data indicate that high workload demands and work time pressures are strongly associated with increased burnout and decreased job satisfaction among health workers (Khamisa *et al.*, 2025; Romero-Carazas *et al.*, 2024). Likewise, mastery of work control and social support in the workplace can improve the welfare of emergency nurses (Liao *et al.*, 2025; Yuan *et al.*, 2021).

However, despite extensive literature on nurse burnout, existing models often treat workload and burnout as distinct constructs, overlooking their dynamic, bidirectional interactions within the unique context of emergency care. Emergency departments present distinct stressors, including patient acuity variability, shift irregularity, and exposure to trauma, that necessitate a context-specific theoretical integration (Parizad *et al.*, 2026; Wang *et al.*, 2026). This study addresses this gap by synthesizing empirical evidence to develop a unified framework that explicitly links multidimensional workload drivers with burnout pathways among emergency nurses (Arnold *et al.*, 2026), thereby enabling more precise, system-level interventions (LaFontaine, 2025; Nantsupawat *et al.*, 2024). Compared to a holistic view combining workload and fatigue studies, it can lead to more effective interventions and resilience-building strategies (Habeger *et al.*, 2022). However, some literature suggests that addressing burnout through individual coping strategies and resilience training can be beneficial, even if the workload factor is not explicitly examined (Ghiya & Wilson, 2022).

This research is very important because it can address existing gaps and contribute to the development of a strong conceptual framework for understanding the relationship between burnout and emergency nurse workload (Provost *et al.*, 2026). By formulating an integrated framework grounded in existing theories, this research is expected to guide the development of more targeted, context-specific interventions to improve nurses' welfare and service quality. Therefore, this study aims to systematically synthesize burnout and workload models and indicators in emergency nursing.

METHODOLOGY

Article Selection

PRISMA has been widely recognized as a well-suited methodology for conducting systematic reviews of articles. This approach incorporates up-to-date elements that can avoid changes to real data. Various studies have widely applied the PRISMA methodology (Page *et al.*, 2021). The PRISMA process in literature review is carried out in the following stages (Paul *et al.*, 2021): (1) determining the research question, (2) collecting the articles to be processed, (3) conducting a selection process based on the research question, and finally (4) analyzing the selected articles in their entirety. The literature review will identify critical questions to obtain specific, detailed data on burnout and workload models and their indicators among emergency nurses.

Research Questions

The research questions in this systematic review (Riedel *et al.*, 2021) were structured using the PICO framework (Hagen *et al.*, 2026; Somma *et al.*, 2026) as follows:

P (Population) - nurses who work in the emergency department of a hospital.

I (Intervention/Exposure) - the workload and burnout model applied in emergency nursing.

C (Comparison) - not applicable (studies with or without specific theoretical models were considered).

O (Outcome) - identified models/theories and their indicators used to measure workload and burnout.

The questions are mainly focused on:

(RQ1): A burnout model to be applied in the context of emergency nursing

(RQ2): A workload model to be applied in the context of emergency nursing

(RQ3): Burnout and workload indicators in the context of emergency nurses

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Papers published in Scopus and Science Direct	Books, reviews, short articles, and magazine articles
Published between 1 January 2022 and 28 December 2024	-
Available in full-text	-
Papers written in English	-
Articles should address specific word combinations. i.e., (burnout OR workload) AND (model OR theory) AND (“emergency nurse” OR “emergency department nurse”)	Articles do not include a specific word.

Inclusion Criteria

Obtained from the Scopus and ScienceDirect databases, appropriate articles and reviews were sourced from publications in the last three years, from 2022 to 2024. The search process used relevant keywords related to burnout models, workloads, and indicators applicable to the emergency nursing context. Only articles written in English were considered, while articles that did not meet the search criteria were excluded from the selection.

Exclusion Criteria

The next step was to identify articles that fulfilled the criteria and then analyze them, adjusting them to the inclusion criteria in Table 1. After determining the keywords, 900 relevant articles were obtained from the Scopus and ScienceDirect databases. Then, articles from the time range (January 2022 - December 2024) were selected, leaving 256 articles. After being selected based on duplication, 167 articles were obtained. Subsequently, themes and abstracts were screened to ensure that all selected articles were in English. This process ultimately selected 14 relevant articles. The next step was to examine the research methodology adopted in the article; research unrelated to the established criteria and irrelevant to burnout and workload in emergency nurses was excluded. Ultimately, 11 articles were selected as the most suitable for review.

Screening Process

A comprehensive literature search was conducted to identify relevant studies for review. Four authors (HW, IA, MU, and AG) independently screened the titles and abstracts according to the predefined inclusion criteria. Any discrepancies during the screening process were discussed and resolved through consensus with a fifth reviewer (IS).

Analysis Method

Subsequently, full-text articles were independently assessed by four authors, and disagreements were resolved through discussion with the fifth reviewer.

Data Extraction

For the data extraction process, HW, IA, MU, and AG independently extracted eligible studies using a

standardized data extraction form. The extracted data included authorship, year of publication, methodological characteristics (study design, participants, and data analysis), nursing-related interventions or theoretical models applied, and key research findings.

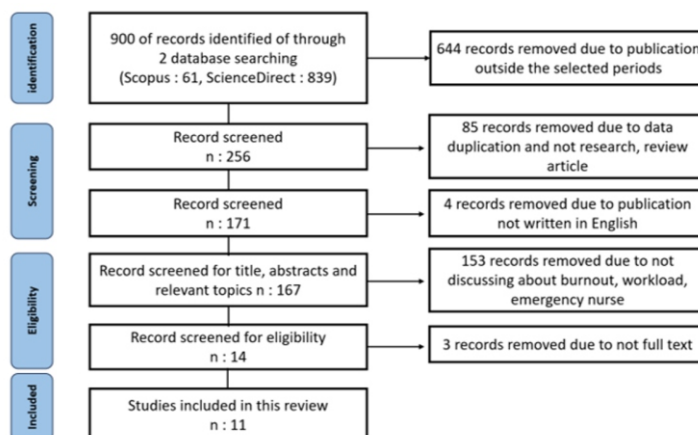


Figure 1: PRISMA Flowchart

Figure 1 shows three stages in the article selection process: Eliminating articles that do not meet the criteria and identifying more relevant articles. Finally, the eleven articles to be reviewed were selected. These eleven selected articles were published between 2022 and 2024 and are part of the scientific publications indexed in Scopus.

RESULTS

The research articles obtained were spread across various countries and analyzed, including:

Table 2: Analysis and Characteristic of the Article

Author (Year)	Country	Study Focus	Burnout Factors	Workload Factors	Key Topic	Key Findings
Wang <i>et al.</i> (2024)	China	Burnout and PTSD	Marital status, shift schedule	Work intensity	Predictors of burnout in the emergency context	Work schedules predict burnout
Luo <i>et al.</i> (2024)	China	Mental workload	Psychological strain	Unidentified patients	Unidentified patients and workload challenges	Increased mental workload
Zhang <i>et al.</i> (2024)	China	Well-being	Emotional exhaustion	Work demands	Role of resilience in reducing burnout	Resilience reduces burnout
Rantung <i>et al.</i> (2024)	Indonesia	Social process	Work pressure	Social processes	Professional work outcomes	Adaptive coping mechanisms
Soto-Castellón <i>et al.</i> (2023)	Spain	Mental burden	Mental burden	Cognitive load	Subjective workload in emergency nurses	High subjective workload
Chahbounia & Gantare (2023)	Morocco	Stress and burnout	Stress and burnout	Work stress	Coaching interventions	Coaching reduces burnout
Hetherington <i>et al.</i> (2024)	Australia	Burnout experience	Role stress	Role ambiguity	Role changes and boundaries	Changing roles increases burnout
Benjamin. (2024)	USA	Burnout	Psychosocial stress	Workplace challenges	Psychosocial challenges	Burnout linked to psychosocial burden
Ranta <i>et al.</i> (2024)	Finland	Burnout	Burnout risk	Work environment factors	Work environment factors	Work environment influences burnout and work ability
Barnard <i>et al.</i> (2023)	South Africa	Burnout	High burnout (job strain)	High demand, low resources	Occupational stress	Poor job profile linked to burnout and turnover intention
Power <i>et al.</i> (2022)	UK	Novice nurses	Early career stress	Skill demand	Emergency department challenges	Novice nurses face high stress

The primary focus of the articles studied is burnout, workload, and psychosocial challenges faced by nurses in emergency departments (Wang *et al.*, 2024). Among these studies, Power *et al.* (2022) in the UK

explored novice nurses' experiences with emergency department challenges; Chahbounia and Gantare (2023) in Morocco examined stress, burnout, and coaching-based management interventions; while Hetherington *et al.* (2024) in Australia used a narrative approach to investigate burnout related to changing roles and boundaries among emergency nurses

The results show a consistent trend related to factors contributing to burnout among emergency nurses. In China. Wang *et al.* (2024) showed that the number of work schedules and marital circumstances are predictors of burnout, while Luo *et al.* (2024) found that caring for unidentified patients increases emergency nurses' mental workload due to communication and safety challenges. This study emphasizes the importance of actions to manage and control workloads and improve support for work environments.

Table 3: Overview of the Examined Study

No	Authors and Years	Methods	Results
1	Wang <i>et al.</i> (2024)	<p>Sample : 1584 nurses.</p> <p>Phenomena of Interest: Burnout and PTSD in emergency nurses.</p> <p>Design: Cross-sectional survey.</p> <p>Evaluation: Impact of Events Scale-Revised (IES-R) and MBI-GS.</p> <p>Research Type: Quantitative research.</p>	<p>Model Burnout Emotional Exhaustion (EE) Depersonalization (DP) Diminished Personal Accomplishment (PA): Workload Night shifts Type of hospital Long time working Indicators: burnout and workload Risk factor: Marital status, the type of hospital, and night shifts</p>
2	Rantung <i>et al.</i> (2024)	<p>Sample: 29 emergency nurses</p> <p>Phenomena of Interest: The social processes used by emergency nurses to achieve sustainability personally and professionally.</p> <p>Design: Constructivist Grounded Theory Method.</p> <p>Evaluation: Evaluation is carried out through the data's credibility, transferability, and confirmability.</p> <p>Research Type: Qualitative research.</p>	<p>Burnout Model: Touches on the factors that cause burnout, including the workload and stress. Workload: Identify the challenges nurses face in managing high workloads. Indicators: Strategies for coping with workload and burnout. Indicators from the Article Driving forces (intrinsic and extrinsic motivation). Skill and expertise development. Physical and mental health. Peer support and a positive work environment.</p>
3	Soto Castelon <i>et al.</i> (2023)	<p>Sample: 201 emergency nurses</p> <p>Phenomena of Interest: The subjective mental burden of emergency nurses.</p> <p>Design: Descriptive, observational, and cross-sectional.</p> <p>Evaluation: Sociodemographic, working conditions, environmental conditions, personality, and subjective mental load questionnaires.</p> <p>Research Type: Quantitative research.</p>	<p>Burnout Model: Individuals with high neuroticism scores are more prone to burnout. Workload: The amount of time and intensity of care nurses provide to patients, influenced by patient severity and working conditions. Indicators: Mental Load Environmental Conditions Personality Factors</p>
4	Chahbounia and Gantare (2023)	<p>Sample: 7 nurses in the Emergency Department.</p> <p>Phenomena of Interest Stress management in emergency nurses.</p> <p>Design: Quasi-experimental studies with a pilot study approach</p> <p>Research Type: Pilot study.</p>	<p><u>Burnout and Workload Model</u> Burnout: MBI measures three dimensions of burnout: emotional exhaustion, depersonalization, and personal achievement. Workload: Research shows that nurses experience job strains and iso - strains, which are closely related to stress and burnout. Indicators: Emotional exhaustion, depersonalization, and personal achievement scores from MBI. Stress levels based on the Karasek questionnaire.</p>

5	Hetherington <i>et al.</i> (2024)	<p>8 emergency department nurses</p> <p>Phenomena of Interest: Experience burnout among emergency department nurses.</p> <p>Design: Narrative inquiry</p> <p>Evaluation: Inductive, analysis based on themes that emerged from the interview.</p> <p>Research Type : Qualitative.</p>	<p><u>Burnout and Workload Model</u></p> <p>Burnout Model: Burnout is a state of physical and psychological fatigue resulting from prolonged work stress.</p> <p>Workload: Increased patient numbers and case complexity contribute to high stress levels in emergency departments.</p> <p>Indicators Obtained</p> <p>Indicators that emerge from this article include: Frustration and dissatisfaction at work.</p> <p>Coping strategies used by nurses include avoidance and seeking support.</p> <p>Negative impact on personal and family life due to work stress.</p>
6	Luo <i>et al.</i> (2024)	<p>Sample : 16 emergency nurses</p> <p>Phenomena of Interest : Emergency nurses' experience in caring for unidentified patients.</p> <p>Design : Descriptive phenomenological qualitative research.</p> <p>Evaluation : Data analysis was carried out using the Colaizzi 7-step method.</p> <p>Research Type : Qualitative research.</p>	<p><u>Burnout and Workload Model</u></p> <p>Burnout: Nurses experience significant mental stress associated with a high workload.</p> <p>Workload: The workload increases because unidentified patients are often uncooperative.</p> <p>Indicators :</p> <p>Difficulty in communicating with patients.</p> <p>Safety concerns when performing procedures on uncooperative patients.</p> <p>Additional material support and labour are needed to meet the patient's basic needs.</p>
7	Benjamin (2024)	<p>Sample : 27 participants</p> <p>Phenomena of Interest : Patient flow management by emergency nurses.</p> <p>Design : Grounded theory study with situational analysis.</p> <p>Evaluation : Data collection through interviews, group focus, and participatory observation.</p> <p>Research Type : Qualitative.</p>	<p><u>Burnout and Workload Model</u></p> <p>Burnout: Shows a link between high workload and low job satisfaction, which can lead to burnout in nurses.</p> <p>Workload: Defined as the demands that nurses face in managing patient flows and resources.</p> <p>Indicators :</p> <p>Stress levels, flow management effectiveness, patient satisfaction, and nurse well-being.</p>
8	Ranta <i>et al.</i> (2024)	<p>Sample : 451 medical personnel</p> <p>Phenomena of Interest : Perception and self-competence in caring for elderly patients.</p> <p>Design : Cross-sectional surveys</p> <p>Evaluation : Quantitative and qualitative data</p> <p>Research Type : Mixed methods (quantitative and qualitative).</p>	<p>Indicators obtained: Level of education considered adequate, ability to recognize dementia, delirium, and multimorbidity problems in elderly patients.</p> <p>Burnout and Workload Model: This article discusses the challenges of caring for elderly patients, which can contribute to burnout and high workload in emergency departments.</p> <p>Indicators: Perceptions of workload and ability to provide comprehensive care to elderly patients, and the need for further geriatric training.</p>
9	Power <i>et al.</i> (2022)	<p>Sample : 11 emergency nurses</p> <p>Phenomena of Interest : Early career nurse experience in an emergency work environment.</p> <p>Design : Qualitative design using semi-structured interviews.</p> <p>Evaluation : Data analysis through transcription and thematic analysis.</p> <p>Research Type : Qualitative.</p>	<p><u>Burnout and Workload Model</u></p> <p>Burnout Model: Nurses experience emotional exhaustion and flashbacks due to high workloads and exposure to traumatic situations.</p> <p>Workload: High levels of workload are a significant challenge, leading to stress and an inability to provide the desired care.</p> <p>Indicators obtained: high workload, traumatic experiences, violence, and other psychological impacts</p>

10	Zhang <i>et al.</i> (2024)	<p>Sample : 11,827 nurses.</p> <p>Phenomena of Interest :</p> <ul style="list-style-type: none"> • Well-being of nurses • Burnout as a negative predictor of well-being • Resilience as a mediator/protective factor • Individual factors and organizational factors that affect well-being. <p>Design : Descriptive, multi-center, cross-sectional study variable-centered</p> <p>Evaluation : Structural Equation Modelling AMOS.</p> <p>Research Type : Quantitative.</p>	<p>Burnout and Workload Model</p> <p>Conceptual framework for understanding the burnout → well-being pathway</p> <p>Health impairment process (demands → burnout); Motivational process (resources → well-being)</p> <p>Key theories for conceptualizing resilience as a mediator</p> <p>Indicators obtained: Burnout; Resilience; Well-being</p>
11	Barnard <i>et al.</i> (2023)	<p>Sample : 204 nurses.</p> <p>Phenomena of Interest :</p> <ul style="list-style-type: none"> • Burnout in emergency nurses in a non-WEIRD society • The role of job demands (challenge, hindrance, emotional) in burnout • Role of job resources (peer relations, supervisors, autonomy, equipment) Against Work Capabilities • Work capabilities as a mediator <p>Design : Cross-sectional survey design</p> <p>Evaluation : Job Demand and Resource with JDRS, Work Capabilities with CSWQ, Burnout with BAT-12</p> <p>Research Type : Quantitative</p>	<p>Burnout and Workload Model</p> <p>JDR (Job Demand Resources) CA (Capability Approach)</p> <p>Combined with conversion factors by connecting capabilities with functioning (burnout)</p> <p>Indicators obtained: Job Demands (Challenge demands, Hindrance demands) ; Job Resources Indicator (Relational, Structural, Material); Work Capabilities</p>

Three main domains were identified from the synthesis: job demands and resources, individual protective factors, and outcomes. Emergency nurses experience high workload, organizational challenges, and psychosocial stressors, which contribute to burnout. However, individual protective factors such as resilience and coping strategies play a key role in mitigating these effects. The interaction between these domains results in outcomes including burnout, well-being, and quality of care.

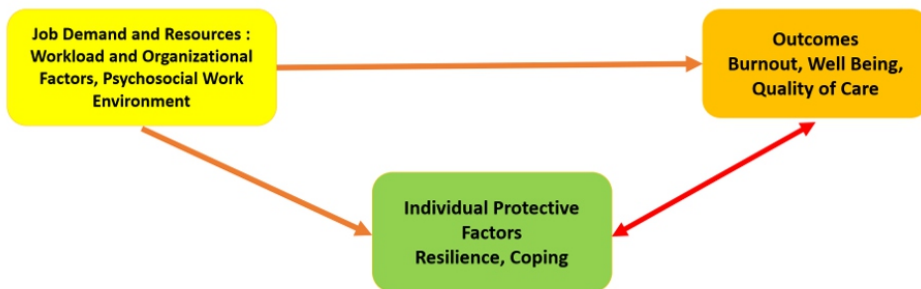


Figure 2: A Synthesis Framework

Figure 2 presents a synthesis of a framework that illustrates the relationship between job demands and resources, individual protective factors, and their outcomes in emergency nursing. The demands and resources of the job, including workload and organizational factors, affect the psychological state of nurses. Individual protective factors, such as resilience and coping, can offset and mitigate these effects. Their interactions lead to outcomes, including burnout, well-being, and quality of care. This framework highlights that burnout is not only shaped by workload but also by adaptive capacity, and this emphasizes the importance of workload management and strengthening individual resilience.

DISCUSSION

All the studies underscore the need for knowledge to develop models to reduce fatigue in emergency settings. This result will help predict burnout and design appropriate actions to support the mental well-being of emergency nurses. Studies in Morocco show that coaching can significantly improve stress management and burnout skills (Chahbounia & Gantare, 2023), while research in Spain suggests improving working environment conditions as a measure to reduce burnout (Soto-Castellón *et al.*, 2023) or other contextual factors, such as resilience, that can protect emergency nurses from burnout events (Giostra & Maiorano, 2025). These findings are important for formulating health policies (Tang *et al.*, 2024) that support the well-being of medical personnel, especially in high-pressure workplaces such as emergency units.

The burnout model among emergency nurses is often described through Maslach's framework. The results showed that 27.4% of nurses experienced high levels of emotional exhaustion, while 48.5% experienced depersonalization, which is a significant psychological impact of a high-pressure work environment (Wang *et al.*, 2024). This model provides a clear framework for understanding burnout among nurses (Huang *et al.*, 2024). In addition, the data showed that factors such as marital status, the specificity of hospital services, and work schedules contributed to increased nurse burnout (Chahbounia & Gantare, 2023; Wang *et al.*, 2024). As a significant component, emotional exhaustion reflects nurses' physical and psychological stress in emergencies (Rantung *et al.*, 2024). Meanwhile, depersonalization indicates a negative attitude towards the patient, often resulting from long-term stress (Hetherington *et al.*, 2024). Declining personal achievement is also an important indicator, with 18.6% of nurses feeling no longer effective in their roles (Wang *et al.*, 2024). Overall, existing burnout models strongly link high workloads and increased burnout rates (Luo *et al.*, 2024; Power *et al.*, 2022). Therefore, it is important to design evidence-based interventions to reduce burnout risk and support nurses' mental well-being in emergency settings (Benjamin, 2024; Ranta *et al.*, 2024).

The workload model in emergency nursing significantly affects mental health and operational effectiveness in these care units. Research shows that high workloads, rated by night shift frequency and the complexity of patient cases, contribute to increased stress levels (Hetherington *et al.*, 2024; Wang *et al.*, 2024). In addition, nurses in general hospitals tend to have higher levels of burnout than those in hospitals with specializations, suggesting that the field of placement has an important impact (Chahbounia & Gantare, 2023; Wang *et al.*, 2024). The workload is defined not only by the number of tasks to be completed but also by the intensity and nature of the care provided, which is often affected by the severity of the patient (Luo *et al.*, 2024; Soto-Castellón *et al.*, 2023). Environmental factors such as noise and lighting also contribute to nurses' fatigue and mental stress (Soto-Castellón *et al.*, 2023). In addition, the coping strategies nurses use, such as seeking social support, are crucial in managing high workloads (Hetherington *et al.*, 2024; Luo *et al.*, 2024). In seeking to develop a basic theory of sustainability in nursing, covering aspects of motivation and workload management strategies (Rantung *et al.*, 2024), this study underscores the need to develop policies that reduce workload and increase support for nurses to prevent negative consequences of stress (Benjamin, 2024; Power *et al.*, 2022). Thus, a deeper understanding of workload models can serve as a basis for effective interventions to improve nurse well-being in emergency settings.

Indicators of burnout and workload among emergency nurses are critical factors that affect medical personnel's quality of care and mental well-being. Given the high prevalence of burnout, nurses experience emotional exhaustion and depersonalization, indicating significant challenges that need to be overcome (Wang *et al.*, 2024). Additionally, nurses reported decreased personal achievement, indicating dissatisfaction and ineffectiveness in their work (Luo *et al.*, 2024; Wang *et al.*, 2024). Contributing risk factors, such as the hospital's room type and the number of scheduled night shifts, further exacerbate this condition (Chahbounia & Gantare, 2023). Workload indicators also include the intensity of care to be provided, which is influenced by the patient's severity and the work environment, including noise and lighting (Luo *et al.*, 2024; Soto-Castellón *et al.*, 2023). Research shows that nurses working in units with high patient volume experience greater frustration and dissatisfaction (Benjamin, 2024; Hetherington *et al.*, 2024). Coping strategies, such as seeking social support, are important in managing workloads and reducing the negative impact of stress (Hetherington *et al.*, 2024; Power *et al.*, 2022). Thus, a deeper understanding of burnout and workload indicators can help formulate more effective interventions to improve the well-being of emergency nurses (Ranta *et al.*, 2024). In

addition to the various coping strategies nurses adopt to manage their burnout and workload in these challenges (Chen *et al.*, 2026; Khan *et al.*, 2026), skill development and involvement in the learning process are also important factors in increasing nurses' resistance to stress (Rantung *et al.*, 2024).

This study systematically synthesized evidence from 11 studies to develop an integrated framework addressing burnout and workload in emergency nursing. The findings reveal complex interrelationships between job demands-resources, individual protective factors, and outcomes, providing a comprehensive understanding of burnout mechanisms in emergency departments. The following discussion addresses each domain systematically and explicates the proposed integrated framework.

Domain 1: Job Demands and Resources – Workload and Organizational Factors

Emergency nurses operate within high-demand environments characterized by elevated psychological workload, emotional labor, and systemic organizational constraints, wherein concurrent stressors—including high patient acuity, unpredictable caseloads, time pressure, and repeated trauma exposure—consistently elevate burnout risk when job resources are insufficient to buffer these demands (Barnard *et al.*, 2023; Wang *et al.*, 2024). Grounded in the Job Demands-Resources (JD-R) model and Conservation of Resources theory, evidence indicates that organizational deficits (inadequate staffing, equipment shortages, limited supervisory support, and constrained career pathways) and adverse psychosocial conditions (workplace violence, interpersonal conflict, and lack of recognition) precipitate resource loss spirals that exacerbate emotional exhaustion and depersonalization (Hetherington *et al.*, 2024; Soto-Castellón *et al.*, 2023; Zhang *et al.*, 2024). Critically, protective social resources—particularly collegiality, workplace connectedness, and collective coping strategies—function as adaptive "armories" that mitigate psychosocial strain, underscoring the imperative for multilevel interventions targeting both structural resource enhancement and psychosocial support systems to sustain emergency nursing workforce resilience (Rantung *et al.*, 2024). This finding underscores the importance of social support as a protective resource within the JD-R framework.

Domain 2: Individual Protective Factors – Resilience and Coping Mechanisms

Resilience functions as a critical dynamic protective factor that partially mediates the burnout–well-being relationship among emergency nurses, accounting for 16.91% of variance in large-scale multicenter evidence (Zhang *et al.*, 2024). and operates through multifaceted coping "armories" including clinical skill development, spiritual integration, linguistic adaptation, health maintenance, and collegial support that encompass both problem-focused and emotion-focused strategies (Boulton *et al.*, 2025; Rantung *et al.*, 2024). While structured individual-level interventions, such as transtheoretical coaching, significantly enhance stress management competencies (Chahbounia & Gantare, 2023), their limited impact on reducing moderate-to-high burnout prevalence (71.4%) underscores the insufficiency of person-centered approaches lacking concurrent organizational reform. Critically, resilience is not an isolated trait but is reciprocally enabled by contextual resources such as supervisory support, job autonomy, and equipment adequacy, demonstrating that sustainable burnout mitigation requires synergistic interventions targeting both individual adaptive capacities and systemic workplace determinants (Barnard *et al.*, 2023). This finding suggests that organizational resources enable the development and deployment of individual resilience, supporting a reciprocal relationship between individual and organizational factors.

Domain 3: Outcomes – Burnout, Well-being, and Quality of Care

Emergency nurses exhibit disproportionately high burnout prevalence, with 27.4% reporting elevated emotional exhaustion, 48.5% high depersonalization, and 31.1% experiencing multidimensional burnout, significantly exceeding rates in general nursing populations and confirming emergency care as a high-risk specialty (Wang *et al.*, 2024). Burnout emerges as the strongest predictor of diminished well-being, explaining 46.5% of its variance among 15 identified determinants (Zhang *et al.*, 2024) and exerts cascading adverse effects on patient safety, with burned-out nurses demonstrating 26%–71% higher odds of medical errors and compromised safety indicators, including falls, pressure injuries, and infection rates. Beyond clinical outcomes, burnout permeates personal domains, fostering hypervigilance and work-life boundary erosion that impair family functioning and psychological recovery (Hetherington *et al.*, 2024). Critically, modifiable

organizational and individual factors, including night-shift frequency, hospital type, marital status, and PTSD severity (risk amplifiers) versus participation in psychological support groups, leadership development, and adequate remuneration (protective factors), offer actionable targets for multilevel interventions aimed at mitigating burnout and preserving both workforce sustainability and quality of care (Wang *et al.*, 2024; Zhang *et al.*, 2024). These findings suggest that targeted interventions addressing specific risk factors could reduce burnout prevalence.

The Integrated Framework: Synthesis and Theoretical Implications

This study proposes an integrated framework synthesizing Job Demands-Resources theory (Leep-Lazar *et al.*, 2026), Conservation of Resources (Lei *et al.*, 2026; Masih *et al.*, 2026), the Capability Approach (Gawthorne *et al.*, 2026), and positive psychology (Xia *et al.*, 2026) to elucidate burnout mechanisms among emergency nurses. The model delineates dual pathways: excessive demands deplete resources, precipitating burnout, while organizational supports foster engagement through enhanced capabilities consistent with previous studies in high-acuity settings (Jimenez-Garcia & Flor-Martinez, 2026). This model will result in unforeseen load pressures from an unpredictable number of patients, as well as time pressures in the emergency room (Güngör & Sönmez, 2025). Resilience and coping function as dynamic mediators and allow a change of direction to be a reciprocal process from structural to psychological (Barnard *et al.*, 2023; Hu *et al.*, 2025), not just one-way, in contrast to previous studies about resilience (Grande & Berdida, 2026; Jimenez-Garcia *et al.*, 2026). The study's novelty lies in its emergency-specific contextualization, incorporating unpredictable patient flow, trauma exposure, and time-critical decision-making, while mapping three synergistic intervention tiers that address integrated workload burnout frameworks and underexplored protective factors as actionable leverage points.

Limitations

The framework yields measurable, contextually grounded indicators informing strategic, multi-level burnout prevention, advancing theoretical precision and translational applicability. It establishes a foundation for resilience-based protocols and institutional policies that concurrently mitigate demands and strengthen adaptive capacities, optimizing nurse well-being and patient safety. Limitations include database/language restrictions, methodological heterogeneity, and limited intervention testing, delineating clear avenues for longitudinal, cross-cultural, and randomized trials to establish causal pathways and refine ecological validity across diverse emergency healthcare systems.

Future Scope

Future research should prioritize longitudinal and multi-center designs to establish causal pathways and trace the pathways of burnout over time. Intervention trials that can evaluate the outcomes of resilience training in a structured manner, predictive staffing models that can optimally adjust and meet the well-being needs of nurses going forward, and technology-assisted workload optimization (e.g., AI-based scheduling or assignment and mapping of tasks based on ability, acuity, reliability and skills) are needed to translate knowledge theoretically into measurable practice, computed and scaled. In addition, integrating objective workload metrics with a mixed-method approach and conducting cross-cultural comparative studies will add to and strengthen the ecological validity and policy transferability of the proposed model across various emergency nursing settings.

CONCLUSION

Burnout among emergency nurses is a very complex, multifactorial phenomenon that significantly endangers nurse well-being, patient safety and renders the health system inefficient. The study shows that high workload intensity, emotional demands, and organizational constraints drive burnout, while resilience, social support, and structured skills development serve as important protection mechanisms. Integration of workload, resilience, and burnout models looks at and reminds us of how systemic stress can become emotional exhaustion and how targeted coping strategies can reduce it. By identifying key indicators such as shift loads, role ambiguities, and erosion of personal resources, stakeholders can design evidence-based workload management policies and institutional resilience programs.

CRedit Authorship Contribution Statement

H. W.: Conceptualization, methodology, investigation, data curation, formal analysis, writing – original draft, writing – review and editing. I.A.: Methodology, Validation, writing – review and editing, supervision. AG.: Data curation, investigation, visualization, writing – review and editing, methodology, supervision. MU.: Supervision, project administration, writing – review and editing, methodology. IS.: Formal analysis, visualization, writing – review and editing, investigation.

AI Assistance Declaration

The authors declare that no artificial intelligence tools were used in the development of the scientific content of this manuscript. AI-based tools were only used for minor language editing to improve clarity and readability.

Conflict of Interest

The authors declare that they have no competing interests.

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