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Work Environment, Workload, and Mental Health Among Healthcare Staff in Critical Care Settings: A Systematic Review

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A B S T R A C T

Critical care settings such as intensive care units, emergency departments, anesthesia units, and crisis-response hospital wards expose healthcare staff to high task density, moral pressure, unpredictable clinical events, and emotionally demanding encounters with patients and families. These conditions can affect staff mental health, quality of life, professional functioning, and patient safety. This systematic review synthesizes evidence on the relationship between the work environment, workload, and mental health outcomes among healthcare staff working in critical care settings. The review was structured according to the main reporting principles of PRISMA 2020. English and Persian literature was searched and verified through PubMed, Google Scholar, journal websites, SID, Magiran, and related databases. Eligible studies examined healthcare workers in critical care or comparable crisis settings and reported work-environment factors, workload, job stress, burnout, depression, anxiety, sleep problems, quality of life, coping, or patient-safety-related outcomes. Given the heterogeneity of study designs, settings, instruments, and outcomes, findings were synthesized narratively rather than statistically. The evidence consistently shows that high workload, insufficient staffing, rotating or night shifts, limited decision latitude, poor team communication, inadequate physical environments, and repeated exposure to death or ethical dilemmas are associated with poorer mental health. Burnout, emotional exhaustion, depressive symptoms, anxiety, sleep disturbance, moral distress, reduced quality of life, and lower perceived patient-safety culture were the most commonly reported outcomes. Protective factors included supportive leadership, meaningful teamwork, supervisor and peer support, resilience, fair scheduling, structured reflection, access to psychological support, and organizational attention to rest, staffing, and safety culture. Mental health in critical care staff is not merely an individual vulnerability; it is a system-level outcome shaped by the interaction between job demands, job resources, organizational culture, and personal coping capacity. Sustainable interventions should therefore combine workload redesign, staffing adequacy, shift planning, supportive supervision, psychological services, team communication, and staff participation in decision-making.

Keywords: *critical care; intensive care; work environment; workload; job stress; burnout; mental health; healthcare workers; nurses; systematic review*

1. Introduction

Critical care settings are among the most demanding environments in modern health systems. Intensive care units, emergency departments, anesthesia units, and infectious disease or crisis-response wards are designed to respond to unstable and life-threatening conditions. In these settings, healthcare staff must make rapid decisions, coordinate complex interventions, use advanced technologies, communicate with anxious families, and remain vigilant despite fatigue and emotional strain. These demands are clinically necessary, yet they create a work environment in which psychological distress can become normalized. The daily reality of critical care is therefore not only a technical challenge but also a mental-health challenge for the professionals who sustain care.

The work environment is a broad construct. It includes the physical characteristics of the unit, such as noise, crowding, lighting, equipment availability, and infection-control pressures; the psychosocial climate, such as leadership, justice, teamwork, conflict, and support; and the structural organization of work, such as staffing, shift design, control over decisions, and opportunities for rest. Theoretical models help explain why these factors matter. The Job Demand-Control model argues that high psychological demands become especially harmful when workers have limited decision latitude (1). The Job Demands-Resources model similarly proposes that demanding work conditions increase strain, whereas resources such as autonomy, support, feedback, and meaningful work protect well-being and motivation (2). Critical care units often combine high demands with uneven access to resources, which makes these models particularly relevant.

Workload is one of the most visible and measurable sources of strain in critical care. It is not limited to the number of patients assigned to a nurse or physician. It also includes cognitive workload, documentation pressure, interruptions, decision complexity, time pressure, emotional labor, ethical conflict, and the need to perform multiple tasks simultaneously. Studies on intensive care staff repeatedly show that heavy workload and insufficient staffing are linked to fatigue, burnout, lower job satisfaction, and concerns about patient safety (3-5). The impact of workload becomes more severe when employees lack recovery time, work frequent night shifts, or feel that patient care is being delivered under suboptimal conditions.

Mental health outcomes among critical care staff have received increasing attention, particularly after the COVID-19 pandemic. However, the problem existed long before the pandemic and is not limited to infectious disease crises. Burnout, anxiety, depression, sleep problems, post-traumatic stress symptoms, moral distress, and reduced quality of life have been reported across different countries and professional groups (6-9). The pandemic made these risks more visible by adding fear of infection, uncertainty, personal protective equipment pressures, separation from families, patient triage dilemmas, and repeated exposure to death. Yet the underlying drivers—workload, organizational support, staffing, team functioning, and perceived control—remain central even outside pandemic conditions.

The mental health of healthcare staff is also a patient-safety issue. Exhaustion and psychological distress can impair attention, memory, decision-making, communication, and emotional regulation. A clinician who is tired, unsupported, and morally distressed may still perform professionally, but the margin for error becomes narrower. Research has linked burnout and fatigue with poorer perceived patient-safety culture, missed care, and lower quality of professional functioning (3, 4). Therefore, protecting staff well-being is not separate from protecting patients; both are part of the same safety system.

Despite the growing literature, the evidence is scattered across observational studies, qualitative studies, pandemic-related studies, systematic reviews, and national or local surveys. Some studies focus on nurses, others on physicians, anesthesiology teams, or broader healthcare worker groups. Some examine burnout, while others examine depression, anxiety, stress, quality of life, shift work, coping strategies, or patient safety. This diversity makes it difficult for managers and policymakers to translate findings into coherent interventions. A systematic synthesis can clarify the patterns that repeatedly appear across settings and help distinguish individual-level coping recommendations from organizational responsibilities.

The present review therefore aims to synthesize evidence on the relationship between the work environment, workload, and mental health among healthcare staff in critical care settings. Specifically, it addresses three

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questions: (1) Which work-environment and workload factors are most consistently associated with mental health outcomes in critical care staff? (2) Which mental health and professional outcomes are most commonly reported? (3) What individual, team-based, and organizational strategies appear most relevant for reducing psychological strain and improving staff well-being?

2. Methods and Materials

2.1. Design and reporting framework.

This manuscript was prepared as a systematic review with narrative synthesis. The structure follows the main elements recommended by PRISMA 2020, including a clearly defined review question, eligibility criteria, information sources, search strategy, study selection, data extraction, quality appraisal, synthesis approach, limitations, and transparent reporting of included evidence (10). A meta-analysis was not planned because the included studies differed substantially in design, participants, clinical settings, measurement instruments, and outcomes.

2.2. Protocol and registration.

No prospective protocol registration was identified for this review. This lack of registration is reported transparently as a methodological limitation. The review question, eligibility criteria, and synthesis plan were defined before drafting the English manuscript to reduce selective interpretation.

2.3. Eligibility criteria.

Studies were eligible if they examined healthcare staff working in critical care or closely related high-acuity settings, including intensive care, emergency medicine, anesthesia, COVID-19 hospital wards, and rotating-shift nursing contexts. Eligible outcomes included mental health, job stress, burnout, depression, anxiety, psychological distress, sleep quality, fatigue, quality of life, coping, perceived patient safety, and work functioning. Eligible exposures included workload, staffing, shift work, task density, decision latitude, physical environment, team support, organizational support, moral or emotional strain, and related work-environment factors. Quantitative, qualitative, cross-sectional, descriptive, systematic review, meta-analysis, and mixed-method evidence were considered. Commentaries without empirical or synthesizable evidence were used only for contextual interpretation when relevant.

2.4. Information sources and search strategy.

English and Persian sources were identified through database and journal-site searching and were cross-checked against the initial evidence map, including PubMed, PubMed Central, Google Scholar, ScienceDirect, SpringerLink, Frontiers, BMJ, SID, Magiran, and Persian journal websites. Search terms combined population, exposure, and outcome concepts. English terms included "critical care," "intensive care," "ICU," "emergency medicine," "anesthesia," "healthcare workers," "nurses," "work environment," "workload," "job stress," "shift work," "burnout," "mental health," "depression," "anxiety," "fatigue," "sleep quality," "quality of life," and "patient safety." Persian terms included equivalents of محیط کاری, پرستاران, فرسودگی شغلی, سلامت روان, استرس شغلی, حجم وظایف, کیفیت زندگی, اورژانس, بخش مراقبت ویژه, کادر درمان, and نوبت‌کاری. Reference chasing was used to verify key theoretical and methodological sources.

2.5. Study selection and extraction.

Titles, abstracts, and full records were screened for relevance to the review question. The final evidence set consisted of empirical studies, qualitative studies, systematic reviews, meta-analyses, and Persian studies that directly addressed at least one of the three core constructs: work environment, workload, and mental health in healthcare staff. Extracted information included author, year, country or context, design, population, setting, variables, measurement focus, and major findings. Exact database hit counts were not reconstructable from the available source material; therefore, no artificial PRISMA flow numbers are reported. This limitation should be addressed in future submissions by archiving search exports from each database and completing a numeric PRISMA flow diagram.

2.6. Quality appraisal.

Critical appraisal was guided by JBI critical appraisal tools (11), which are used to assess trustworthiness,

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relevance, and results across different study designs. Because the included evidence comprised heterogeneous designs, quality was summarized narratively rather than as a single numerical score. Greater confidence was assigned to studies with clearly defined samples, validated instruments, transparent methods, adequate sample size, and appropriate analysis. Qualitative studies were assessed in terms of sampling, analytic transparency, credibility of interpretation, and usefulness for understanding contextual mechanisms.

2.7. Synthesis.

A narrative thematic synthesis was conducted. Findings were grouped into recurrent themes: workload and staffing, shift work and fatigue, work environment and decision control, emotional and moral strain, mental health outcomes, patient safety and professional performance, and protective organizational or personal resources. The synthesis emphasizes convergence across studies rather than isolated statistical findings.

Table 1

Review framework based on Population, Exposure, Outcome, and Study Design

Element	Definition used in this review
Population	Healthcare staff in critical care or high-acuity settings, including nurses, physicians, anesthesiology staff, emergency medicine professionals, and hospital workers exposed to crisis care.
Exposure	Work environment, workload, staffing, shift work, decision latitude, physical conditions, organizational support, team communication, moral or emotional strain, and job resources.
Outcomes	Mental health, job stress, burnout, depression, anxiety, psychological distress, sleep problems, fatigue, quality of life, coping, job satisfaction, patient safety culture, and professional performance.
Study designs	Cross-sectional studies, qualitative studies, descriptive studies, systematic reviews, meta-analyses, and relevant Persian and English empirical reports.

3. Findings and Results

The included evidence shows a coherent pattern despite differences in country, professional group, and measurement approach. Critical care staff are exposed to a combination of high job demands and uneven job resources. High workload, staffing limitations, shift pressure, insufficient rest, limited autonomy, weak organizational support, and emotionally intense patient care are repeatedly associated with burnout, anxiety, depression, stress, fatigue, poor sleep, and reduced quality of life. At the same time, studies also show that workplace resources—especially supervisor support, co-worker support, meaningful work, fair scheduling, structured reflection, and access to psychological support—can buffer the effects of demanding work.

Table 2

Summary of key included evidence

Study	Setting / population	Design	Main focus	Key contribution to synthesis
(12)	ICU nurses, Saudi Arabia	Cross-sectional assessment	Critical care work environment	Work environment assessment highlighted the importance of organizational conditions and support in ICU nursing.
(3)	270 critical care nurses, Oman	Predictive cross-sectional study	Fatigue, burnout, workload, work environment, patient safety culture	Fatigue, work environment, and burnout dimensions predicted perceived patient-safety culture.
(6)	Critical care clinicians, Brazil	Cross-sectional study	Burnout, depression, anxiety	Burnout was empirically related to, but not identical with, depression and anxiety.
(13)	Multidisciplinary ICU staff, United Kingdom	Qualitative study	Psychological impact of workplace environment	High demand and low control were central mechanisms of psychological strain.
(7)	ICU staff during COVID-19, United Kingdom	Survey study	Mental health during pandemic intensive care	High levels of mental health symptoms among ICU staff reinforced the urgency of organizational support.
(14)	ICU nurses, South Korea	Cross-sectional study	Resilience, depression, stress, sleep, burnout	Resilience was linked with better psychological outcomes among ICU nurses.
(15)	Emergency and critical care professionals	Review and meta-analysis	Mental health challenges	Confirmed the high burden of mental health symptoms in acute and critical care professionals.

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(4)	1,095 ICU shifts, Sweden	Descriptive retrospective study	Daily reflection on patient safety, workload, environment	Workload was a major factor affecting shifts; reflection helped identify safety and environment concerns.
(8)	2,643 ICU professionals, France	Multicenter cross-sectional survey	Stress and mental health during COVID-19	Epidemic intensity and perceived stress were associated with worse mental health; coping and positive thinking had buffering roles.
(16)	13,745 critical care nurses, China	Nationwide cross-sectional network study	Job demands-resources and depressive symptoms	Supervisor support, co-worker support, work meaning, resilience, and working hours were central in the network of depression-related factors.
(17)	Anesthesia department staff, Denmark	Qualitative interviews	Working environment and mental strain	Unexpected events and high workflow were major sources of strain; support needs differed across staff.
(5)	ICU nurses	Systematic review and meta-analysis	Job satisfaction and burnout	Burnout and job satisfaction were strongly linked, supporting the need for organizational interventions.
(9)	ICU and non-ICU healthcare workers	Cross-sectional study	Mental health during COVID-19	Mental health outcomes differed across ICU and non-ICU groups during the outbreak.
(18)	121 ICU workers	Survey study	Stress as workload in ICUs	Stress was related to physical and mental workload, responsibility, cognitive demands, and sleep-rhythm disruption.
(19)	274 nurses, Iran	Cross-sectional analytical study	Job stress and quality of life	Job stress showed a significant inverse relationship with nurses' quality of life.
(20)	Rotating-shift nurses, Iran	Cross-sectional study	General health and shift work	Better shift-work status was associated with fewer general, physical, and social-functioning problems.
(21)	COVID-19 ward nurses, Iran	Qualitative phenomenological study	Coping with burnout	Family, individual, spiritual, and organizational strategies were identified as coping pathways.
(22)	Hospital healthcare workers, Iran	Descriptive-analytical study	Mental health in direct vs. indirect COVID-19 care	Direct involvement with COVID-19 care was associated with poorer mental health indicators.

3.1. Workload, staffing, and task density.

The strongest cross-study theme is that workload in critical care is multidimensional. It includes patient acuity, number of assigned patients, documentation, simultaneous tasks, interruptions, high-consequence decision-making, communication with families, emergency response, and responsibility for complex equipment. Larsson et al. (2022) showed that workload was one of the main factors affecting ICU shifts and that complex care, multitasking, and working conditions contributed to perceived pressure (4). Al Ma'mari et al. (2020) similarly found that fatigue, workload, work environment, and burnout dimensions were linked to nurses' perception of patient-safety culture (3). These studies suggest that workload is not only a matter of employee discomfort; it can shape how safely and effectively care is delivered.

Persian evidence converges with these findings. Seyed Askari et al. (2025) reported a significant inverse relationship between job stress and quality of life among nurses, indicating that occupational stress can reach beyond the workplace and affect general well-being (19). In the source manuscript, this study was described as showing that job stress explained a substantial proportion of variation in quality of life, reinforcing the need for stress-reduction and organizational support interventions. This is consistent with international evidence that high workload and inadequate staffing are among the most actionable organizational drivers of distress.

Recent large-scale evidence strengthens this interpretation. Li et al. (2025), in a nationwide study of 13,745 critical care nurses in China, used a job demands-resources framework and found that job demands, resources, resilience, and depressive symptoms were interconnected (16). Average working hours, co-worker support, supervisor support, work meaning, and resilience emerged as important bridge or resource variables. This finding is particularly useful for practice because it suggests that reducing distress does not depend only on reducing workload, which is often difficult in understaffed systems; it also depends on increasing meaningful, modifiable resources around staff.

3.2. Shift work, fatigue, and sleep disruption.

Shift work is another recurrent mechanism linking workload to mental health. Critical care often requires continuous 24-hour coverage, rotating shifts, night work, and overtime. These schedules disrupt circadian rhythm, reduce sleep recovery, and can increase emotional exhaustion. Rezaie and Karimiankakolaki (2024) found that better shift-work status among rotating-shift nurses was associated with fewer problems in general health, physical health, and social functioning (20). Zacharova et al. (2021)

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identified sleep-rhythm disturbance and physical demands as notable workload components among ICU staff. These findings support the view that shift planning is a mental-health intervention, not merely an administrative task (18).

Fatigue also mediates the relationship between work conditions and safety. When staff work long shifts without adequate recovery, cognitive resources decline. In intensive care, where small delays or communication failures may have serious consequences, fatigue can affect attention, memory, vigilance, and team interaction. Al Ma'mari et al. (2020) found a negative relationship between fatigue and perceived patient-safety culture (3). This does not prove causality, but it is clinically meaningful: workers who are fatigued may perceive the care environment as less safe, and unsafe systems may also generate more fatigue.

3.3. Work environment, control, and autonomy.

Work environment includes both visible and invisible conditions. Visible conditions include equipment, physical space, noise, infection-control burden, and crowding. Invisible conditions include decision control, leadership style, psychological safety, fairness, communication, support, and recognition. Grailey et al. (2021) offered an important qualitative contribution by applying a demand-control perspective to the ICU environment (13). Their findings showed that some job demands are inherent to critical care, but certain aspects of control and support are modifiable. For example, staff may not be able to remove clinical urgency or patient instability, but organizations can improve communication, escalation pathways, staffing flexibility, and access to senior support.

This distinction is essential. Critical care will never be stress-free, and an intervention that promises to remove all stress would be unrealistic. The goal is to prevent avoidable, chronic, and morally damaging stress. The difference between an intense but supported shift and an intense but unsupported shift is substantial. Supportive leadership, transparent decision-making, fair allocation of tasks, and staff participation in operational decisions can transform the meaning of workload. Demerouti et al. (2001) would classify these elements as job resources; they do not erase demands, but they reduce the probability that demands will turn into emotional exhaustion, cynicism, and withdrawal (2).

3.4. Emotional load, moral strain, and exposure to crisis.

Critical care staff repeatedly witness suffering, death, family distress, and ethically difficult decisions. During the COVID-19 pandemic, these pressures intensified because of restricted family visitation, uncertain treatments, resource scarcity, fear of infection, and decisions about bed availability. Laurent et al. (2021) reported that ICU professionals in high-intensity epidemic zones experienced higher mental health problems and perceived stress than those in lower-intensity zones (8). Stress was particularly shaped by emotional load related to patients and families and by care delivered in suboptimal or conflictual conditions. These are not ordinary workload variables; they are moral and emotional pressures that can remain with staff after the shift ends.

Greenberg et al. (2021) and Wozniak et al. (2021) similarly showed that ICU or ICU-exposed staff experienced significant mental health burdens during the pandemic (7, 9). Feyzipour et al. (2022) reported unfavorable mental health among Iranian healthcare workers during COVID-19, especially among those directly involved in patient care (22). These studies suggest that crisis exposure amplifies pre-existing vulnerabilities in health systems. When high workload is combined with uncertainty, threat to personal safety, family concerns, and lack of recovery, mental health risks increase sharply.

3.5. Burnout, depression, anxiety, and quality of life.

Burnout is one of the most frequently reported outcomes in this literature. It typically includes emotional exhaustion, depersonalization or psychological distancing, and reduced personal accomplishment (23). However, burnout should not be treated as a synonym for depression or anxiety. Fischer et al. (2020) showed that burnout was associated with depression and anxiety among critical care clinicians, but the constructs were empirically distinguishable (6). This distinction matters clinically because an employee may need organizational redesign, psychological treatment, peer support, medical evaluation, or a combination of these depending on the pattern and severity of symptoms.

Quesada-Puga et al. (2024) synthesized evidence on job satisfaction and burnout among ICU nurses and supported the conclusion that burnout is closely linked with reduced

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job satisfaction (5). Hwang and Lee (2023) showed that resilience was associated with depression, job stress, sleep quality, and burnout among ICU nurses, suggesting that personal resources can buffer distress (14). Yet the presence of resilience should not be used to shift responsibility from systems to individuals. Resilience-based programs are useful when they are part of a broader strategy that also improves staffing, schedules, supervision, and team functioning.

3.6. Coping strategies and protective resources.

The Iranian qualitative study by Shahmoradi et al. (2024) adds depth by identifying coping strategies used by nurses in COVID-19 wards (21). Strategies were organized around family support, individual coping, spirituality, and organizational support. This structure is helpful because it recognizes that coping is not purely psychological. Staff cope through relationships, meaning, professional identity, and organizational conditions. Madsen et al. (2023) also showed that staff differed in how they understood and managed mental strain; most had someone to talk to, but some found it difficult to discuss workplace conflict or personal vulnerability (17).

Protective resources repeatedly include supervisor support, peer support, meaningful work, team cohesion, access to consultation, structured reflection, and psychologically safe communication. Larsson et al. (2022) found that structured daily reflection helped staff identify issues affecting patient safety, workload, and the work environment (4). This kind of intervention is practical because it transforms distress from a private burden into a visible organizational signal. When staff are invited to reflect, report, and discuss problems, managers can identify patterns and address root causes rather than waiting for burnout, resignation, or errors.

4. Discussion and Conclusion

This review found a clear and repeated relationship between work environment, workload, and mental health among healthcare staff in critical care settings. The central message is straightforward: mental health problems in critical care staff are not random individual reactions. They are predictable responses to sustained high demands, insufficient resources, limited recovery, emotional exposure, and organizational conditions that either buffer or amplify stress. The evidence is strongest for workload, staffing pressure, shift-related fatigue, poor decision control, and weak support as risk factors, and for leadership, teamwork, resilience, meaningful work, psychological support, and fair scheduling as protective factors.

The findings align closely with the Job Demand-Control and Job Demands-Resources models. Critical care demands are often high and cannot be removed without compromising the function of the unit. Patients will remain unstable, emergencies will remain unpredictable, and staff will continue to face emotional situations. However, many job resources are modifiable. Decision latitude can be improved through participatory scheduling and clearer escalation protocols. Supervisor support can be improved through leadership training and visible senior presence. Team support can be strengthened through structured debriefing, handover quality, conflict management, and peer-support systems. Recovery can be protected through safer shift patterns and breaks. These changes do not make critical care easy, but they make it more sustainable.

A major practical implication is that organizations should avoid framing mental health only as self-care. Individual strategies—exercise, rest, counseling, mindfulness, reflection, spiritual coping, and cognitive reframing—can be valuable, but they cannot compensate for chronic understaffing, excessive overtime, poor communication, or unsafe workloads. The National Academies of Sciences, Engineering, and Medicine (2019) has emphasized clinician burnout as a systems issue requiring organizational action, not only individual resilience (24). The evidence reviewed here supports that approach. Staff mental health should be treated as a core quality and safety indicator.

The review also suggests that mental health interventions should be tiered. At the primary prevention level, organizations should redesign work conditions before distress becomes severe. This includes workforce planning, reasonable nurse-to-patient ratios, flexible staffing pools, protected breaks, predictable scheduling where possible, reduction of unnecessary documentation burden, and safe rest areas. At the secondary prevention level, units should identify early signs of fatigue, distress, moral strain, and burnout through confidential screening, team reflection, supervisor check-ins, and staff feedback systems. At the tertiary level, employees with significant depression,

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anxiety, trauma symptoms, or functional impairment should have access to confidential professional support, referral pathways, and return-to-work accommodations.

Team processes deserve special attention. Critical care is delivered by teams, and staff distress is often experienced collectively. Poor communication, unclear roles, and conflict can intensify workload even when patient numbers remain unchanged. Conversely, strong teamwork can make high-acuity care feel more manageable. Madsen et al. (2023) and Larsson et al. (2022) show the value of listening to staff narratives and daily reflections(4, 17). A unit that regularly learns from staff experience can identify preventable stressors, improve coordination, and build trust. This approach is also consistent with patient-safety principles: the people closest to the work usually know where the pressure points are.

Leadership is another key mechanism. Supervisors and senior clinicians influence the psychological climate through fairness, availability, feedback, emotional tone, and responsiveness to concerns. Li et al. (2025) identified supervisor support and co-worker support as central job resources in the network of depressive symptoms among critical care nurses (16). This implies that leadership interventions may have a broader effect than single-topic wellness sessions. A manager who notices fatigue, redistributes tasks, reduces unnecessary conflict, protects breaks, and validates emotional difficulty is not merely being supportive; they are actively reducing risk.

The review also highlights the complexity of burnout. Burnout overlaps with depression and anxiety but is not identical to them. A staff member may be emotionally exhausted because the system is overloaded; another may be clinically depressed; a third may be experiencing moral injury after repeated exposure to suboptimal care. Treating all of these experiences as “burnout” may lead to vague interventions. Organizations should distinguish between occupational exhaustion, psychiatric symptoms, moral distress, and trauma-related symptoms while recognizing that they can co-occur. Screening tools, occupational health pathways, and psychological services should therefore be designed with this complexity in mind.

Another important finding is the relationship between staff mental health and patient safety. Fatigue and burnout may influence safety through attention, memory, communication, and willingness to speak up. In the studies reviewed, workload and work environment were repeatedly linked with perceived patient-safety culture, missed care, and quality concerns. This supports the argument that protecting staff is not a luxury or a human-resources add-on. It is part of clinical governance. Hospitals that ignore staff mental health may pay the cost through turnover, absenteeism, presenteeism, reduced quality of care, and weakened safety culture.

The Persian studies included in this review are particularly valuable because they show that the same broad patterns appear in local contexts. Job stress was inversely related to nurses’ quality of life; shift-work status was related to general health and social functioning; COVID-19 care was linked with poorer mental health; and nurses used family, individual, spiritual, and organizational strategies to cope with burnout. These findings suggest that interventions should be culturally sensitive. In Iranian and similar contexts, family support, spirituality, and professional values may be important protective resources, but they should complement—not replace—organizational responsibility for staffing, scheduling, workload, and psychological services.

For policy and management, the review suggests several priorities. First, workload should be measured routinely rather than assumed from staffing numbers alone. Measures should include patient acuity, task complexity, documentation, interruptions, night shifts, and emotional burden. Second, staff should be involved in redesigning shifts and workflows because they understand the hidden workload of care. Third, managers should develop early-warning systems for fatigue and distress. Fourth, psychological support should be confidential, accessible, and normalized. Fifth, units should implement structured debriefing or reflection after high-intensity events. Sixth, patient-safety programs should include staff well-being indicators.

For research, more longitudinal and intervention studies are needed. Much of the current evidence is cross-sectional, which limits causal inference. Future studies should examine how changes in staffing, shift patterns, leadership training, peer support, and psychological services affect mental health and patient safety over time. Studies should also compare professional groups, because nurses, physicians, residents,

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technicians, and support staff may experience different stressors and have different access to resources. Finally, research in non-Western and middle-income health systems should be expanded to capture cultural, economic, and organizational differences.

This review has limitations. First, the evidence is heterogeneous and includes different designs, instruments, countries, and clinical contexts. This prevented meta-analysis and required narrative synthesis. Second, many studies rely on self-report measures, which may be influenced by response bias, current mood, or workplace culture. Third, pandemic-era studies may overrepresent crisis-specific stressors, although many of the identified mechanisms are relevant beyond COVID-19. Fourth, exact database hit counts were not reconstructed from the available source material, so a full PRISMA flow diagram should be completed before journal submission. Fifth, some Persian sources may have limited international visibility, but they remain relevant for local and regional interpretation.

Despite these limitations, the convergence of findings is strong. Across countries and methodologies, critical care staff mental health is shaped by the balance between demands and resources. Workload, shift pressure, emotional exposure, and low control increase risk; support, meaning, teamwork, autonomy, and fair management reduce risk. This pattern is consistent with major occupational health theories and with practical experience in high-acuity care.

5. Conclusion

Healthcare staff in critical care settings work in environments where high workload, uncertainty, rapid decision-making, emotional exposure, and moral pressure are routine. The evidence reviewed here shows that these conditions are associated with burnout, stress, depression, anxiety, fatigue, sleep disruption, reduced quality of life, and poorer perceptions of patient safety. The most important implication is that staff mental health should be managed as a system-level quality and safety issue. Effective action requires more than encouraging individual resilience. It requires adequate staffing, fair and safe shift planning, supportive leadership, structured team communication, access to psychological care, staff participation in decisions, and organizational willingness to identify and reduce preventable sources of strain. In critical care, caring for staff is inseparable from caring for patients.

5.1. Practical Recommendations

1. Establish routine workload monitoring that includes patient acuity, task complexity, documentation pressure, interruptions, emotional burden, and shift burden.
2. Improve staffing and shift planning, especially by reducing excessive consecutive night shifts and ensuring recovery periods after high-intensity duties.
3. Strengthen supervisor and peer support through leadership training, regular check-ins, and psychologically safe communication practices.
4. Use structured reflection or debriefing after difficult shifts, deaths, ethical dilemmas, or major clinical events.
5. Provide confidential psychological support and referral pathways for staff with significant distress, burnout, depression, anxiety, or trauma-related symptoms.
6. Include staff well-being indicators in patient-safety and quality-improvement dashboards.
7. Encourage culturally meaningful coping resources, such as family support, spirituality, professional identity, and peer belonging, while maintaining organizational responsibility for workload and safety.

Authors' Contributions

Conceptualization, literature organization, synthesis, writing, and final approval: Fezeh Rezaeian.

Declaration

Artificial intelligence tools were used only for language editing and translation support in preparing the English version of the manuscript. The scientific content, data, interpretation of findings, and final responsibility for the manuscript remain with the authors.

Transparency Statement

No new dataset was generated. The review is based on published literature cited in the reference list.

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Declaration of Interest

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Ethics Considerations

This article is a review of previously published studies and does not involve direct data collection from human participants. Therefore, formal ethics committee approval was not required. All included studies should be interpreted according to their own reported ethical approvals and consent procedures.

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