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JOB STRESS, BURNOUT AND COPING STRATEGIES AMONG NURSES IN TERTIARY CARE HOSPITALS

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Abstract

The present paper reviews the job stress, burnout and coping mechanisms of nurses in tertiary care hospitals. The World Health Organization estimates there are 29.8 million nurses in the world, and a shortage of around 6,000,000 has been greatly worsened by the COVID-19 pandemic. Burnout is viewed as an occupational health issue in high-acuity healthcare settings and is defined as emotional exhaustion, depersonalization, and diminished personal accomplishment via the Maslach Burnout Inventory. This paper reviews nurse burnout throughout the COVID-19 pandemic, synthesizing published data on the global prevalence of three dimensions of burnout: emotional exhaustion (36.1% during COVID-19, 33.45% overall); depersonalization (32.4% during COVID-19, 25.0% overall); and reduced personal accomplishment (33.3% during COVID-19, 33.49% overall), from a set of recent systematic reviews, meta-analyses and primary studies published between 2019 and 2026 and collated through an integrative review. It has been concluded that some of the key risk factors are excessive workload, high patient-nurse ratio, emotional labor, organizational culture deficiencies and pandemic related stressful situation. The review also reviews problem-focused, emotion-focused and organizational coping interventions, and problem-focused interventions are found to be the most protective against burnout. The paper discusses evidence-based recommendations for healthcare organizations, nursing practice, health policy, and future research on coping interventions (particularly technology-based coping interventions), based on the results of evidence-based recommendations from the evidence presented.

1. Introduction

Nearly the entire healthcare eco system is facing the unprecedented situation of a shortage of nurses which will certainly pose a major challenge for the cornerstone of patient care on a global level. The World Health Organization[13] estimates that currently there are about 29.8 million nurses in the world, but there is an estimated shortage of almost 6 million nursing professionals identified and this gap is more pronounced in LMIC countries. The COVID-19 pandemic has made this long-standing shortage far more severe, as nursing was put under unparalleled pressure and has seen workforce losses all over health and social care. This is especially acute in tertiary care where nurses face the most complex patients and are also most likely to experience a shortage of colleagues due to the pandemic's impact.

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Over the years, job stress as described by Lazarus and Folkman[8] has long been known to pose a serious risk to the health of nurses in their job. Job stress is defined as a relationship between an individual and his/her environment that both individuals perceive as being beyond their means and threatening to their well-being. If this stress continues and is not controlled, it could evolve into the state of burnout, which was first described in 1974 by Freudenberger[17] and later formally defined and evidenced by the Maslach Burnout Inventory (MBI) by Maslach and Jackson[9]. Burnout has been listed as an occupational phenomenon by the World Health Organization's (WHO) 11th Revision of the International Classification of Diseases (ICD-11), which reinforces the importance of addressing burning out as a public health issue. There are three dimensions emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) to burnout, each with a specific implication for nurse well-being and quality of patient care.

Tertiary care hospitals are specialized medical centers equipped with state-of-the-art diagnostic, therapy and intensive care equipment, and may serve as tertiary referral centers for complicated health issues. The complexities of the patient population, the need for a high level of technological sophistication, and the risk of encountering life threatening emergencies and patient death pose special challenges for nursing staff in these settings. This paper explores the rate of incidence, risk factors and coping strategies with police burnout amongst nurses in tertiary hospitals using up-to-date empirical studies to extrapolate knowledge and come up with evidence-based recommendations for interventions and further research.

2. Literature Review

2.1 Theoretical Frameworks

Theories attempt to provide possible explanations for the occupational stress and the relationship between occupational stress and burnout among nurses.Several theoretical models are currently available that explain the relationship between occupational stress and occupational burnout among nurses. Karasek[7] proposed the Job Demand-Control-Support Model which suggests that Job-strain is the combination of high psychological demands and low decision latitude. This model includes a lack of social support from supervisors and co-workers, which would imply that nurses, between these factors, are more vulnerable to the effects of burnout. The model has been utilized widely in nursing research and found that those nurses who believe that they have less control over their work environment and also are not given enough support along the way by the organization have highly emotional exhaustion and depersonalization.

A complementary theory is the Conservation of Resources (COR) Theory as developed by Hobfoll[5] that regards stress as a felt loss of valued resources or inadequate replenishment after they were invested in a significant way. This approach states that, if nurses put into their patient care in the emotional, cognitive and physical arenas without proper remuneration mechanism to replenish their resources, they will end up "burning out". The COR theory is more applicability to understanding burnout in tertiary care settings where the emotional and physical demands are constant and strong, and where loss of resources can be quick when support from within the institution is low.

The Maslach Burnout Inventory (MBI) is still the most popular scale used to assess burnout in nursing studies. The MBI originally developed by Maslach and Jackson[9] in 1981 measures three aspects: Emotional Exhaustion (EE): Low sense of being emotionally drained; Depersonalization (DP): Low sense of personal connection with recipients of care; and reduced Personal Accomplishment (PA): Low sense of personal competence and achievements. The three dimensions give a multi dimensional perspective on burnout, which has been found useful for research and clinical practice, as well as to guide specific interventions to treat parts of the syndrome.

2.2 Prevalence of Burnout Among Nurses

Numerous systematic reviews and meta-analyses have been conducted to document the global syndrome of burnout, covering nurses. A pooled prevalence of 33.45% (95% CI 27.31-39.59) for the emotional exhaustion, 25.0% (95% CI 17.17-33.00) for depersonalization and 33.49% (95% CI 28.43-38.55) for low personal

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accomplishment in the 3 dimensions of MBI are reported in the umbrella review in 2025, based on a systematic review of 14 reviews, that took place in 2025. The results suggest that there is considerable emotional strain and a troubling level of depersonalization when dealing with patients among nurses globally as they perceive a lack of professional efficacy, particularly among one-third who are experiencing clinically significant levels of strain.

Burnout seems to be an increased challenge in nursing, especially during the COVID-19 pandemic. Substantially higher rates were reported in a 2025 meta-analysis of 19 studies looking at burnout during the period of the pandemic; overall burnout 59.5%, emotional exhaustion 36.1%, depersonalization 32.4%, and reduced personal accomplishment 33.3% [3] The results indicate that by almost doubling the percentage of nurses who reported overall burnout when compared with pre-pandemic estimates, these findings suggest a serious drop in the occupational health and wellbeing of nurses worldwide. Figure 1 is a bar chart that compares global period prevalence with COVID-19 period prevalence.The difference between global and COVID-19 period prevalence is compared in the bar chart in Figure 1.

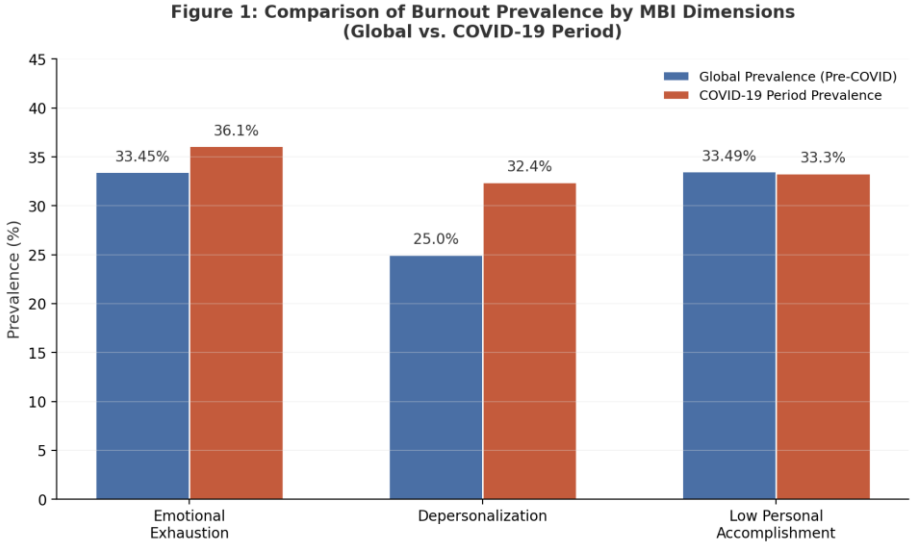


Figure 1: Comparison of Burnout Prevalence Dimensions (Global vs. COVID-19 Period)

The prevalence of burnout in certain contexts may be contextual as well; there is cross-regional support for this. In Ghana, Gmayinaam[4] undertook a comparative cross sectional study across all tertiary and secondary care facilities and found that 77.8% of 248 nurses experienced moderate occupational stress. In line with this, a study conducted by Fernandes in India indicated that 87.4% of the nurses felt that the workload they had faced at work was stressful and 32.2% of them experienced high level, or very high level stress. The observations made from the LEA, LMDC suggest that burnout and occupational stress could be even more common in resource-limited environments where, systemic stressor factors like inadequate staffing, limited infrastructure due to poverty add to the individual-level stressors.

2.3 Risk Factors and Contributing Factors

There are many interrelated determinants of burnout amongst the nurses in tertiary care hospitals. Perhaps the most consistently identified risk factors are workload/staffing. Dall'Ora et al. [1] carried out a in-depth theoretical study that showed that high workload, low staffing and long shift schedules are strongly related to emotional exhaustion. But a vicious circle can set in when patient-nurse ratios are high, as Chen et al. [14] found that increased occupational stress levels often increase the risk of medical errors due to high patient-nurse ratios as well. But constantly

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surging numbers of nurse staffing shortages and patient care demands in tertiary care settings continue to plunge nurses into a state of deprivation, particularly during recorded care shifts.However, in tertiary hospitals, the complete mismatch between nurse staffing and care demands is constantly pushing nurses to a state of deprivation, especially when measured during their recorded care shifts.

Emotional labour associated with nursing practice and patient level of acuity are other essential risk factors. The repeated exposure to patient suffering, death and traumatic events was significantly correlated with depersonalization scores among emergency department (ED) nurses, as reported by Portero de la Cruz et al. [10]. Professional or compassionate caring for those patients can have an additional emotional obligation, resulting in a particular pattern of occupational stress, especially in tertiary care, where patients may have life-threatening presentations, and end-of-life care is commonplace.

In addition, organizational factors such as leadership, work culture, and autonomy of the nurse have been established as important factors and were considered the most significant in determining burnout. In their global prevalence study, Ge et al. found that poor leadership and lack of autonomy were significantly correlated with the low scores on personal accomplishment. Moreover, various aspects of the COVID-19 pandemic were found to significantly influence high burn out rates, such as fear of infection and of the restrictive measures, but also due to the growth of work tasks, according to Ge et al [3]. Demographic factors also were found to play a role, with Woo et al. [12] reporting higher levels of burnout among younger nurses or those with fewer years of experience as professionals, perhaps owing to the extent of adaptation in early years or to the development of successful coping mechanisms over time. All these risk factors are then summarized here in Table 1.

Table 1: Summary of Key Risk Factors for Burnout Among Nurses

Factor Category	Specific Risk Factors	Evidence/Findings	Source
Workload	Excessive workload, understaffing, long shifts	Higher emotional exhaustion	Gmayinaam (2024); Dall'Ora et al. (2020)
Staffing	High patient-nurse ratios	Increased stress and medical errors	Chen et al. (2025)
Emotional Labor	Repeated exposure to suffering/death	Higher depersonalization	Portero de la Cruz et al. (2020)
Organizational	Poor leadership, lack of autonomy	Lower personal accomplishment	Ge et al. (2023)
Pandemic	COVID-19 restrictions, fear of infection	59.5% overall burnout	Ge et al. (2025)
Demographic	Younger age, fewer years of experience	Higher burnout levels	Woo et al. (2020)

2.4 Burnout by Nursing Specialty

Incidence of burnout can fluctuate significantly among nursing specialties, depending on the level of workload, emotions involved, and workplace. Intensive Care Unit (ICU) nurses have been found to have the highest burnout scores in all specialties studied; 46.02% of intensive care nurses report low personal accomplishment as compared to other specialties. The work in the ICU is high-tech, high-stress; hospital decisions surrounding end-of-life care might cause additional stress related losing control; and emotional demands of managing critically ill patients, seem to be fertile ground for the emergence of burnout.

Oncology nurses are another specialty group that is at high risk of burns out – studies have found that close to 42% have clinically

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significant depersonalization, which is the highest rate for any nursing specialty. This increased risk is due to the extended duration of treatment of cancer and the emotional stress that comes with building therapeutic relationships with patients who often die of cancer, as well as the ethical dilemmas of making cancer treatment decisions. Nurses in the emergency department also appear vulnerable as 43.27% have a high score for depersonalization. Emergency nursing is an occupation of high volume, high pressure and frequently an overwhelmingly hectic one, with the constant threat of patient death and/or experience with trauma and violence fostering cynical and detached attitudes towards patients. These are specialist-specific patterns shown in Figure 2.

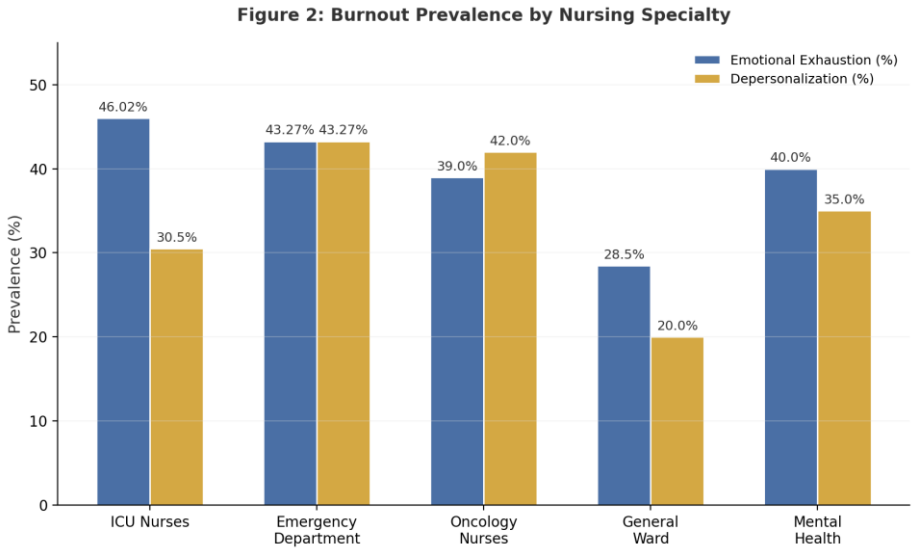


Figure 2: Burnout Prevalence by Nursing Specialty

2.5 Impact of Burnout

Nurses who suffer from burnout also have consequences that impact patients, as well as the professionals and organizations themselves. On the individual scale, burnout is linked to poor quality of care, failure to perform well on medical errors tests, and lower patient satisfaction scores. Emotional exhaustion and depersonalization are associated with less than optimal care, lack of vigilance and lowered empathy in the care of patients, which can make patients unsafe and lead to poorer treatment outcomes. The Nurse Burnout Patient Outcome Linkage Study is an important area of focus related to quality and safety in healthcare.

Individuals who experience burnout are at increased risk for poor mental health at the personal level with increased risk for anxiety, depression, sleep disturbances, substance abuse disorders. Burnout among nurses can lead to decreased job satisfaction, lower professional commitment, and decreased quality of life. The organizational aspects of burn out are also important. Data from the American Organization for Nursing Leadership (AONL) and NSI Nursing Solutions says that registered nurse turnover costs are made up of the average compensation of the nurses who leave and the associated higher costs of recruitment, training, and orientation, as well as the benefit loss of their unfilled shifts.The average cost of turnover estimated by the American Organization for Nursing Leadership (AONL) and NSI Nursing Solutions is $40,038, which includes the turnovers' average salary, recruitment, training, orientation, and replacement of lost shifts on the job. The economic impact on individual hospitals due to nurse turnover can be significant, ranging from $3.87 million to $5.79 million per year, emphasizing the critical need for a robust plan to address burnout and prevent it from happening.

3. Coping Strategies

3.1 Problem-Focused Coping

Problem-focused coping strategies are those attempts to reduce or change the origin of the stress directly, in a behavioral and cognitive

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manner. Time management, assessment of task priorities, effective delegation of tasks, seeking professional help and mentorship, and ongoing continuing professional development to improve clinical skills and confidence are common problem-solving strategies used by nurses. Problem-focused coping showed significant correlation with lower burnout score in the emergency department nurses, indicating that active involvement with the stressors was a protection factor for occupational burnout, rather than avoidance.Essentially, problem-focused coping significantly related to lower the burnout score among the emergency department nurses, meaning that active engagement with stressors is a protective factor against occupational burnout in emergency department nurses, rather than avoidance. According to Fernandes[16] the mean score of the problem-focused coping scale of the nurses was 27.8 (SD 4.4) and in the emotion-focused coping scale was 22.6 (SD 4.1) showing a general preference for active coping approaches among Indian Nurses.

There is evidence that the effectiveness of problem-focused coping is dependent on the extent of coping control that nurses feel they have in the workplace. Problems oriented coping strategies are more effective when there are structures in the organization that encourages the involvement of the nurse in decision making and promotes autonomy. In contrast, in settings where there is little agency and an extreme hierarchy, even very motivated nurses could be discouraged by having their efforts to deal with problems result in restricted benefits or feel frustrated and helpless on the job, which paradoxically can worsen symptoms of disability.

3.2 Emotion-Focused Coping

Emotion-focused coping is focused on the emotions rather than on the stressors. These strategies incorporate a wide variety of techniques such as relaxation, mindfulness cognitions, physical activity, social support from family and friends, spiritual/religious activity, and hobbies/recreational activities. Research evidence indicates that adaptive emotion-focused coping may play a role in decreasing burn-out symptoms and increasing psychological well-being among nurses in conjunction with problem-focused coping.

The association between emotion-focused coping and outcomes of burnout is complex, and seems to be influenced by the type and quality of coping strategies utilized, though. Avoidance ($p = 0.002$), denial and disengagement were shown to be positively correlated with depression, which can actually hinder a nurse from working toward the root cause(s) of their burnout symptoms. Emotion-focused coping has been linked in a recent study by Joseph et al.[6] to short term emotional response, but its ability to have long-term effects as a single coping skill is limited, and it could be most effective if it was part of a multi-level coping strategy package that also implemented problem-focused and organizational-level coping.

3.3 Organizational and Institutional Coping Interventions

Organizational-level interventions are crucial to the overall prevention and management of burnout. There is a significant body of empirical evidence to show that mindfulness-based interventions are effective as organizational coping interventions. A systematic review by Wang et al.[11] showed that the Mindfulness Based program was effective in reducing stress and burnout symptoms for healthcare professionals, including nurses. They tend to include aspects of mindful movement, meditation and body scanning, and are delivered in structured group sessions which offer social support benefits, too.

Other organizational interventions which have shown promising results include the introduction of dedicated mental health material, including EEPs and confidential counselling, structured de-briefing after critical incidents, evidence-based nurse to patient ratios or inequitable workloads, and development of supportive leadership practices that foster a sense of autonomy, decision-making, and professional recognition among nurses. Jimenez-Garcia et al[15] (2026) conducted a systematic review and network meta-analysis to evaluate interventions for preventing or reducing nurse burnout and concluded that multicomponent studies combining interventions to address individual and organizational factors were the most effective. Table 2 outlines a comparison of coping strategy types.

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Table 2: Comparison of Coping Strategies for Nurse Burnout

Strategy Type	Examples	Effectiveness	Limitations
Problem-focused	Time management, delegation, professional development	Moderate to high	Requires organizational support
Emotion-focused	Mindfulness, relaxation, social support	Moderate	May be insufficient alone
Avoidance (maladaptive)	Substance use, denial, withdrawal	Low/negative	Associated with higher burnout
Organizational	Staffing improvements, debriefing, mental health programs	High	Resource-intensive

3.4 Coping Strategy Profiles Among Nurses

Studies have started to begin to explain the coping strategy profiles of various nursing groups and specialty groups. However, when examining the coping strategies used by ED nurses, it was concluded that most nurses used problem-focused coping strategies, which may have been attributed to the demand of the clinical setting, which promotes proactive decision making and quick problem solving skills. Copings of various nurse groups are shown in Figure 3 as a radar chart of coping relative to one another.

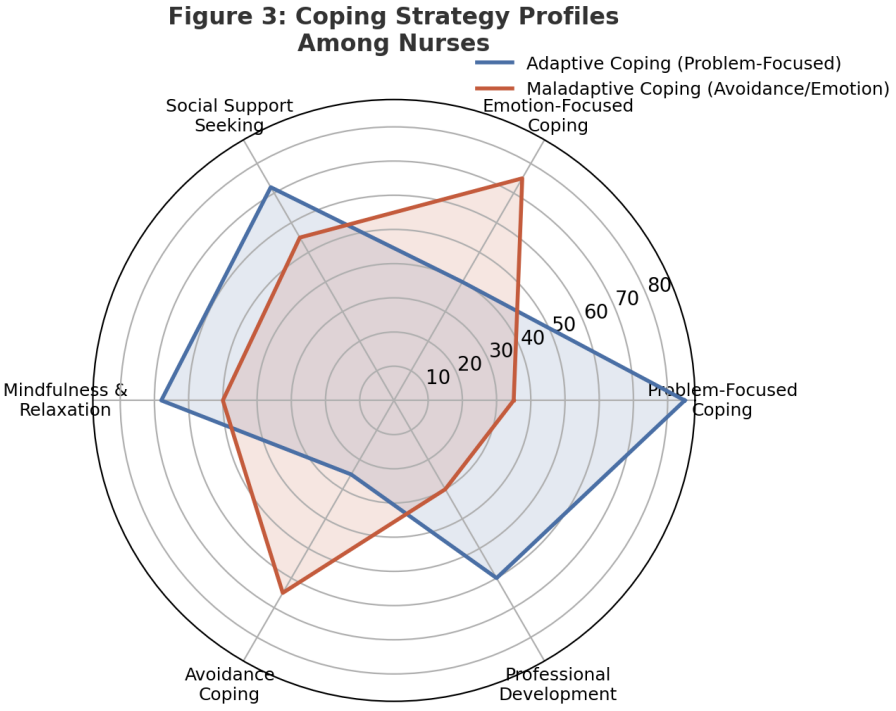


Figure 3: Coping Strategy Profiles Among Nurses Across Specialties

Most significantly, avoidance coping has been repeatedly found to be positively correlated with emotional exhaustion ($p < 0.01$) and depersonalization ($p < 0.001$) which are maladaptive coping strategies. In a study of coping strategies and associated factors in a sample of nurses, 2026 participants who used more avoidance-based coping tended to have significantly higher scores on all three MBI dimensions[20]. The results of this study support the need for recognizing nurses who primarily use avoidance coping style and applying specific

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interventions to enhance their coping abilities. It seems that comprehensive burnout prevention programs should include a discussion of how to tailor coping styles as an approach to prevention since there is a relationship between the coping profiles and the burnout outcomes.

4. Discussion

4.1 Synthesis of Findings

The findings of this paper vividly show that the burn out of the nurses in tertiary care hospitals is a multi-factorial condition as the individual, interpersonal, and organisational factors interact in a complex manner. Given the continued high prevalence rates in studies from around the world, regions, and specialty-specific studies, it can be assumed that burnout is not rare, isolated, and uncommon, but rather a systemic problem-a problem of a significant portion of the nursing profession. The COVID-19 pandemic has actually become a huge natural experiment and eye opener on how much potential stressors, such as occurring in life, can create vulnerabilities and escalate burnout rates to alarming levels. This is a reminder of the importance of nurse health in an unexpected and prolonged occupational stress, as overall burn-out increased almost double during the pandemic.

The similarities in the results from different healthcare environments and cultural backgrounds indicate that the drivers for burnout in tertiary care hospitals (TCs) are likely to be similar, such as workload, workload demands, and organisational problems. The variation in prevalence of burnouts by specialty of nursing, however, reminds us that there is a need for context-sensitive considerations when planning interventions. Higher incidence rates of burn-out among nurses working in inpatient care settings, such as the immediate care unit, oncology and emergency care settings suggest that there is a need to create nurse-specific prevention and support programs. Another synthesis of burnout management research indicates that burnout can only be effectively managed at a multi-level system, including changes in the organization's work environment and individual coping skills enhancement.

4.2 Limitations of Current Research

While there is a considerable amount of research related to nurse burnout, there are a couple key areas of limitations that need to be taken into consideration when analyzing and making conclusions from the results. The most important methodological limitation is that most research is conducted using cross sectional study design, preventing the understanding of causal relations among found risk factors and burnout. Cross-sectional studies provide associations at one specific moment in time, but do not clarify if observed risk factors are causes, consequences, or correlates of burnout. This constraint is especially important for its potential to shed light on the temporal nature of Burnout symptoms and their possible double-directionality in developing relationship with variables like job satisfaction, coping strategy use and/or organizational commitment.

The use of self-report measures may be subject to social desirability bias, especially in organizational settings where expressing burnout may be interpreted as a weakness, and the lack of measurement of several potential factors that could affect fatigue symptoms. This diversity in measurement can be problematic when comparing results across studies, because some have used different cut-off scores for their MBI but others have utilized other instruments, which can differ quite significantly from the MBI. The results of burnout studies from certain settings do not readily apply to all nurses in the world, due to cultural and geographic variations in burnout expression and perception. Convenience sampling is the most common type of sampling employed in single-institution studies, introducing concerns for selection effects and reducing external validity. These limitations are listed in Table 3.

Table 3: Limitations of Existing Studies on Nurse Burnout

Limitation	Description	Impact on Findings
Cross-sectional design	Most studies use cross-sectional design	Cannot establish causal relationships

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Limitation	Description	Impact on Findings
Self-report bias	Reliance on self-reported measures (MBI, PSS)	Potential social desirability bias
Heterogeneity	Varying definitions and cut-off scores for burnout	Difficulties in comparing across studies
Cultural factors	Cultural differences in expressing and perceiving burnout	Limited generalizability
Sampling bias	Convenience sampling in single institutions	Limited external validity

4.3 Counterarguments and Alternative Perspectives

Although in most of the literature, burnout is regarded as a work phenomenon caused by systemic work factors, alternative interpretations should be noted. Others have conceived of Burnout as a consequence of a constellation of traits of the individual such as: personality traits - neuroticism, perfectionism, low levels of resilience; factors that may make some individuals more susceptible to Burnout than others despite their work context. This individual-differences perspective posits that preventing burnouts must not occur without taking into consideration worker differences and therefore interventions must go beyond organizational change to tackle individual factors which has been the trend in interventions focused on developing resilience in the context of positive psychology.

There is a related argument regarding conceptual differences in burnout from clinical depression. A few investigators have raised doubts about whether burnout is a separate clinical syndrome, or a special type of occupational depression (especially the emotional exhaustion component). This debate is relevant when it comes to treatment strategies and organizational response. In addition, there has been a discussion for why moderate amounts of stress can actually function as a motivator a position that indicates that while there is a difference between eustress (beneficial stress) and distress (harmful stress), these theories are not mutually exclusive. Although this view has some theoretical validity, the results examined in this paper seem to indicate that the stress of the nurses in these hospitals is mainly distressful in nature and not motivating for the change. The ICD-11 diagnosis of 'burnout' as an occupational phenomenon is particularly supportive of the systemic perspective as it takes into account the role of the work-related factors and not individual shortcomings.

5. Conclusion and Implications

5.1 Summary of Key Findings

The current systematic review has revealed that Burnout among Tertiary care hospital nurses is a big and prevalent health issue at work. Internationally, one third of nurses have clinically significant emotional exhaustion and decreased personal accomplishment and one quarter have depersonalization. Due to the COVID-19 pandemic substantially raising these figures, the overall prevalence of burnout is almost 60% among participants at the pandemic period. Clearly, patients in certain environments such as in the ICU, oncology, and emergency department are targets for nursing and come with high emotional and clinical needs. Some coping strategies such as problem-focused coping are protective against burnout, whereas avoidance-focused coping is related to increased risk of burnout. Interventions occurring at an organizational level, such as multicomponent interventions addressing both individual and organizational issues, show the highest potential for preventing and/or reducing burnout.

5.2 Recommendations

Given the evidence collated against this review, some recommendations will be put forward for various groups of stakeholders. Key Priority Activities for health care providers should include: increasing staff ratios based on evidence-based benchmarks; developing comprehensive mental health support processes that include confidential counseling and/or structured debriefing services, creating a

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supportive organizational culture in which nurses are valued as contributors to the decision making process, and conducting routine burn-out screening with validated instruments like the MBI to allow for early identification and intervention. Suggestions for nursing practice include including teaching on adaptive coping skills as a key element of undergraduate education and even for continuing education, offering and implementing programs designed to build staff resiliency and adapting to the unique stressors of tertiary care nursing, and implementing peer support groups for sharing of adaptive coping strategies between colleagues.

At the policy level, governments and regulatory bodies should consider introducing evidence-based staffing legislation that sets a minimum nurse to patient ratio (NPR) for tertiary care settings, making healthcare institutions adopt and maintain focused Occupational Health programs pertaining to the prevention of healthcare worker burnout, having regular burnout prevalence monitoring and reporting to ensure accountability, and investing in research infrastructure to improve innovative healthcare worker burnout prevention and intervention programs. These policy recommendations are based on the understanding that burnout is a systemic and is more broadly a problem that must be addressed at an organizational, professional and governmental level.

5.3 Future Research Directions

Breakthrough ideas that could be pursued in the future can be inferred from gaps and limitations identified in this review. There is an urgent need to conduct longitudinal studies to determine the burn-out's timelines and critical transitions and thus temporally sequence risk and protective factors. Rigorous experimental studies (in particular randomized controlled trials) are required to evaluate the effectiveness of multilevel prevention programmes addressing different levels of determinants of burnout. A cross-cultural comparative study could improve the knowledge how the cultural values, the system of the health services and society's attitude towards nursing influence the expression of burnout and the effectiveness of coping.

There are especially a number of avenues for future research and practice to take the form of technology-based coping interventions. Digital health solutions like mobile apps for stress reduction, VR relaxation therapy, and AI-driven automated chatbots for on-demand advice on coping strategies have the potential to be scalable and accessible for burnout prevention work that can be combined with traditional methods. Wearable healthcare technology is crucial in a smart workplace as it provides a way to measure physiological stress that could help prevent burnout even before it happens. These technology-based solutions need to be tested in a variety of nursing populations, in different tertiary care settings and evaluated for feasibility, acceptability and effectiveness, and offer vital evidence to inform development of scalable responses to the international nursing burn-out crisis.

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