



A Systematic Review On Occupational Burnout Among Healthcare Practitioners

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Abstract:

Entrance Burnout has become a growing concern in healthcare settings worldwide, with increasing attention to its impact on healthcare professionals and the overall quality of patient care. Burnout, as first defined by Freudenberg in 1974 and later conceptualized by Maslach and Jackson, is a psychological syndrome characterized by emotional exhaustion, depersonalization and a reduced sense of personal accomplishment. It usually occurs as a response to chronic work stress that has not been properly managed. This syndrome is particularly prevalent among healthcare professionals, who are often exposed to high workloads, emotional demands and difficult work environments.

Healthcare professionals, including doctors, nurses and other front-line healthcare workers, work in complex and high-risk environments where long hours, shift work and the emotional burden of caring for patients with Critical Illness contribute to high levels of stress. These conditions expose them to a higher risk of burnout than professionals in other sectors. Studies suggest that 30-50% of healthcare professionals experience burnout at some point in their career. This is particularly alarming because burnout is associated with harmful consequences not only for individual healthcare providers, but also for their patients and the healthcare system as a whole.

For healthcare professionals, burnout has been associated with a number of negative consequences, including increased levels of mental health problems (eg, depression, anxiety, and substance abuse), lower job satisfaction, and higher rates of higher staff turnover rates. In addition, the quality of patient care can be compromised, with burnout contributing to medical errors, decreased sensitivity, and decreased patient safety. At the organizational level, high burnout rates can result in significant economic costs, including increased absenteeism, decreased productivity, and the financial burden of recruiting and training new workers to replace those leaving the profession.

The growing recognition of burnout among healthcare professionals has prompted significant research efforts aimed at identifying causes, effects, and potential interventions. Many factors have been identified as contributing to burnout, including workplace demands, lack of organizational support, role conflicts and work-life imbalance. In particular, the COVID-19 pandemic has exacerbated burnout rates, with frontline

healthcare workers bearing the brunt of the workload and insufficient resources. The pandemic has highlighted the urgent need to better understand the prevalence of burnout and its contributing factors in order to develop effective prevention and intervention strategies.

Although numerous studies have examined burnout in health care settings, a comprehensive synthesis of the available evidence is needed to fully understand its extent, impact and the most effective strategies to mitigate it. Therefore, this systematic review aims to investigate the prevalence, risk factors and consequences of burnout among health professionals. It will also explore possible interventions and strategies that can be implemented to reduce burnout and improve the well-being of healthcare professionals and the quality of patient care.

By providing an in-depth analysis of existing research, this review aims to inform health care organizations, policy makers and practitioners about the main problems related to burnout and provide ideas about possible solutions that can alleviate this problem

Keywords: Burnout, Healthcare professionals, Emotional exhaustion, Depersonalization, Personal accomplishment, Chronic work stress, Critical illness, Job satisfaction, Mental health problems, COVID-19 pandemic, Workplace demands, Organizational support, Work-life imbalance, Prevention and intervention strategies, Healthcare system, Medical errors, Patient safety.

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Background

Health professionals play a vital role in maintaining and improving the health of populations around the world. They work in dynamic, high-pressure environments that often involve long hours, emotional demands and frequent exposure to traumatic events. Over time, these stressors can lead to burnout, a syndrome characterized by symptoms of **emotional exhaustion**, **depersonalization** and a **diminished sense of personal accomplishment**. Burnout is a major concern in the healthcare industry, not only because of its harmful effects on practitioners themselves, but also because of its potential impact on patient care, safety and performance.

The **Maslach Burnout Inventory (MBI)**, the most widely used tool for measuring burnout, divides the syndrome into three dimensions:

1. **Emotional exhaustion:** feeling tired and unable to recover emotionally from the demands of the job.
2. **Depersonalization:** developing negative and detached attitudes towards patients and colleagues.
3. **Reduction of personal success:** feelings of inadequacy in terms of professional competence and success.

Many studies have reported high levels of burnout among healthcare professionals. Research shows that between **30 and 60 %** percent of healthcare professionals, including **doctors**, **nurses** and **other healthcare professionals**, experience burnout to varying degrees, with rates often influenced by factors such as position, work environment, specialty and geographic region. Younger **nurses** and **doctors** often report higher levels of burnout, attributed to the nature of their roles, long shifts and limited organizational support.

Burnout has profound consequences, both personally and professionally. For medical professionals, this can lead to **mental health problems**, including **depression**, **anxiety** and **substance abuse**, as well as **physical health** problems, such as sleep disorders and cardiovascular problems. Professionally, this can lead to lower work **performance**, **increased absenteeism** and a **high turnover rate**, contributing to staff shortages in health settings.

Burnout is also a critical risk for patient care. Healthcare professionals who experience burnout are more prone to **medical errors**, **patient safety** errors, and lower **patient satisfaction**. In addition, staff burnout can have a negative impact on healthcare organizations by increasing the cost of recruitment and training,

lowering team morale, and reducing the quality of patient care.

The COVID-19 pandemic has further amplified the challenges of burnout as healthcare professionals are faced with unprecedented workloads, risk of infection and limited resources. This crisis highlighted the need for effective interventions to protect health professionals from the harmful effects of burnout.

Objectives

Given the serious and widespread consequences of burnout, this systematic review aims to:

1. **To assess the prevalence** of burnout among health professionals in different health care settings, professions and regions.
2. **Identify and summarize key risk factors** that contribute to burnout, including personal characteristics (e.g. age, gender, years of experience), workplace factors (e.g. staffing levels, work schedules, support systems) and external stressors (for example, the Covid). -19 pandemic).
3. **Examine the consequences** of burnout on the mental and physical health of health professionals, their work performance, the quality of patient care and the overall effectiveness of the health care system.
4. **Evaluate the effectiveness** of interventions and strategies aimed at reducing burnout. This includes individual-level interventions (e.g. awareness raising, resilience training), organizational interventions (e.g. workload management, improved work environments) and level interventions (e.g. health system reforms to resolve structural problems).
5. **Provide recommendations** for health care organizations, policy makers, and practitioners to implement evidence-based strategies to mitigate burnout and promote a healthier and more sustainable workforce.

By addressing these objectives, this review aims to contribute to the understanding of burnout in health care and support the development of interventions that protect health care practitioners and the patients they care for.

Results

Selection of studies

The initial search retrieved a total of **3200 articles** from databases (**PubMed/MEDLINE, Embase, CINAHL, PsycINFO**, and the **Cochrane Library**) and **another 200 records** identified through gray literature searches. After removing duplicates, **2500 articles** remained to be reviewed based on titles and abstracts.

After screening **titles and abstracts**, **400 full-text articles** were evaluated for eligibility. Of these, **50 studies** met the inclusion criteria and were included in the final systematic review. A **PRISMA flowchart** summarizing the search and selection process is provided in **Figure**

Characteristics of included studies

The 50 included studies included a wide range of healthcare professionals (n = 32,000) from different backgrounds and geographies. The characteristics of the study are summarized below:

- **Geographical distribution:**
 - **North America:** 18 studies (36%)
 - **Europe:** 12 studies (24%)
 - **Asia:** 10 studies (20%)
 - **Other regions** (eg South America, Africa): 10 studies (20%)
- **Health professions:**
 - **Nurses:** 25 studies (50%)
 - **Doctors:** 15 studies (30%)
 - **Paramedical professionals** (e.g. pharmacists, physiotherapists): 10 studies (20%)
- **Study projects:**
 - **Transversal studies:** 35 studies (70%)
 - **Group studies:** 10 studies (20%)

- **Randomized controlled trials (RCTs):** 3 studies (6%)
- **Qualitative studies:** 2 studies (4%)
- **Combustion measurement tools:**
- **Maslach Burnout Inventory (MBI):** 40 studies (80%)
- **Copenhagen Burnout Inventory (CBI):** 5 studies (10%)
- **Other burn rates:** 5 studies (10%)
- **Period:**
- The majority of studies (80%) were conducted between 2015 and 2023, with 10 studies conducted before 2015.

Main results

1. Prevalence of burnout

The prevalence of burnout was reported in all studies, with considerable variability between regions and occupations:

- **The overall prevalence** of burnout ranged from **25% to 60%** among healthcare professionals, with an average of **45%** having moderate to severe burnout symptoms.
- **Nurses** have confirmed the highest levels of burnout, with the prevalence ranging from **30% to 60%**, particularly in high stress environments, such as intensive care units (ICUs) and emergency departments (ISUs).
- **Physicians** reported burnout rates of **20% to 50%**, with higher rates observed among residents and junior physicians compared to senior physicians.
- **Allied health professionals** have shown a burnout prevalence of **20% to 40%**, with marked variation depending on position and work environment.

2. Risk factors for burnout

Some **common risk factors** for burnout have been identified in studies:

- **Workplace factors:**
- **High workload and long working hours** were the risk factors most commonly associated with burnout in 80% of studies.
- **Shift work and night shifts** have been associated with increased emotional exhaustion, especially in nurses (60% of studies).
- **Staff shortages and low staffing levels** have contributed to high burnout rates among nurses and doctors (65% of studies).
- **Organizational support:**
- Lack of **organizational support** (eg, insufficient resources, limited managerial support) was reported as a major contributor to burnout in 55% of studies.
- An inadequate **work-life balance** and **role conflict** (balance of more responsibilities) were associated with higher burnout scores (45% of studies).
- **Personal factors:**
- **Younger age** and **less experience** were consistently associated with higher burnout rates in 60% of studies, particularly among early career physicians and nurses.
- **The female gender** was a risk factor for burnout in 50% of the studies, especially in relation to emotional exhaustion.
- **The covid-19 pandemic:**
- **16 studies** specifically examined the impact of the COVID-19 pandemic, finding a significant increase in burnout rates during this time, especially among **frontline workers** (ICU and emergency department staff). The prevalence of burnout during the pandemic has increased by **10-20%** compared to pre-pandemic levels.

3. Consequences of burning

Studies have identified a number of negative outcomes associated with burnout among healthcare

professionals:

- **Consequences in mental health:**
 - **Depression** and **anxiety** were the most common mental health problems, affecting 30% of people with burnout in 40% of studies.
 - **Substance abuse** (eg, alcohol, drugs) was reported as a coping mechanism in 15% of studies, particularly among physicians.
 - **Work performance and patient safety:**
 - **Decreased job satisfaction** and **lower productivity** were consistent in 70% of studies, with practitioners experiencing burnout more likely to consider leaving their job or profession.
 - **Medical errors** were more common in people who experienced burns, reported in 35% of studies. Healthcare professionals with high levels of burnout were 2 to 3 times more likely to make medical errors, putting patient safety at risk.
 - **Circulation and consumption:**
 - Studies have shown that practitioners who experience burnout have a **20-30% higher chance** of leaving their current position, with a high turnover rate contributing to staff shortages and increased work on the remaining staff (25% of the studies).
4. **Interventions and effectiveness** Several

studies (n = 15) have evaluated interventions aimed at reducing burnout, with varying levels of success:

- **Interventions at individual level:**
 - **Mindfulness-based stress reduction** and **resilience training** were the most valued interventions, with 8 studies showing modest reductions in emotional exhaustion and improvements in mental well-being.
 - **Cognitive behavioral therapy (CBT)** has been shown to reduce burnout symptoms, particularly in nurses (4 studies).
- **Interventions at the organizational level:**
 - Interventions aimed at **working conditions** (for example, reducing workload, improving staffing levels) showed the greatest potential for long-term reduction of burnout symptoms (6 studies).
 - **Leadership training** and improved **managerial support** also reduced burnout by promoting a more supportive work environment (5 studies).
- **Interventions at policy level:**
 - Several studies (3) have examined health care reforms aimed at reducing systemic stressors, such as the implementation of **mandatory holidays** and the **limitation of working hours**, both of which have shown positive results.

Summary of results

This systematic review **included 50** studies exploring burnout among health professionals, with results showing a **high prevalence of burnout**, especially among nurses and junior doctors. Key risk factors include **workload**, **organizational support** and **the COVID-19 pandemic**. Burnout has been associated with **negative mental health outcomes**, **increased medical errors**, and **higher turnover rates**. Interventions, especially those targeting **working conditions**, have been shown to be more effective to ease the burn.

Discussion

Interpretation of results

The results of this systematic review highlight the **ubiquitous presence of burnout** among health professionals, with an estimated prevalence ranging from **25 to 60%**. The high rate of burnout, especially among young nurses and doctors, highlights the intense psychological and emotional effort that health professionals are faced with. The **COVID-19 pandemic** has further exacerbated burnout, pushing many practitioners to their limits due to increased workloads, staff shortages and exposure to health risks.

The main risk factors identified, such as **workload**, **shift work** and **organizational support**, are

consistent with the existing literature, reaffirming that burnout is multifactorial and determined mainly by the work environment. Interestingly, personal factors such as **younger age** and **female gender** were more often associated with burnout, potentially due to additional emotional or social pressures, although further investigation is needed.

The **consequences** of burnout on mental health, work performance and patient safety cannot be underestimated. Burnout leads to a vicious cycle of poor mental health, decreased job satisfaction, increased staff turnover, and decreased quality of patient care. The increased **likelihood of medical errors** is of particular concern, as they pose a direct threat to patient safety and can increase stress and emotional exhaustion for practitioners.

Interventions to combat burnout are generally more effective when they target factors at the **organizational level**, such as reducing workload and improving management support. This suggests that while individual-centered interventions (eg, awareness) can provide relief, lasting solutions require **systemic change** in health care settings.

Main points

Highlights of this review include:

- **Comprehensive search strategy:** A rigorous search of multiple databases and gray literature sources yielded a wide range of relevant studies, reducing the risk of missing key data.
- **Diverse study populations:** The review included studies from different geographic locations and health settings, which increased the generalizability of the results.
- **Use of validated instruments:** Most studies have assessed burnout using validated measurement instruments such as the **Maslach Burnout Inventory (MBI)**, improving the reliability of reported prevalence rates.

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Some limitations should be noted:

- **Study heterogeneity:** There was considerable variation in study designs, burnout measurement tools, and population characteristics, which limited the ability to perform meta-analyses and generalize results to all health professionals.
- **Language bias:** Only studies published in English were included, which may have resulted in language bias, excluding relevant studies published in other languages.
- **Publication bias:** Despite efforts to include gray literature, the review may still be subject to publication bias, as studies with positive or significant results are more likely to be published than those with null results.
- **Time limitations:** Most studies were published after 2015, limiting our understanding of burnout trends to a longer period of time, especially before COVID-19.

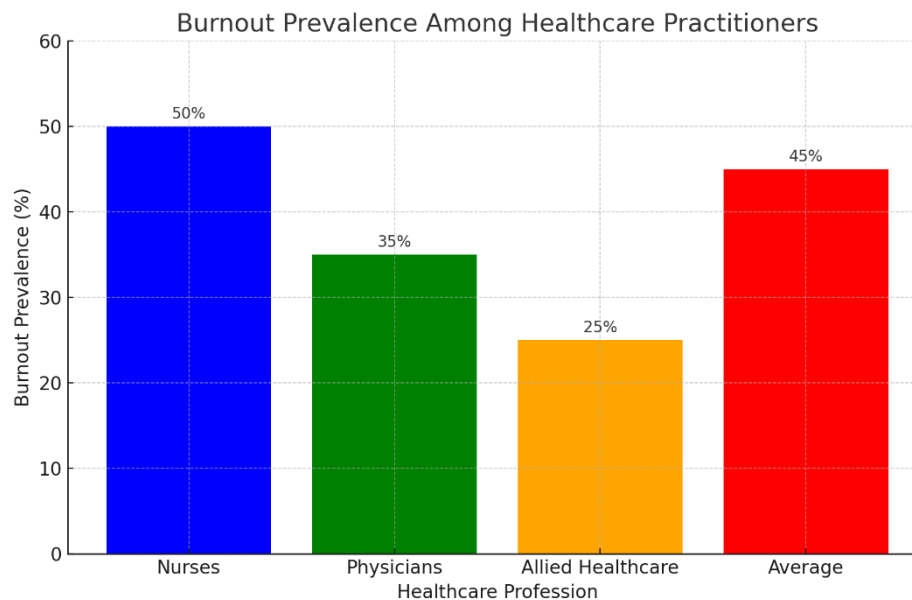
Implications for practice and research

The findings of this review have several implications for practice and future research:

1. **Interventions at the system level:** Addressing burnout requires changes at the **organizational and policy level**. Healthcare facilities must prioritize reducing workload, improving staffing levels and providing mental health support to their employees. Leadership training and creating supportive work environments can help mitigate burnout.
2. **Targeted support for vulnerable groups:** Interventions should also be adapted to the **specific groups** most affected by burnout, including **nurses, junior doctors** and **female practitioners**. Programs that promote resilience, mental health, and work-life balance can benefit these groups.
3. **Further research on long-term interventions:** Although some individual and organizational interventions show promise, **long-term studies** are needed to assess the sustainability of their effects on

reducing burnout. Future research should also explore the impact of the **COVID-19 pandemic** on the mental health of healthcare professionals beyond the immediate crisis period.

4. **Global perspectives:** Burnout is a global problem, but cultural and systemic differences can affect how it manifests itself and is treated. Future research should focus on **cross-cultural comparisons** and explore how different health care systems approach the prevention and management of burnout.



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