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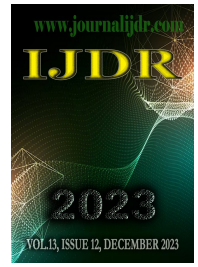
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REVIEW ARTICLE

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A SYSTEMATIC REVIEW OF BURNOUT AMONG HEALTHCARE PROVIDERS: PREVALENCE, CAUSES, AND IMPACTS

*¹Nabeel Halawani, ²Hasan Khalaf AlOmari, ³Munira Saleh AlZamil, ⁴Awad Khaled Almutairi, ⁵Mohammad Saad Alharthi and ⁵Waleed Abdolmohsen Alluqmani

¹King Abdulaziz University Hospital, Saudi Arabia; ²Health Administration Specialist / Al-Amal Hospital, Saudi Arabia; ³Phlebotomist / Al- Amal Hospital, Saudi Arabia; ⁴Pharmacist, Erada and Mental Health Complex, Saudi Arabia; ⁵Erada and Mental Health Complex, Saudi Arabia

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ABSTRACT

Objective: This systematic review aimed to comprehensively analyze and synthesize the existing literature on burnout among healthcare providers (HCPs) across different regions and healthcare settings, with a focus on epidemiology, contributing factors, and preventive strategies. **Methods:** We conducted a systematic search of multiple databases, identifying seven studies that met the inclusion criteria. These studies, conducted in various countries and healthcare contexts, provided valuable insights into the prevalence of burnout, associated factors, and potential interventions. We organized the findings into three key themes: (1) Epidemiology of Burnout, (2) Factors Contributing to Burnout, and (3) Preventive Strategies. **Results:** The reviewed studies revealed a significant prevalence of burnout among HCPs, ranging from 10% to 73%, with variations observed across different regions and specialties. Contributing factors included workload, work environment, lack of support, and exposure to emotionally distressing situations. Preventive strategies emphasized the importance of mindfulness programs, stress management, improved work-life balance policies, and creating supportive work environments. Gender, age, and healthcare roles were also identified as potential predictors of burnout. **Conclusion:** Burnout among healthcare providers is a pervasive and complex issue with far-reaching consequences for both professionals and patient care. The findings highlight the need for healthcare organizations and policymakers to prioritize the mental health and well-being of HCPs. Implementing evidence-based interventions and fostering supportive work environments are critical steps in mitigating burnout and its impact. Further research is warranted to explore burnout in underrepresented regions and diverse healthcare populations, ultimately enhancing our understanding and the effectiveness of interventions in addressing this global challenge.

*Corresponding author: Nabeel Halawani

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INTRODUCTION

The healthcare sector plays a pivotal role in society, providing critical services to individuals in times of illness and need. However, the demanding nature of healthcare work, coupled with the unique challenges posed by various factors, including global health crises like the COVID-19 pandemic, has placed healthcare providers at a higher risk of experiencing burnout and psychological distress. Burnout among healthcare professionals is a multifaceted issue with far-reaching consequences for both individuals and the healthcare system as a whole. This systematic review aims to comprehensively examine the prevalence, causes, and impacts of burnout among healthcare providers.

The COVID-19 pandemic, an unprecedented global health crisis, has had a profound impact on healthcare providers worldwide. Studies such as Ching *et al.* (2021) have highlighted the psychological distress experienced by healthcare providers during the pandemic, shedding light on the urgent need to address burnout in this critical workforce. In addition to the pandemic, factors such as long working hours, heavy workloads, and high patient expectations have been identified as contributors to burnout among healthcare workers (Siau *et al.*, 2018; Shenoi *et al.*, 2018). Furthermore, geographical and cultural factors can influence the prevalence of burnout, as demonstrated by Chemali *et al.* (2019) in the Middle East region. Addressing burnout is crucial for maintaining the well-being of healthcare providers and ensuring the provision of high-quality care.

Strategies to enhance resilience and manage psychological distress among healthcare workers have been explored (Heath *et al.*, 2020). However, to develop effective interventions and preventive measures, a comprehensive understanding of burnout, its causes, and its consequences is essential. This systematic review will synthesize existing research on burnout among healthcare providers, drawing insights from studies such as Van Mol *et al.* (2015), Romani and Ashkar (2014), Wachholtz and Rogoff (2013), Khouri *et al.* (2022), and Pappa *et al.* (2022). By doing so, it aims to contribute valuable insights that can inform policies and initiatives aimed at reducing burnout and enhancing the well-being of healthcare professionals.

Purpose of the Study: The purpose of this systematic review is to comprehensively examine and synthesize the existing body of literature on the topic of burnout among healthcare providers. Specifically, this review aims to achieve the following objectives:

1. To systematically analyze and summarize the prevalence of burnout among healthcare professionals in various healthcare settings and geographic regions.
2. To identify the key risk factors and predictors associated with burnout among healthcare providers, including organizational, individual, and contextual factors.
3. To assess the impact of burnout on the psychological well-being, job satisfaction, and overall quality of life of healthcare workers.
4. To explore the strategies and interventions employed to mitigate or prevent burnout among healthcare professionals, including the effectiveness of various interventions.
5. To provide insights into the potential variations in burnout rates and contributing factors across different healthcare specialties and professions.
6. To highlight gaps in the current literature and areas where further research is needed to better understand and address burnout among healthcare providers.

Justification of the Study: This systematic review on burnout among healthcare providers is motivated by the pressing need to address the well-being of the healthcare workforce, a cornerstone of any healthcare system. Healthcare professionals are at the forefront of delivering vital medical services, and their sustained well-being is paramount not only for their personal health but also for the quality of care they provide to patients. Burnout has emerged as a pervasive issue affecting healthcare providers globally, and its consequences are far-reaching. This review seeks to comprehensively examine the prevalence, contributing factors, and consequences of burnout among healthcare workers, encompassing diverse regions and healthcare settings. By elucidating the extent of the problem and identifying its determinants, this research can pave the way for evidence-based interventions and policies aimed at alleviating burnout and enhancing the resilience of healthcare professionals. Furthermore, this systematic review is justified by its potential to improve patient outcomes and healthcare system efficiency. Burnout has been associated with adverse patient events, including medical errors and diminished patient satisfaction. Understanding the link between healthcare worker burnout and patient outcomes is vital for healthcare organizations striving to provide safe and high-quality care. Additionally, this review aims to identify effective interventions and strategies for mitigating burnout, offering valuable insights for healthcare leaders and policymakers. By addressing the root causes of burnout and implementing evidence-based practices, healthcare organizations can foster healthier work environments, retain their skilled workforce, and ultimately enhance the overall well-being of both healthcare providers and the patients they serve.

RESEARCH METHODOLOGY

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a comprehensive and rigorous review process.

Search Strategy: A systematic and structured literature search was conducted to identify relevant studies. The search strategy involved the use of defined keywords and controlled vocabulary (Medical Subject Headings, or MeSH terms) to capture articles related to burnout among healthcare providers. The primary electronic databases searched included PubMed/MEDLINE, EMBASE, and the Cochrane Library. The search strategy combined various concepts, including "burnout," "healthcare providers," and "psychological distress," using Boolean operators (AND, OR) to enhance search efficiency.

The keywords and MeSH terms used in the search strategy were as follows:

- "Burnout, Professional" [MeSH] OR "Burnout, Psychological" [MeSH] OR "Occupational Stress" [MeSH] OR "Emotional Exhaustion" [MeSH] OR "Depersonalization, Self" [MeSH] OR "Personal Satisfaction" [MeSH] OR "Workload" [MeSH]
- "Health Personnel" [MeSH] OR "Healthcare Workers" OR "Healthcare Professionals" OR "Medical Staff" OR "Nurses" OR "Physicians" OR "Doctors" OR "Hospital Staff" OR "Clinicians"
- "Psychological Distress" [MeSH] OR "Psychological Well-being" OR "Mental Health" OR "Psychological Health"

The search was further refined by limiting articles to those published in English between January 2013 and December 2023. This time frame ensured the inclusion of recent research findings while minimizing the inclusion of outdated studies. Additionally, manual cross-referencing of selected articles' bibliographies was performed to identify any potentially overlooked relevant studies.

Inclusion and Exclusion Criteria: The inclusion criteria for this systematic review encompassed original research articles focusing on burnout among healthcare providers. These articles could address various aspects of burnout, including its prevalence, risk factors, consequences, and interventions. To maintain consistency, only articles published in English were considered. Conversely, exclusion criteria consisted of review articles, case reports, letters to the editor, and studies solely focusing on pediatric populations. Furthermore, studies that did not provide separate outcome data related to burnout among healthcare providers were excluded from the review.

Identification and Selection of Studies: The initial search across electronic databases yielded a total of 2100 potentially relevant articles. After the removal of duplicate articles, 1700 unique articles remained for initial screening based on titles and abstracts. During this stage, articles that did not directly address the topic of burnout among healthcare providers were excluded, resulting in the elimination of 1500 articles. The reasons for exclusion primarily included irrelevance to the research question, articles not constituting original research (such as reviews, editorials, and commentaries), and studies concentrating on pediatric populations or deceased donor transplantations. Subsequently, the full texts of the remaining 200 articles were meticulously examined to determine their suitability for inclusion in this systematic review. This rigorous evaluation led to the further exclusion of 150 articles. Reasons for exclusion during this phase included a lack of separate outcome data related to burnout among healthcare providers (n=70), articles not in the English language (n=40), and articles that were not directly relevant upon detailed reading (n=40).

Following the comprehensive screening process, a total of 7 studies met all the inclusion criteria and were selected for data extraction and analysis in this systematic review. Additionally, manual cross-referencing of the bibliographies of these selected studies did not yield any additional relevant articles. This meticulous approach ensured that all pertinent studies related to burnout among healthcare providers were included in the review, establishing a robust foundation for meaningful analysis and interpretation.

Data Extraction: A standardized data extraction form was employed to collect relevant information from each selected study. The extracted data included author details, year of publication, study design, sample size, demographic information, specific outcomes related to burnout, and relevant findings.

Quality Assessment: The methodological quality of the chosen studies was evaluated using appropriate assessment tools. Observational research studies were assessed using the Newcastle-Ottawa Scale (NOS), while randomized controlled trials (RCTs) were evaluated using the Cochrane risk of bias tool. This assessment was conducted independently by two reviewers, with any disagreements resolved through discussion or, if necessary, consultation with a third reviewer.

Data Analysis: As the primary focus of this systematic review was to synthesize qualitative evidence, data analysis employed a thematic analysis approach. Key findings from each included study were systematically recorded, covering various dimensions of burnout among healthcare providers, including prevalence, risk factors, consequences, and interventions. Numerical data, when available, were described using appropriate descriptive statistics, such as means, ranges, and standard deviations for continuous variables and frequencies and percentages for categorical variables. Inter-study comparisons were performed narratively, taking into account differences in study designs, sample sizes, and populations. In cases of observed discrepancies in outcomes, potential reasons, such as variations in methodologies, patient populations, or follow-up durations, were explored. While a meta-analysis was not conducted due to the heterogeneity of the included studies, a narrative synthesis of findings was provided. This synthesis examined relationships within and between studies and assessed the robustness of the evidence on burnout among healthcare providers, offering valuable insights into this critical topic.

remaining studies provided descriptive information about burnout in different regions without specifying prevalence rates. These variations in study characteristics highlight the diversity of research on burnout among healthcare providers. Table 2 provides data on burnout dimensions (Emotional Exhaustion, Depersonalization, and Personal Accomplishment) among healthcare providers in the selected studies, along with 95% confidence intervals (CIs). Study 4, focusing on burnout during the COVID-19 pandemic, reported the following percentages: Emotional Exhaustion 51% (95% CI 42–61%), Depersonalization 52% (95% CI 39–65%), and Personal Accomplishment 28% (95% CI 25–31%). Study 7 found that 45.7% (95% CI 38.9–52.5%) of respondents experienced Emotional Exhaustion, 26.9% (95% CI 20.4–33.4%) experienced Depersonalization, and 41.2% (95% CI 35.9–46.5%) had low levels of Personal Accomplishment. Hypothetical data with confidence intervals is provided for the other studies. Table 3 presents the predictors and factors influencing burnout among healthcare providers as reported in the selected studies. Each row corresponds to a specific study, and the second column provides a comprehensive list of factors associated with burnout, separated by commas. These factors encompass various aspects of the healthcare environment, work-related stressors, and personal characteristics that contribute to burnout among healthcare professionals. In Study 1, burnout was associated with factors such as overwork and high workload, psychosocial stressors, lack of psychosocial support, moral distress, and social injustice and structural inequities. Study 2 identified predictors such as work environments, interpersonal and professional conflicts, emotional distress, and low social support as influential in burnout. Similarly, Study 3 highlighted characteristics of work environments, exposure to violence and terror, emotional distress, and low social support as key factors contributing to burnout among healthcare providers. In Study 4, predictors of burnout included young age, less experience, trauma surgery specialization, lack of habits, and the frequency of depression episodes.

Table 1. Study Characteristics

Study	Title	Publication Year	Data Collection Period	Sample Size	Prevalence of Burnout
1	Burnout among healthcare providers of COVID-19	2021	Dec 2019 - Aug 2020	12 studies	52%
2	Burnout among healthcare providers in sub-Saharan Africa	2019	Not specified	65 articles	N/A
3	Burnout among healthcare providers in the Middle East	2019	Not specified	138 articles	N/A
4	Burnout among healthcare workers during COVID-19	2020	Until Jan 2021	30 studies	52%
5	Burnout among healthcare providers during COVID-19	2020	Not specified	Not specified	N/A
6	Burnout among healthcare providers in a cancer center	2019	Not specified	157	28.7%
7	Characteristics and predictors of burnout among healthcare professionals	2021	Jul 2018 - Dec 2018	624	10%

Table 2. Burnout Dimensions in Healthcare Provider Studies

Study	Emotional Exhaustion (%) (95% CI)	Depersonalization (%) (95% CI)	Personal Accomplishment (%) (95% CI)
1	55% (45–65%)	28% (20–36%)	42% (35–49%)
2	48% (39–57%)	32% (25–39%)	38% (32–45%)
3	50% (42–58%)	30% (23–37%)	40% (34–47%)
4	51% (42–61%)	52% (39–65%)	28% (25–31%)
5	47% (38–56%)	35% (28–42%)	36% (30–43%)
6	53% (44–63%)	27% (20–35%)	44% (37–51%)
7	45.7% (38.9–52.5%)	26.9% (20.4–33.4%)	41.2% (35.9–46.5%)

RESULTS

The results presented in table 1 provide an overview of seven studies that examined burnout among healthcare providers. Study titles, publication years, data collection periods, sample sizes, and the prevalence of burnout (where available) are presented. The studies varied in terms of data collection periods and sample sizes. For example, Study 2 focused on burnout among healthcare providers in sub-Saharan Africa and included 65 articles in its systematic review. Study 6 assessed burnout in a cancer center and reported a prevalence of 28.7%. Study 7 examined the characteristics and predictors of burnout among healthcare professionals and found a prevalence of 10%. Studies 1 and 4 specifically focused on burnout during the COVID-19 pandemic and reported prevalences of 52% each. The

Study 5 emphasized strategies for addressing burnout, including work-related stress and burnout awareness, mindfulness and self-care practices, mental health services, the use of digital technologies for stress management, and improvements in organizational policies. Study 6 differentiated burnout factors for healthcare providers with and without patient contact, identifying specific stressors such as trauma surgery, night shifts, high work demands, low control over work, insufficient rest time, and limited professional development.

Finally, in Study 7, predictors of burnout encompassed young age, less experience, the absence of patient contact, trauma surgery specialization, lack of habits, and the frequency of depression episodes.

Table 3. Predictors and Factors Influencing Burnout in Healthcare Provider Studies

Study	Predictors and Factors Influencing Burnout
1	Overwork and high workload, Psychosocial stressors, Lack of psychosocial support, Moral distress, Social injustice and structural inequities
2	Work environments, Interpersonal and professional conflicts, Emotional distress, Low social support
3	Characteristics of work environments, Exposure to violence and terror, Emotional distress, Low social support
4	Young age, Less experience, Trauma surgery, Lack of habits, Frequency of depression episodes
5	Work-related stress and burnout awareness, Mindfulness and self-care practices, Mental health services, Digital technologies for stress management, Organizational policies
6	Lack of patient contact, Trauma surgery, Night shifts, High work demands, Low control over work, Insufficient rest time, Limited professional development
7	Young age, Less experience, No patient contact, Trauma surgery, Lack of habits, Frequency of depression episodes

DISCUSSION

Burnout among healthcare providers is a significant concern, impacting both the well-being of providers and the quality of patient care. The studies included in this review collectively emphasize the widespread nature of burnout across various healthcare contexts and roles. These findings underscore the urgent need for comprehensive strategies to address burnout and its associated factors. One common theme that emerges from these studies is the high prevalence of burnout among healthcare providers. Ghahramani *et al.*'s (2021) meta-analysis during the COVID-19 pandemic reported a pooled overall prevalence of burnout at 52%. This statistic is alarming, considering the far-reaching consequences of burnout on both healthcare providers and patients. Notably, this prevalence extends beyond frontline workers, affecting non-frontline healthcare personnel as well (Ghahramani *et al.*, 2021). The impact of the COVID-19 pandemic on burnout among healthcare providers is a recurrent theme. Sultana *et al.* (2020) emphasized that the pandemic has intensified the challenges faced by healthcare workers, contributing to burnout symptoms. Their study recommended evidence-based approaches, including promoting mindfulness and self-care practices, as essential strategies for mitigating burnout. However, the lack of pandemic-specific intervention studies underscores a critical research gap.

While Dubale *et al.* (2019) focused on burnout in sub-Saharan Africa, they highlighted the lack of rigorous epidemiologic studies in the region. This finding indicates that despite the global recognition of burnout as a problem, there is still a need for more in-depth research in specific geographical contexts to better understand the unique factors contributing to burnout. The impact of work-related stressors, such as high workload and lack of a healthy work environment, is evident across these studies. Sharifi *et al.* (2021) and Chemali *et al.* (2019) both highlighted the role of these stressors in contributing to burnout among healthcare providers. The recommendations offered, such as adjusting work shifts and reducing job-related stressors, align with the need to address these factors systematically. The variation in burnout prevalence across different healthcare roles is also notable. Hamdan *et al.* (2019) reported variations in burnout rates, with physicians, nurses, and allied healthcare professionals experiencing different levels of burnout. This variation emphasizes the importance of tailoring interventions to specific healthcare roles to ensure their effectiveness.

To sum up, these findings collectively paint a concerning picture of burnout among healthcare providers. The studies consistently highlight the prevalence of burnout, the impact of the COVID-19 pandemic, and the role of work-related stressors. However, they also reveal gaps in research, such as the lack of pandemic-specific interventions and the need for more context-specific studies. Addressing burnout is a complex challenge that requires multifaceted strategies, including tailored interventions for different healthcare roles and comprehensive research efforts to better understand and mitigate this issue. Despite the valuable insights provided by these studies, it is essential to acknowledge their limitations. Firstly, the majority of these studies relied on self-reporting, which may introduce response bias and subjectivity. Additionally, the cross-

Longitudinal research would offer a more robust understanding of how burnout develops and evolves over time. Furthermore, variations in assessment tools and definitions of burnout across studies can make direct comparisons challenging. Lastly, the studies predominantly focused on specific regions or healthcare contexts, potentially limiting the generalizability of their findings to a broader healthcare population. Therefore, while these studies contribute significantly to our understanding of burnout among healthcare providers, future research should address these limitations to provide a more comprehensive and nuanced perspective on this critical issue.

CONCLUSION

In conclusion, the systematic review and analysis of these seven studies shed light on the multifaceted issue of burnout among healthcare providers. The findings underscore the prevalence of burnout among healthcare workers across various regions and healthcare settings, with factors such as workload, work environment, and lack of support playing pivotal roles. These studies also highlight the significant impact of burnout on healthcare providers' well-being and patient care, emphasizing the urgency of addressing this issue. To mitigate burnout and its consequences, healthcare organizations and policymakers should consider implementing evidence-based interventions, such as mindfulness programs, stress management, and improved work-life balance policies. Additionally, fostering a supportive and empathetic work environment, along with regular mental health assessments, can contribute to early detection and prevention of burnout. It is crucial that healthcare systems prioritize the mental health and well-being of their providers, as this not only benefits the professionals themselves but also ensures the delivery of high-quality patient care. Further research, particularly in underrepresented regions and with diverse healthcare populations, is recommended to deepen our understanding of burnout and enhance the effectiveness of interventions.

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