

Review

Suicide Among Healthcare Workers: Risk Factors, Prevention, and Challenges

Yaser Qattan^{1*}, Hassan Almarzooq², Rashad Khoj³, Ahmed Alzahrani⁴, Badr Alotibi⁵, Wesam Areeshi⁶, Meaad Albakestani⁷, Abdullah Alrohaili⁸, Alshimaa Alantar⁹, Ali Alsughayir¹⁰, Zainab Alhumoud¹¹

¹ Department of Psychiatry, Al-Amal Mental Health and Addiction Treatment Hospital, Jeddah, Saudi Arabia

² Department of Internal Medicine, Mullingar Regional Hospital, Mullingar, Ireland

³ Department of Nephrology, King Fahad General Hospital, Jeddah, Saudi Arabia

⁴ Medical Administration of the Land Forces, Ministry of Defense, Jazan, Saudi Arabia

⁵ College of Medicine, Shaqra University, Riyadh, Saudi Arabia

⁶ Department of Emergency Medicine, King Abdulaziz Specialist Hospital, Taif, Saudi Arabia

⁷ Department of Pediatric Emergency, Maternity and Children Hospital, Medina, Saudi Arabia

⁸ Department of Emergency Medicine, King Salman bin Abdulaziz Medical City, Medina, Saudi Arabia

⁹ College of Medicine, Ibn Sina National College, Jeddah, Saudi Arabia

¹⁰ College of Medicine, Alfaisal University, Riyadh, Saudi Arabia

¹¹ Department of Emergency Medicine, Aladan Hospital, Ministry of Health, Kuwait City, Kuwait

Correspondence should be addressed to **Yaser Qattan**, Department of Psychiatry, Al-Amal Mental Health and Addiction Treatment Hospital, Jeddah, Saudi Arabia. Email: yasserqattan@hotmail.com

Copyright © 2024 **Qattan**, this is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: 6 January 2024, Accepted: 9 January 2024, Published: 13 January 2024.

Abstract

Mental health disorders, contributing considerably to the global disease burden, have seen a marked increase due to urbanization, economic challenges, and the COVID-19 pandemic. These disorders, encompassing a spectrum from anxiety to schizophrenia, significantly impact individuals' cognitive, emotional, and functional capacities, while also straining societal resources through reduced workforce productivity and escalated healthcare costs. There are multiple mental health struggles of healthcare workers which can be characterized by long hours, high-pressure situations, and exposure to trauma. These occupational stressors, intensified during the COVID-19 pandemic, have heightened the prevalence of mental health issues such as depression, anxiety, burnout, and post-traumatic stress disorder among healthcare professionals. The stigma surrounding mental health in the healthcare sector, coupled with fears of professional repercussions, often dissuades workers from seeking necessary help. The pandemic has further exacerbated these challenges, leading to worsening mental health conditions. By understanding the complexities of this crisis, the paper seeks to guide policy changes and institutional initiatives that prioritize and protect the mental health of those who are devoted to the care and well-being of others.

Keywords: mental health, prevention, risk factors, challenges, healthcare, suicide

Introduction

Mental health disorders represent a significant global burden, impacting individuals, communities, and societies at large. According to the World Health Organization (WHO), mental health conditions contribute to a substantial portion of the world's disease burden, with depression alone being the leading cause of disability worldwide (1). The prevalence of mental health disorders is on the rise, exacerbated by factors such as urbanization, economic instability, and the ongoing COVID-19 pandemic (2). These disorders, ranging from anxiety and mood disorders to severe conditions like schizophrenia, not only affect an individual's cognitive and emotional well-being but also impair their ability to function in daily life. Furthermore, the societal impact extends beyond the immediate individuals, as mental health issues contribute to reduced workforce productivity and increased healthcare costs (3).

Mental health disorders among healthcare workers have become a critical concern, reflecting the demanding and stressful nature of their profession. The healthcare environment, characterized by long working hours, high-pressure situations, exposure to trauma, and the need for constant adaptation to new challenges, contributes to elevated stress levels (4). Common mental health disorders observed in healthcare workers include depression, anxiety, burnout, and post-traumatic stress disorder (PTSD). The COVID-19 pandemic has intensified these challenges, as healthcare professionals faced unprecedented workloads, concerns about personal safety, and the emotional toll of witnessing widespread suffering and loss (5). Moreover, the consequences of mental health issues among healthcare workers extend beyond the individual, affecting patient care quality, professional relationships, and overall healthcare system functionality. Stigma and fear of professional repercussions often deter healthcare workers from seeking help, exacerbating the problem (6).

Suicide among healthcare workers is a deeply concerning and complex issue that has gained increasing attention in recent years. These dedicated

professionals, who commit their lives to the well-being of others, find themselves grappling with the profound challenges and stressors inherent in the healthcare industry (7). The demanding nature of their work, coupled with long hours, high patient loads, and emotional exhaustion, contributes to an environment where mental health concerns can thrive. Moreover, the intense pressure to provide optimal care, combined with the fear of making mistakes that could have life-altering consequences, can create a daunting and isolating atmosphere for healthcare workers (8). The COVID-19 pandemic has exacerbated these pre-existing challenges, pushing healthcare systems and personnel to their limits. The constant threat of infection, the heart-wrenching decisions surrounding resource allocation, and the witnessing of widespread suffering have taken an immense toll on the mental well-being of healthcare professionals (9). Furthermore, the stigma surrounding mental health in the healthcare industry exacerbates the issue. Healthcare workers often feel a sense of duty to appear resilient and composed, fearing that seeking help may be perceived as a sign of weakness or incompetence. This culture of silence prevents many from reaching out for the support they desperately need (10). The relentless demands of the job, combined with the societal expectation that healthcare professionals should be immune to the emotional toll of their work, create a perfect storm for mental health struggles to go unnoticed and unaddressed. The consequences of untreated mental health issues among healthcare workers are severe, leading to burnout, decreased job satisfaction, and, tragically, an increased risk of suicide.

Healthcare workers, particularly females, were identified as being at a higher risk of mental health issues and suicide ideation in multiple research studies (8, 11). A systematic review highlighted that female nurses were at an increased risk of suicide. Several factors were found to be associated, which included a previous history of mental health disorders, the use of alcohol and other substances, and occupational stressors (12). Another research estimated that approximately 3.4% to 10.5% of health professionals have experienced suicidal

thoughts. These ideations were assumed to be related to pre-existing mental health issues stemming from personal stressors, which were exacerbated due to job-related stress. Healthcare workers also reported that these ideas and thoughts got considerably worse during and after the pandemic due to heavier work obligations and fear of COVID-19 (13, 14). Multiple studies have endorsed the increase in suicidal thoughts and cases of suicide attempts during and after the COVID-19 pandemic and factors related to it (15, 16). The demanding nature of healthcare work, exacerbated by the COVID-19 pandemic, has intensified stressors and placed an unprecedented burden on the mental well-being of healthcare workers. By conducting a thorough review, the study aims to identify and analyze the multifaceted risk factors contributing to the heightened vulnerability of healthcare professionals to suicidal ideation and behaviors. Understanding the intricacies of this crisis is pivotal for implementing targeted and effective support mechanisms tailored to the unique challenges faced by healthcare workers. Through this comprehensive review, the study seeks to contribute valuable insights that can inform policy changes, institutional initiatives, and broader societal attitudes to foster a healthcare environment that prioritizes and safeguards the mental health of those dedicated to the well-being of others.

Review

Various global research studies have indicated the alarming need for program-based attention to the suicides of health professionals. A comparison between suicide rates among healthcare workers and non-healthcare workers in the United States revealed that healthcare workers were found to be at a higher risk of having mental health issues and suicide ideation (17, 18). A cohort study highlighted that the risk of death by suicide was considerably higher among health professionals as compared to non-health professionals. Most of these healthcare workers were exposed to issues related to their jobs, physical health, and law. Moreover, surgeons who were older, married, male, and had a history of mental illnesses were also at a much higher risk (14, 19). Another study identified several other risk

factors, such as high workload, exhaustion, and increased substance abuse (20). Additionally, prevalent risk factors contributing to suicide in healthcare workers encompassed factors like marital status, with being unmarried identified as a common element. A history of diagnosed depression or anxiety disorders, substance abuse, and sleep deprivation also emerged as significant contributors to the elevated risk of suicide within this professional demographic. These factors collectively underscore the complex interplay of personal, mental health, and lifestyle elements that can escalate vulnerability among healthcare workers. Recognizing these risk factors is vital for developing targeted interventions and support systems that address the specific challenges faced by healthcare professionals. By understanding and addressing these underlying factors, healthcare institutions can implement preventive measures aimed at mitigating the impact of these risk elements and fostering a workplace environment that prioritizes the mental health and well-being of its workforce (21, 22). Research conducted in India highlighted that academic stress stood out as a notable factor contributing to suicide ideation within the healthcare worker community. Additionally, prolonged working hours, fatigue, the absence of lunch breaks, and sleep deprivation emerged as significant risk factors in this context. The study underscored the multifaceted nature of stressors faced by healthcare workers, emphasizing the importance of recognizing and addressing both academic and occupational challenges. The findings point to the need for targeted interventions that address the specific stressors prevalent in the academic and professional lives of healthcare workers. Implementing measures to alleviate workload, providing sufficient breaks, and promoting a healthy work-life balance are essential steps in mitigating these risk factors. By acknowledging and addressing these challenges, healthcare institutions can contribute to a more supportive and conducive environment, ultimately reducing the risk of suicide ideation among healthcare workers (23).

One of the recent surges in the deterioration of the mental health of healthcare workers was seen during the COVID-19 pandemic, which left its mark on the entire world. In another study, health professionals explained the further worsening of their mental health status during COVID-19, in addition to the existing stress regarding an unsupportive work environment and personal conflicts, health professionals were also dealing with increased responsibilities both at home and at work, coupled with a profound sense of loneliness (13). Evidence suggests that one of the most common reasons for suicide attempts among healthcare workers during COVID-19 was being infected, followed by increased work responsibilities (24).

Suicide prevention strategies

Preventing suicide among healthcare professionals requires a holistic strategy that addresses both individual and institutional aspects. Central to this effort is the establishment of mental health support initiatives within healthcare entities, encompassing counseling services, peer-assisted groups, and confidential helplines. Evidence suggests that it is vital to foster an environment where discussing mental health is normalized and seeking assistance is not stigmatized (5). Implementing regular mental health assessments for staff members plays a crucial role in enabling timely interventions and providing healthcare providers with a platform to express concerns and access support in a nurturing environment. The incorporation of routine mental health evaluations contributes to the early identification of individuals at risk, allowing for prompt interventions and connections to appropriate support services. This proactive approach not only fosters a culture that prioritizes mental well-being but also ensures that vulnerable individuals receive timely assistance. Regular mental health check-ins create an ongoing dialogue, promoting an atmosphere where healthcare providers feel comfortable discussing their mental health, thereby reducing the stigma associated with seeking support. The systematic implementation of these assessments reflects a commitment to the holistic well-being of healthcare professionals, acknowledging the unique stressors they face. By

identifying potential challenges early on, healthcare institutions can implement targeted interventions, offer tailored support, and ultimately contribute to the overall mental health resilience of their workforce (25). To mitigate workplace stressors, it is imperative to implement measures such as effective workload management, ensuring sufficient staffing levels, and providing resources to cope with challenging situations. These actions are essential for creating a work environment that supports the well-being of employees by addressing the factors contributing to stress and exhaustion. Properly managing workloads, maintaining adequate staffing, and offering support resources are vital components in fostering a workplace culture that prioritizes the mental and emotional health of individuals, ultimately contributing to a more sustainable and supportive professional environment (11). Additionally, literature has proven that endorsing a healthy work-life equilibrium and flexible scheduling can mitigate some of the challenges faced by healthcare workers. Equipping professionals with tools for stress alleviation, resilience development, and coping mechanisms through targeted training is pivotal (26). Educational campaigns can also play a role in enhancing mental health awareness and dismantling associated stigmas (27). Moreover, ongoing research plays a pivotal role in comprehending the complex causes and risk factors linked to suicide among healthcare workers. Consistently updating and refining prevention strategies based on evolving insights and changing contexts is essential. The continuous investigation into the intricate aspects surrounding healthcare workers' suicide is critical for staying abreast of the dynamic nature of the issue. This research-driven approach not only enhances our understanding of the multifaceted factors contributing to suicide within this demographic but also ensures that prevention initiatives remain relevant and effective. By regularly incorporating new findings into prevention approaches, healthcare institutions can adapt strategies to address emerging challenges and tailor interventions to the evolving needs of their workforce. This commitment to ongoing research and adaptation underscores dedication to the well-

being of healthcare professionals and reflects a proactive stance in the face of a complex and evolving mental health landscape within the healthcare industry (28). By amalgamating these approaches, healthcare institutions can cultivate a culture that emphasizes and safeguards the mental health of its professionals, fostering an environment conducive to preventing suicide among this critical workforce.

Challenges

Preventing suicide among healthcare workers encounters significant hurdles, reflecting the intricate nature of the problem and the systemic factors contributing to heightened risk within this group. A prevailing stigma around mental health issues in the healthcare profession obstructs open conversations and seeking help, as workers fear judgment or professional repercussions, fostering a culture of silence that hampers effective prevention initiatives. Additionally, healthcare professionals grapple with demanding work schedules, heavy patient loads, and emotionally taxing situations, leading to burnout, exhaustion, and increased stress levels—all prominent risk factors for suicide (29). Despite the imperative for mental health support, healthcare workers face barriers to accessing suitable resources, such as limited availability of services, lengthy wait times for appointments, and insufficient coverage through employee assistance programs, hindering timely interventions (30).

Specifically, the healthcare work environment, marked by high-pressure circumstances and ethical dilemmas, exacerbates stressors, and an unsupportive organizational culture, coupled with inadequate leadership responses to mental health concerns, adds to the challenges in suicide prevention (8). Evidence suggests that seeking help for mental health issues is often perceived as a sign of weakness by healthcare workers, influenced by the professional identity linked to competence and resilience. Perfectionism and the fear of making mistakes further deter individuals from acknowledging and addressing their mental health struggles (31).

Despite the nature of their work, healthcare professionals may lack adequate training in recognizing, addressing, and coping with mental health challenges in themselves and their colleagues. Enhanced education and training are crucial for destigmatizing mental health discussions and encouraging a proactive well-being approach (32). Concerns about the confidentiality of mental health disclosures act as a deterrent, as healthcare workers fear potential impacts on their professional reputation or job security, posing a significant obstacle to creating an environment conducive to open dialogue (33). The ongoing global pandemic has exacerbated challenges in suicide prevention among healthcare workers, with increased workloads, exposure to trauma, fear of infection, and personal life strains heightening stress levels and worsening existing mental health concerns (28). Addressing these challenges necessitates a collaborative effort from healthcare institutions, policymakers, and the broader community to cultivate a supportive culture, enhance mental health resources, and prioritize the well-being of those devoted to caring for others. Systemic changes are essential to destigmatize mental health discussions, improve access to confidential support, and establish environments where healthcare workers feel secure and encouraged to seek help (34).

Conclusion

The issue of suicide among healthcare workers is a complex and pressing concern, underscored by various risk factors such as academic stress, long working hours, and mental health challenges. Effective prevention requires a multi-faceted approach, including the de-stigmatization of mental health discussions, regular mental health assessments, and addressing systemic issues within healthcare institutions. Challenges such as stigma, heavy workloads, and organizational culture must be systematically tackled. A concerted effort from healthcare institutions, policymakers, and the broader community is imperative to create a supportive environment that prioritizes the mental well-being of healthcare professionals.

Disclosure

Conflict of interest

There is no conflict of interest.

Funding

No funding

Ethical consideration

Non applicable

Data availability

Data that support the findings of this study are embedded within the manuscript.

Author contribution

All authors contributed to conceptualizing, data drafting, collection and final writing of the manuscript.

References

1. Organization WH. Mental Health 2023 [Available from: https://www.who.int/health-topics/mental-health#tab=tab_1].
2. Ustün T. The global burden of mental disorders. *American journal of public health*. 1999;89(9):1315-8.
3. Eaton WW, Martins SS, Nestadt G, Bienvenu OJ, Clarke D, Alexandre P. The Burden of Mental Disorders. *Epidemiologic Reviews*. 2008;30(1):1-14.
4. Rulli D. Mental Health Issues in Health Care Providers. *J Dent Hyg*. 2022;96(4):4-5.
5. Spoorthy MS, Pratapa SK, Mahant S. Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review. *Asian journal of psychiatry*. 2020;51:102119.
6. Mateen FJ, Dorji C. Health-care worker burnout and the mental health imperative. *Lancet*. 2009;374(9690):595-7.
7. Mohanty A, Kabi A, Mohanty AP. Health problems in healthcare workers: A review. *J Family Med Prim Care*. 2019;8(8):2568-72.
8. Duthiel F, Aubert C, Pereira B, Dambrun M, Moustafa F, Mermillod M, et al. Suicide among physicians and health-care workers: A systematic

review and meta-analysis. *PloS one*. 2019;14(12):e0226361.

9. Harvey SB, Epstein RM, Glozier N, Petrie K, Strudwick J, Gayed A, et al. Mental illness and suicide among physicians. *The Lancet*. 2021;398(10303):920-30.

10. Alderson M, Parent-Rocheleau X, Mishara B. Critical review on suicide among nurses. *Crisis*. 2015.

11. CDC. Suicide Prevention for Healthcare Workers. 2021.

12. Groves S, Lascelles K, Hawton K. Suicide, self-harm, and suicide ideation in nurses and midwives: A systematic review of prevalence, contributory factors, and interventions. *Journal of Affective Disorders*. 2023;331:393-404.

13. Bismark M, Jain R, Smallwood N, Willis K. Thoughts of suicide or self-harm among healthcare workers during the COVID-19 pandemic: qualitative analysis of open-ended survey responses. *BJPsych Open*. 2022;8(4):e113.

14. Bismark M, Scurrah K, Pascoe A, Willis K, Jain R, Smallwood N. Thoughts of suicide or self-harm among Australian healthcare workers during the COVID-19 pandemic. *Australian & New Zealand Journal of Psychiatry*. 2022;56(12):1555-65.

15. García-Iglesias JJ, Gómez-Salgado J, Fernández-Carrasco FJ, Rodríguez-Díaz L, Vázquez-Lara JM, Prieto-Callejero B, et al. Suicidal ideation and suicide attempts in healthcare professionals during the COVID-19 pandemic: A systematic review. *Front Public Health*. 2022;10:1043216.

16. Padmanathan P, Lamb D, Scott H, Stevelink S, Greenberg N, Hotopf M, et al. Suicidal thoughts and behaviour among healthcare workers in England during the COVID-19 pandemic: A longitudinal study. *PLOS ONE*. 2023;18(6):e0286207.

17. Olfson M, Cosgrove CM, Wall MM, Blanco C. Suicide Risks of Health Care Workers in the US. *JAMA*. 2023;330(12):1161-6.

18. Sullivan S, Germain M-L. Psychosocial risks of healthcare professionals and occupational suicide. *Industrial and Commercial Training*. 2020;52(1):1-14.

19. Ji YD, Robertson FC, Patel NA, Peacock ZS, Resnick CM. Assessment of Risk Factors for Suicide Among US Health Care Professionals. *JAMA Surgery*. 2020;155(8):713-21.
20. Awan S, Diwan MN, Aamir A, Allahuddin Z, Irfan M, Carano A, et al. Suicide in healthcare workers: Determinants, challenges, and the impact of COVID-19. *Frontiers in psychiatry*. 2022;12:792925.
21. Freire FdO, Marcon SR, Espinosa MM, Santos HGBd, Kogien M, Lima NVPd, et al. Factors associated with suicide risk among nurses and physicians: a cross-section study. *Revista brasileira de enfermagem*. 2020;73.
22. Braquehais MD, González-Irizar O, Nieva G, Mozo X, Llavyol E, Pujol T, et al. Assessing high risk of suicide amongst physicians and nurses in treatment. *Psychiatry Research*. 2020;291:113237.
23. Das N, Khar P, Karia S, Shah N. Suicide among Health Care Professionals—An Indian Perspective. *Healthcare*. 2022;10(2):354.
24. Jahan I, Ullah I, Griffiths MD, Mamun MA. COVID-19 suicide and its causative factors among the healthcare professionals: Case study evidence from press reports. *Perspectives in Psychiatric Care*. 2021;57(4):1707-11.
25. Gray P, Senabe S, Naicker N, Kgalamono S, Yassi A, Spiegel JM. Workplace-Based Organizational Interventions Promoting Mental Health and Happiness among Healthcare Workers: A Realist Review. *International Journal of Environmental Research and Public Health*. 2019;16(22):4396.
26. Søvdold LE, Naslund JA, Kousoulis AA, Saxena S, Qoronfleh MW, Grobler C, et al. Prioritizing the mental health and well-being of healthcare workers: an urgent global public health priority. *Frontiers in public health*. 2021;9:679397.
27. Brand SL, Thompson Coon J, Fleming LE, Carroll L, Bethel A, Wyatt K. Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review. *PLOS ONE*. 2017;12(12):e0188418.
28. Rolling J, Mengin AC, Palacio C, Mastelli D, Fath M, Gras A, et al. COVID-19: mental health prevention and care for healthcare professionals. *Frontiers in Psychiatry*. 2021;12:332.
29. Carpiniello B, Pinna F. The reciprocal relationship between suicidality and stigma. *Frontiers in psychiatry*. 2017:35.
30. Platt S, Arensman E, Rezaeian M. National suicide prevention strategies—progress and challenges. Hogrefe Publishing; 2019.
31. Vijayakumar L. Suicide prevention: Meeting the challenge together: Orient Blackswan; 2003.
32. Mann JJ, Apter A, Bertolote J, Beautrais A, Currier D, Haas A, et al. Suicide prevention strategies: a systematic review. *Jama*. 2005;294(16):2064-74.
33. McKernan LC, Clayton EW, Walsh CG. Protecting life while preserving liberty: ethical recommendations for suicide prevention with artificial intelligence. *Frontiers in psychiatry*. 2018;9:650.
34. Coffey CE, Ahmedani BK, Coffey MJ. Challenges in research on suicide prevention. *JAMA*. 2019;321(11):1105-.