

Workplace Hazards and Their Impacts on Worker Health and Safety across Multiple Industries: A Comprehensive Review

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The causes of workplace accidents among coal mine field operational workers and explore the physical and mental health challenges experienced by hotel housekeepers (Chaiprakarn *et al.*, 2025; Arifah *et al.*, 2025; Lutfiya *et al.*, 2025; Iing, Mariawati and Duana, 2025; Imanjaya and Pangabea, 2025). Workplace hazards—both physical and psychological—negatively impact worker health and safety across various industries including ports, manufacturing, offices, mining, and the creative sector. Exposure to hazardous chemicals in industries like power and manufacturing poses serious health risks, making strict safety protocols essential to protect workers (Atmaka *et al.* (2025). Sedentary work styles have also become a significant concern in many sectors, contributing to the rise of metabolic syndrome, obesity, and poor dietary choices. Workers in sedentary roles, especially in regions like Eastern Indonesia, are more likely to experience emotional eating and poor nutrition, which contribute to obesity and metabolic syndrome (Handayani *et al.* (2025).

This narrative review analyzed the impact of workplace hazards on worker health and safety across various industries, focusing on physical and psychological risks. It included a comprehensive literature search from 2010 to 2024, examining studies related to workplace hazards, mental health, and sector-specific conditions, with a focus on technological advancements. Data extracted from selected studies covered hazard types, affected sectors, health outcomes, risk factors, mitigation strategies, and technologies like AI and wearable monitoring systems for risk prevention.

Traffic accidents remain a pressing global issue, disproportionately affecting low- and middle-

income countries (LMICs) through higher mortality rates, socio-economic burdens, and persistent policy implementation challenges. To address this, a bibliometric analysis was conducted to identify global trends, conceptual developments, and critical knowledge gaps in road safety research, with a focus on LMIC contexts. The findings underscore the need for a multidimensional approach—integrating technology, human behavior, and infrastructure—while highlighting the importance of strengthening LMIC research, validating tools in real-world settings, and fostering cross-sector collaboration to reduce traffic-related injuries and deaths worldwide (Setyowati, *et al.*, 2025).

In the 21st century, computers play a vital role in university operations, but prolonged use by office staff has been linked to an increased risk of musculoskeletal disorders (MSDs), which can lead to reduced productivity and health problems. This study aims to identify the risk factors associated with MSDs among computer users in a public university. The findings highlight the need for effective management strategies to raise awareness, encourage preventive measures, and implement ergonomic improvements to minimize risks and boost employee productivity (Amer, *et al.*, 2025).

Musculoskeletal disorders (MSDs) are one of the most frequent physical risks and arise from the combination of repetitive physical workload, non-ergonomic postures and working hours. Enhancing nutritional knowledge and self-efficacy promotes healthy behaviors, improves physical health, and lowers stress levels. Balanced diets, regular exercise, and supportive workplace environments effectively reduce mental and physical fatigue. Occupational Health, Safety, and Environment (OHSE) in Indonesia is regulated by Government Regulation No. 50 of 2012, which defines OHSE and outlines preventive measures to protect workers from accidents and occupational diseases.

Despite the existence of regulations intended to safeguard worker health and safety, numerous challenges remain in ensuring their effective implementation in real-world workplace settings. In Indonesia, the occupational health system continues to face significant limitations, particularly due to the absence of a well-structured, integrated, and responsive framework. This is especially evident when dealing with health emergencies in the workplace, where inadequate preparedness, limited resources, and lack of coordination among relevant institutions hinder timely and effective responses (Hassan and Samy (2025).

Stress and burnout in the workplace can be effectively alleviated through various techniques, including enhancing one's Spiritual Quotient (SQ), which fosters a deeper sense of purpose and meaning in work; emotional labor training, which equips employees with skills to manage and express emotions appropriately in demanding situations; engaging in regular physical activity to improve mood and energy levels; and practicing relaxation methods such as mindfulness, deep breathing, or meditation to reduce mental and physical tension. Furthermore, implementing additional strategies such as ensuring a balance between job demands and individual capabilities, fostering a supportive work environment through strong coworker relationships, and participating in resilience-building workshops designed to strengthen psychological endurance and adaptability can significantly contribute to improved overall mental well-being and long-term occupational health (Shakiba *et al.*, 2025; Putri, Situngkir and Sumartanto, 202).

In the healthcare sector, managing stress and conducting regular health checks are essential due to the high workload and emotional demands faced by medical workers. Implementing shift debriefs, schedule adjustments, coping strategy training, and preventive evaluations can foster mental resilience and support holistic well-being through an integrated approach (Amer *et al.*, 2025)

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