International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBAS)

International Journal of Economics, Business, Accounting, Agriculture Management and Sharia Administration (IJEBAS Journal) | ISSN(e): 2808-4713
Volumes 6 No. 2 (2026)

THE IMPACT OF OCCUPATIONAL HEALTH AND SAFETY ON EMPLOYEE PRODUCTIVITY: A SYSTEMATIC LITERATURE REVIEW

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Received	: 15 January 2026	Accepted	: 20 February 2026
Revised	: 31 January 2026	Published	: 10 April 2026

Abstract

This study aims to systematically examine the impact of Occupational Health and Safety (OHS) on employee productivity by synthesizing evidence from existing literature. The research adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach to ensure a transparent and rigorous review process. A total of 600 articles were initially identified from the Scopus database, and after screening, eligibility assessment, and quality evaluation, 63 relevant studies were selected for analysis. The findings reveal that OHS significantly influences employee productivity through multiple dimensions, including psychosocial factors, technological and environmental conditions, and organizational structures. Effective OHS implementation enhances employee well-being, reduces workplace risks, and improves motivation, engagement, and performance. Furthermore, the integration of safety culture, leadership support, and advanced safety technologies contributes to sustainable productivity outcomes. This study highlights that OHS should not be viewed merely as a regulatory requirement but as a strategic investment that drives organizational efficiency and long-term success. The findings provide important theoretical insights and practical recommendations for policymakers and organizations in designing comprehensive OHS strategies.

Keywords : ***Occupational health and safety, employee productivity, systematic literature review, PRISMA, workplace safety, organizational performance, safety culture***

INTRODUCTION

In an increasingly complex and globalized business environment, employee productivity has emerged as a key indicator of organizational success. Productivity not only reflects operational efficiency but also signifies an organization's capacity to manage human resources sustainably. One critical determinant that has gained growing scholarly attention is occupational health and safety (OHS), which functions as a protective mechanism against physical, psychological, and social risks in the workplace (Lari, 2024; Ju et al., 2021). A substantial body of research demonstrates that effective OHS implementation enhances motivation, reduces fatigue, and strengthens employees' emotional attachment to the organization (Kim & Park, 2020; Mohammadi et al., 2021). Employees who perceive their workplace as safe and healthy tend to exhibit higher work engagement and long-term organizational loyalty (Segbenya & Yeboah, 2022; Ahmad, 2022). Conversely, the absence of a strong safety culture increases the likelihood of workplace incidents, elevates psychological strain, and ultimately diminishes productivity (Iman & Nitawati, 2023; Pramestuti & Perkasa, 2020).

Theoretical perspectives such as Human Capital Theory (Becker, 1993) and the Job Demands–Resources (JD-R) model (Demerouti et al., 2001) conceptualize OHS policies as strategic investments that can directly and indirectly enhance productive output. By fostering a safe and healthy work environment, organizations cultivate a positive work culture that improves both individual and team efficiency (Pheko & Kgathi, 2022; Lamm et al., 2020). Despite its recognized importance, OHS implementation across industries continues to face substantial challenges. Empirical studies highlight constraints such as limited resources, weak managerial commitment, and insufficient awareness of OHS importance, particularly in informal sectors and labor-intensive industries (Gbadago & Amedome, 2017; Ekowati & Amin, 2019). Evidence from Africa and Asia further underscores that inadequate policy frameworks

and insufficient safety training hinder the realization of optimal productivity through OHS interventions (Katsuro et al., 2010; Shikdar & Sawaqed, 2020; Tulu & Kumie, 2021).

Moreover, numerous studies have established a strong link between OHS effectiveness and employee performance. For instance, Lari (2024) found that consistent OHS practices significantly improved productivity in the industrial security sector of the United Arab Emirates (Lari, 2024). Other studies emphasize that safety culture substantially contributes to employee engagement and job satisfaction (Ju et al., 2021; Kim & Park, 2020; Tulu & Kumie, 2021). Additionally, Mohammadi et al. (2021) highlight that periodically evaluated OHS management systems reinforce productive organizational structures. Sector-specific evidence further supports these findings. In the construction industry, OHS implementation accounts for 69.6% of labor productivity variation in Ghana (Segbenya & Yeboah, 2022). Similarly, in manufacturing, managerial commitment to OHS is a critical determinant of overall work efficiency (Ahmad, 2022).

Nevertheless, several studies reveal persistent barriers to OHS implementation, including weak regulatory enforcement, limited human resources, and organizational resistance to change (Iman & Nitawati, 2023; Gbadago & Amedome, 2017; Ekowati & Amin, 2019). Katsuro et al. (2010) further argue that many industries in developing countries lack adequate safety standards, which negatively affects long-term productivity. Based on this background, this study aims to systematically analyze the scientific literature on the impact of occupational health and safety on employee productivity. The analysis focuses on identifying the most influential OHS dimensions, mapping sectors and regions with significant effects, and examining common implementation challenges. By synthesizing empirical evidence across diverse contexts, this study seeks to provide evidence-based policy recommendations to support the development of safer, more productive, and sustainable workplaces.

THEORETICAL REVIEW

Health in the Organizational Context

Employee health encompasses organizational efforts to maintain and enhance physical and mental well-being while preventing health-related disruptions to productivity. Occupational health management theory emphasizes dimensions such as work–life balance, physical working conditions, and psychological support (Cooper & Cartwright, 1994). Organizations that proactively prioritize employee health extend beyond physical safety measures to include mental health initiatives, such as counseling, stress management training, and access to psychological support services. From a theoretical perspective, the Job Demands–Resources (JD-R) model suggests that employee health is shaped by the interaction between job demands (e.g., workload) and organizational resources {Citation}(Bakker & Demerouti, 2007). When resources such as social support, adequate rest, and work–life balance are available, employees experience better health outcomes, which subsequently enhance productivity. Furthermore, social exchange theory in human resource management posits that organizational investment in employee health fosters reciprocal outcomes, including increased commitment, loyalty, and productivity.

Safety in the Organizational Context

Workplace safety refers to organizational policies and practices designed to protect employees from injuries and accidents. Theoretically, safety is often associated with the behavior-based safety (BBS) approach, which emphasizes the role of individual behavior and organizational culture in promoting workplace safety (Geller, 2001). In practice, this approach encourages organizations not only to provide safety equipment but also to foster active employee participation in safety practices, such as adhering to protective protocols, engaging in safety training, and reporting hazards. From a psychological standpoint, the high-reliability organization (HRO) theory highlights that industries with high safety dependency—such as oil, gas, and manufacturing—adopt stringent safety principles to minimize risks and enhance operational reliability (Weick & a, 2001). HRO underscores that safety extends beyond individual protection to ensuring organizational stability and continuity. Organizations with robust safety systems tend to achieve higher productivity by reducing downtime, avoiding compensation costs, and safeguarding corporate reputation.

Interrelationships Between Variables

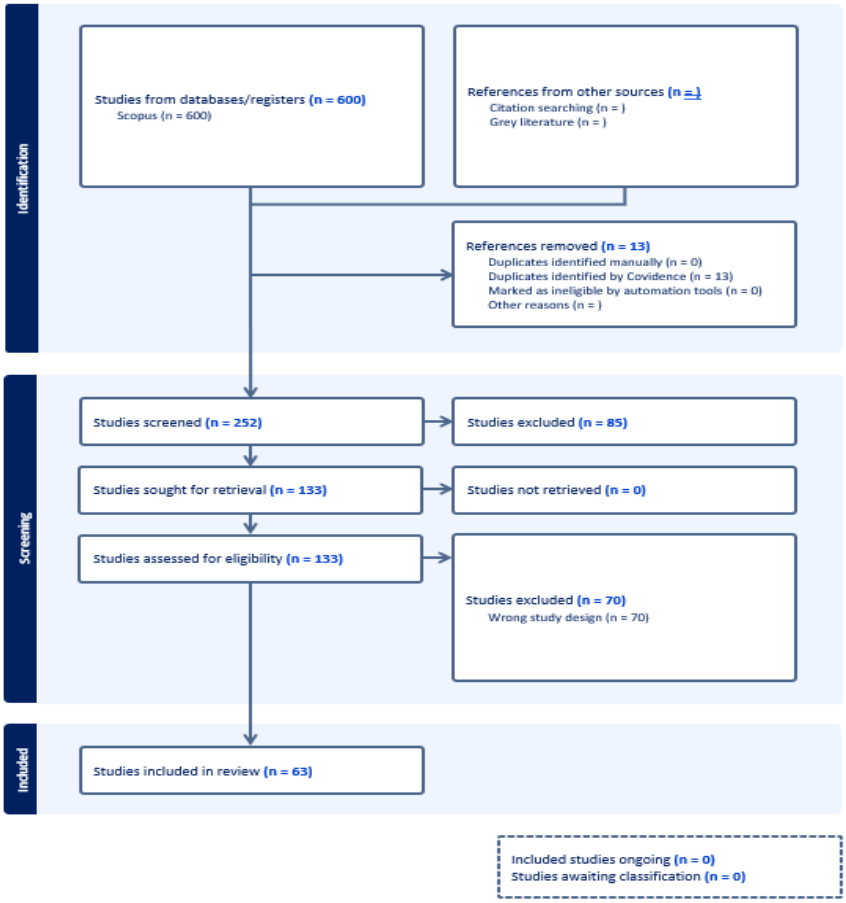
Occupational health and safety (OHS) play a central and interconnected role in enhancing employee productivity. Employee health—encompassing both physical and mental well-being—enables individuals to remain focused and perform tasks effectively. Improved health conditions reduce absenteeism and stabilize productivity levels, leading to cost efficiencies for organizations. Within the JD-R framework, employee health serves as a critical

resource that mitigates job demands and prevents excessive fatigue, thereby promoting higher productivity (Bakker & Demerouti, 2007).

Conversely, workplace safety focuses on creating a risk-free environment that enhances employee comfort and concentration. According to the behavior-based safety (BBS) approach, safety-oriented behaviors embedded within organizational culture contribute to a secure and supportive work environment (Geller, 2001). Effective safety programs reduce accident rates and minimize lost work time, ultimately improving operational efficiency. Additionally, a safe work environment fosters a sense of value among employees, strengthening their motivation and loyalty. The synergistic relationship between health and safety creates optimal conditions for sustainable productivity. High-reliability organization (HRO) theory suggests that organizations with stringent health and safety standards are better equipped to maintain employee focus and performance (Weick & Sutcliffe, 2001). Ensuring employee well-being not only reduces costs associated with accidents and health issues but also promotes a high-performance work environment. Moreover, social exchange theory posits that organizational commitment to employee well-being is reciprocated through increased employee engagement and productivity (Blau, 1964). Therefore, investment in health and safety programs yields both direct and indirect benefits. Beyond improving individual performance, such investment enhances employee loyalty, fosters a positive organizational culture, and reduces turnover. Together, these factors establish a foundation for an optimal work environment that drives overall organizational success.

METHOD

This study adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach, which is widely utilized in occupational health, safety management, and applied social sciences research (Trifu et al., 2022; Marhavilas & Koulouriotis, 2021). The PRISMA framework ensures transparency, traceability, and accountability across all stages of the review process, including identification, screening, eligibility assessment, and final selection (Lindholm et al., 2020; Rahman et al., 2022).



During the identification stage, articles were retrieved from the Scopus database using the keywords "Occupational Health and Safety," "Employee Productivity," and "Workplace Safety." The initial search yielded 600 articles. Duplicate detection was conducted using Covidence, which automatically removed 13 duplicate records. A subsequent manual verification ensured that all remaining articles were unique and relevant (Trifu et al., 2022). In the screening stage, 252 articles were evaluated based on titles, abstracts, and keywords. Two independent reviewers

conducted parallel assessments to ensure methodological relevance. At this stage, 70 articles were excluded due to irrelevance or overly narrow case-study approaches, leaving 133 articles for further eligibility assessment.

The eligibility assessment involved evaluating each article based on thematic relevance, data quality, and methodological rigor. Inclusion criteria required that articles explicitly address the impact of occupational health and safety on employee productivity, be published in English or Indonesian, provide full-text access, and originate from reputable journals (Babalola et al., 2023; Lindholm et al., 2020). A total of 85 articles were excluded at this stage, resulting in 63 high-quality studies with strong methodological and substantive relevance. In the final stage, the selected 63 articles were analyzed and synthesized. These studies represented diverse industrial and geographical contexts and employed quantitative, qualitative, and mixed-method approaches. Data extraction focused on key variables, including occupational health indicators (e.g., absenteeism, stress, and job satisfaction), safety indicators (e.g., workplace accidents, procedural compliance, and environmental conditions), and productivity indicators (e.g., time efficiency, output quality, and work performance) (Choi et al., 2024; Bentley et al., 2023).

Additionally, methodological classification was applied to assess the diversity of research perspectives in examining the relationship between OHS and productivity. Key findings were mapped to identify enabling and inhibiting factors, such as safety training effectiveness, mental health support, and organizational culture. Given the diversity of sectors and regions, variations in study outcomes were also analyzed based on contextual characteristics (Myzabella et al., 2019). Finally, the data were analyzed using thematic synthesis, classifying findings according to OHS dimensions and their relationship with productivity. Emerging patterns were further examined, and research gaps were identified to inform future research directions and context-specific policy recommendations (Ahamad et al., 2022; Rahman et al., 2022).

RESULTS AND DISCUSSION

Journal Table

No	Study Title	Authors	Year	Journal
1	Leadership matters in crisis-induced digital transformation: how to lead service employees effectively during the COVID-19 pandemic	Bartsch, S.	2021	Journal of Service Management
2	Preserving organizational resilience, patient safety, and staff retention during COVID-19 requires a holistic consideration of the psychological safety of healthcare workers	Rangachari, P.	2020	International Journal of Environmental Research and Public Health
3	Microplastics in human food chains: Food becoming a threat to health safety	Mamun, A.A.	2023	Science of the Total Environment
4	Deep Learning-Based Traffic Safety Solution for a Mixture of Autonomous and Manual Vehicles in a 5G-Enabled Intelligent Transportation System	Yu, K.	2021	IEEE Transactions on Intelligent Transportation Systems
5	One Health for Food Safety, Food Security, and Sustainable Food Production	Garcia, S.N.	2020	Frontiers in Sustainable Food Systems
6	Review: Using unmanned aerial vehicles (UAVs) as mobile sensing platforms (MSPs) for disaster response, civil security and public safety	Hildmann, H.	2019	Drones
7	Burnout and Associated Factors Among Health Care Workers in Singapore During the COVID-19 Pandemic	Tan, B.Y.Q.	2020	Journal of the American Medical Directors Association
8	Role of artificial intelligence in patient safety outcomes: Systematic literature review	Choudhury, A.	2020	JMIR Medical Informatics
9	Assessing the relative impact of diverse stressors among public safety personnel	Carleton, R.N.	2020	International Journal of Environmental Research and Public Health
10	Mismanagement of Plastic Waste through Open Burning with Emphasis on the Global South: A Systematic Review of Risks to Occupational and Public Health	Velis, C.A.	2021	Environmental Science and Technology

A. General Description of the Literature

The systematic analysis in this study is based on an in-depth review of ten international scholarly articles examining the impact of occupational health and safety (OHS) on employee productivity. These articles were selected using rigorous criteria, including publication in reputable journals, full-text accessibility, and explicit examination of the relationship between OHS dimensions and productivity indicators within contemporary organizational contexts. The studies span multiple disciplines and sectors, including healthcare, intelligent transportation, organizational management, manufacturing, information technology, and global workplace safety. All articles were analyzed using a thematic synthesis approach, enabling the identification of conceptual structures and classification into three primary domains: (1) psychosocial and leadership factors, (2) technological and environmental factors, and (3) organizational and structural factors. This classification facilitates a clearer understanding of how various OHS dimensions—personal, technological, and systemic—contribute directly and indirectly to productivity enhancement.

The diversity of research contexts reflects the broad scope of OHS issues in modern organizations. For example, Bartsch (2021) highlights transformational leadership as a critical factor in sustaining productivity during crisis-driven digital transformation, while Rangachari (2020) emphasizes psychological safety in maintaining healthcare staff productivity during the pandemic. In contrast, Mamun et al. (2023) and Velis et al. (2021) explore environmental health risks, particularly microplastic contamination and improper waste management, which negatively affect worker health and long-term performance. Technological dimensions of OHS also emerge as significant. Yu et al. (2021) demonstrate the effectiveness of deep learning-based safety systems in reducing workplace accidents in transportation, while Choudhury et al. (2020) confirm that artificial intelligence enhances patient safety and improves healthcare workforce performance. From an organizational perspective, Garcia et al. (2020) propose the One Health framework, integrating human health, food safety, and environmental sustainability as a holistic productivity strategy. Meanwhile, Tan et al. (2020) and Carleton et al. (2020) identify burnout and occupational stressors as critical barriers to productivity when not addressed through proactive OHS policies.

Through this synthesis, the study establishes that OHS is no longer merely a technical or regulatory instrument but an integral component of organizational productivity strategy. The reviewed studies consistently demonstrate that effective OHS implementation is closely associated with improved employee outcomes, including time efficiency, output quality, work motivation, and workforce retention. These findings will be further elaborated in subsequent sections through a thematic classification to examine in detail how each OHS dimension influences productivity through diverse mechanisms.

B. Interrelationships Among Variables in the Literature Findings

1. Psychosocial Factors and Leadership

The psychosocial dimension of occupational health and safety (OHS) plays a fundamental role in shaping workforce productivity. A central component of this dimension is organizational leadership that actively supports employees' mental well-being. Bartsch (2021) highlights the importance of transformational leadership during the COVID-19 crisis, demonstrating its capacity to sustain employee productivity amid digital disruption and operational uncertainty (Bartsch, 2021). Leaders who display empathy and sensitivity toward mental health foster psychological safety, which serves as a foundation for employee motivation, trust, and work engagement. This finding is reinforced by Rangachari (2020), who emphasizes the importance of holistic psychological safety in healthcare organizations during times of crisis. When organizations implement strict safety protocols while attending to employees' psychological conditions, they not only protect workers from physical risks but also create a work climate that strengthens trust and collective morale. As a result, organizations are better able to maintain high productivity even under extreme pressure, such as during a global pandemic (Rangachari, 2020).

A similar pattern appears in Tan et al. (2020), who identify burnout as a major barrier to productivity in the healthcare sector. When organizations fail to respond adequately to psychosocial pressures, such as excessive workloads or insufficient emotional support, mental exhaustion increases, leading to lower work effectiveness and stronger turnover intentions (Tan et al., 2020). Accordingly, OHS policies that incorporate mental health are not merely an ethical necessity but also a strategic instrument for enhancing organizational productivity. Conceptually, these findings suggest that the relationship between OHS and productivity extends beyond physical and structural factors to include affective and relational dimensions within organizations. Leadership that is responsive to psychosocial concerns helps create a supportive work climate that sustains productivity by increasing motivation, reducing work-related stress, and strengthening organizational commitment.

2. Technology and the Work Environment

Advances in safety technology and workplace environmental management have transformed conventional approaches to OHS implementation. Recent studies indicate that technology-based interventions and improvements in the physical work environment significantly enhance employee productivity, particularly in high-risk industries and high-pressure work settings. Yu et al. (2021) demonstrate that integrating deep learning-based safety technology into intelligent transportation systems can reduce accident risk and improve operational efficiency. Such technology enables real-time risk detection and prediction, thereby creating a safer work environment with fewer operational disruptions (Yu et al., 2021). As a result, employees are able to work more calmly, attentively, and productively because anxiety related to workplace accidents is substantially reduced.

Similarly, Choudhury et al. (2020), in their systematic review, show that the application of artificial intelligence (AI) in patient safety systems improves the speed and accuracy of healthcare delivery while reducing the cognitive workload of medical personnel. AI also functions as a decision-support tool, contributing to higher-quality outputs and stronger accountability in public service sectors (Choudhury et al., 2020). At the same time, the physical work environment remains equally important. Mamun et al. (2023) note that exposure to environmental contaminants, such as microplastics in food chains and workplace air, can undermine workers' long-term health, increase absenteeism, and disrupt productivity continuity. Over time, contaminated work environments become not only a health threat but also a systemic obstacle to performance and efficiency (Mamun et al., 2023).

A related concern is raised by Velis et al. (2021), who argue that open burning of plastic waste in developing countries poses serious risks to occupational health and public safety. This practice reflects weak OHS systems in informal sectors and generates substantial health-related costs and work disruptions, ultimately undermining national productivity (Velis et al., 2021). Taken together, these findings indicate that technology and workplace environmental quality are key determinants mediating the relationship between OHS and productivity. Organizations that prioritize technology-based risk detection and maintain workplaces free from harmful exposure are, in effect, investing in long-term workforce productivity.

3. Organizational and Structural Dimensions

Beyond psychosocial factors and technological interventions, the organizational and structural dimensions of OHS policy play a critical role in creating productive and sustainable work environments. These dimensions include institutional values, internal policies, work design, and organizational structures that comprehensively support employee health and safety. Garcia et al. (2020) introduce the One Health approach, which situates occupational health not solely at the individual level but within a broader integration of environmental health and food safety. This perspective is grounded in the view that sustainable productivity cannot be achieved without safeguarding both workplace ecosystems and surrounding communities (Garcia et al., 2020).

In the public sector, Carleton et al. (2020) show that poorly managed psychosocial stressors within public safety systems contribute to high absenteeism, lower workforce retention, and institutional instability. Organizations that fail to design structural support systems for employees face long-term risks in the form of declining work effectiveness and weakened team cohesion (Carleton et al., 2020). A further organizational perspective is offered by Hildmann & Kovacs (2019), who examine the use of unmanned aerial vehicles (UAVs) as safety monitoring systems in emergency response and public security. Their findings indicate that integrating UAVs into organizational systems can accelerate risk response, reduce direct exposure to hazards, and strengthen data-driven oversight. In this sense, UAVs function not merely as technical tools but as structural components of institutional risk management systems (Hildmann & Kovacs, 2019).

Tan et al. (2020) also underscore the importance of a systematically embedded safety culture within organizations. When organizations cultivate a work culture that treats safety as a collective priority, employee engagement, institutional loyalty, and compliance with efficient work procedures increase significantly. Such a culture not only creates a sense of security but also strengthens productivity by reinforcing collective organizational identity and operational discipline (Tan et al., 2020).

4. Cross-Thematic Synthesis and Causal Implications

Based on the three major themes discussed above—psychosocial factors and leadership, technology and the work environment, and organizational and structural dimensions—the relationship between OHS and productivity can be understood as multidimensional and causal. Overall, the reviewed literature indicates that effective OHS not

only reduces the risk of accidents and occupational illness but also generates multiplier effects across several productivity outcomes, including time efficiency, employee retention, individual motivation, and organizational capability. First, there is an indirect pathway through psychological safety, whereby caring leadership and supportive work cultures reduce job stress and strengthen organizational commitment, which in turn improves productivity (Bartsch, 2021; Rangachari, 2020; Tan, 2020). Second, safety technologies and environmental control interventions enhance not only operational efficiency but also employees' sense of security, enabling them to work under more optimal conditions (Yu, 2021; Choudhury, 2020; Mamun, 2023). Third, institutional structures and organizational policies that internalize safety values create stable work conditions and enhance resilience in the face of change and crisis (Garcia, 2020; Carleton, 2020; Hildmann, 2019).

Theoretically, these three themes complement one another and form a holistic causal framework in which OHS should not be viewed as a single exogenous variable, but rather as part of a broader system of values and managerial practices that shape organizational behavior. The interaction between individual factors (psychological), technological systems, and institutional structures confirms that productivity cannot be reduced to a simple economic input-output function; instead, it is the result of synergy among multiple occupational health and safety determinants. The main implication of this synthesis is the need for an interdisciplinary and integrative approach to OHS policy design. Organizations seeking to optimize productivity sustainably must combine evidence-based strategies across three levels: the individual, the work system, and organizational design. In this way, OHS becomes not only a legal obligation but also a strategic instrument for productivity transformation and organizational resilience in an era of disruption.

C. Practical and Theoretical Implications

The findings of this literature synthesis demonstrate that occupational health and safety (OHS) is no longer merely a matter of regulatory compliance or technical operations, but has evolved into a strategic component of organizational productivity. This implication is critical both practically—for policymakers and organizational actors—and theoretically, as it enriches the conceptual understanding of the relationship between OHS and employee productivity. From a practical perspective, the results call for a multi-level and integrative approach to OHS design and implementation. Evidence from Bartsch (2021), Rangachari (2020), and Tan et al. (2020) underscores that attention to psychosocial dimensions—such as transformational leadership and psychological safety—significantly enhances work engagement and organizational resilience in times of crisis (Bartsch, 2021; Rangachari, 2020; Tan et al., 2020). Accordingly, human resource managers and organizational leaders should treat mental well-being as a key performance indicator of OHS effectiveness.

Regarding technological and environmental interventions, organizations must reassess the extent to which proactive safety technologies are integrated into their systems. Studies by Yu et al. (2021) and Choudhury et al. (2020) show that deep learning and AI-based safety systems significantly reduce accident risks and improve operational efficiency (Yu, 2021; Choudhury, 2020). Meanwhile, maintaining a work environment free from pollutants and toxic exposure—as highlighted by Mamun et al. (2023) and Velis et al. (2021)—contributes to reduced health disruptions and enhanced workforce capacity (Mamun, 2023; Velis, 2021). Therefore, policymakers should allocate resources not only toward direct productivity outputs but also toward health-supporting and environmentally safe workplace systems.

From an organizational design perspective, the literature suggests that embedding safety culture and integrating data-driven monitoring systems strengthen employee retention, loyalty, and morale (Garcia, 2020; Carleton, 2020; Hildmann, 2019). OHS programs that are internalized within organizational values—rather than treated as procedural obligations—are more effective in fostering workforce stability and sustainability. This implication is particularly relevant for sectors facing high turnover or elevated occupational risks.

Theoretically, this study extends productivity theory by integrating occupational health, organizational safety, and management psychology perspectives. OHS is conceptualized not as a single independent variable, but as part of a complex organizational ecosystem, where its effects operate through mediating mechanisms (e.g., psychological safety and well-being) and moderating factors (e.g., technology, organizational structure, and crisis context). This perspective aligns with multi-level safety climate theory and organizational resilience theory, which view productivity as an outcome of interactions among individual behavior, technological systems, and social structures (Choudhury, 2020; Tan, 2020). Furthermore, these findings open avenues for developing new conceptual frameworks that conceptualize productivity as a function of mental health, physical safety, and the quality of organizational support systems. Thus, this study not only reinforces the understanding of the OHS–productivity nexus but also advances the development of more holistic and evidence-based OHS evaluation models across sectors.

D. Limitations and Directions for Future Research

Despite offering a comprehensive synthesis of the impact of occupational health and safety (OHS) on employee productivity, this study presents several methodological and substantive limitations that warrant critical reflection and inform future research directions.

First, a key limitation lies in the sectoral distribution of the analyzed studies, which are predominantly concentrated in healthcare and public safety contexts (e.g., Bartsch, 2021; Rangachari, 2020; Tan et al., 2020; Carleton et al., 2020). While these sectors are central to OHS practices, such dominance restricts the generalizability of findings to other industries, including manufacturing, mining, and small and medium enterprises. Future research should expand sectoral coverage to enable more representative cross-industry insights.

Second, most of the reviewed studies adopt descriptive or conceptual approaches, relying on literature reviews or short-term observational designs. Only a limited number employ longitudinal, experimental, or quasi-experimental methods to assess the long-term impact of OHS implementation on productivity. This limitation constrains the robustness of causal inference. Future studies should incorporate advanced quantitative approaches, such as panel data analysis, field experiments, or structural equation modeling (SEM), to more precisely identify mediating and moderating pathways.

Third, geographical limitations are evident, as the majority of studies originate from developed countries (e.g., Singapore, Germany, the United States, and Canada), where safety infrastructure and labor regulations are relatively advanced. Evidence from developing countries remains limited (with exceptions such as Mamun et al., 2023; Velis et al., 2021), despite the more complex OHS challenges in these contexts due to budget constraints, informal work cultures, and weak regulatory enforcement. Future research should prioritize Global South perspectives through comparative or context-specific studies.

Fourth, there remains a lack of focused research on the psychological and organizational mechanisms mediating the OHS–productivity relationship. Constructs such as psychological safety, employee engagement, organizational commitment, and resilience capacity are frequently mentioned but rarely examined systematically. Future research should develop integrative conceptual models that incorporate these mediators and moderators, for example through moderated mediation models or multi-level modeling (MLM).

Fifth, no standardized cross-sectoral productivity indicators explicitly linked to OHS have been established. Current measures—such as time efficiency, output quality, absenteeism, and loyalty—vary widely and lack standardization. Future research should aim to develop integrated productivity measurement systems that incorporate OHS dimensions, either through composite indices or multidimensional scoring models applicable across industries and cultural contexts.

CONCLUSION

Based on the analysis of ten selected articles, this study concludes that occupational health and safety (OHS) exerts a broad and significant impact on employee productivity. Comprehensive OHS programs function not only as preventive mechanisms against health and safety risks but also as critical drivers in creating work environments that support efficiency and sustainable productivity. Across diverse sectors—from high-risk industries to public service organizations—OHS implementation consistently enhances motivation, organizational commitment, and employees' psychological and physical well-being. The reviewed studies highlight key OHS components, including mental health, safety-supporting technologies, participatory safety culture, and workplace ergonomics. Employees who feel safe, valued, and supported within a holistic well-being framework demonstrate higher loyalty, reduced absenteeism, and significantly improved performance. Consequently, OHS should be understood not merely as regulatory compliance, but as a strategic investment that underpins long-term organizational success.

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