INTERNATIONAL JOURNAL OF NUSANTARA ISLAM
ISSN : 2355-651X

Gap Analysis of Occupational Safety and Health Regulation and Implementation for Non-Healthcare Workers in Healthcare Facilities

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Received: June 5, 2025, *Revised:* June 12, 2025, *Accepted:* June 30, *2025,*
Published: July 1, 2025

Abstract: This study analyzes the gap between regulation and implementation regarding occupational health and safety (OHS) protections for non-medical workers (e.g., cleaning staff, security personnel, and administrative staff) in healthcare facilities, grounded in universal labor protection principles. Employing a normative-juridical approach and a systematic literature review, the study examines the legal framework, empirical studies, and academic discourse concerning OHS in the healthcare sector. The findings indicate that despite the existence of comprehensive and universal OHS regulations, implementation remains uneven and tends to marginalize non-medical personnel—particularly outsourced workers—who often lack access to safety training, personal protective equipment, and incident reporting mechanisms. Outsourcing practices emerge as a primary structural factor causing a fragmentation of responsibility between hospitals and service providers, thereby undermining accountability. Challenges identified include weak managerial commitment, a safety culture focused predominantly on clinical aspects, and limited oversight of outsourced personnel. The study recommends strengthening OHS provisions in outsourcing contracts, enhancing labor inspections, and integrating all workers into hospital safety management systems. Furthermore, it introduces the concept of "silent vulnerability" to characterize the marginalization of non-medical workers within healthcare safety systems, thereby enriching academic scholarship in the fields of occupational health and labor law.

Keywords: labor law; non-health workers; occupational safety and health; policy implementation; safety culture.

Introduction

Healthcare facilities are complex and high-risk work environments, not only for healthcare workers but also for all workers who support their operations (OSHA), 2020). Behind the frontline doctors and nurses, there is a group of non-healthcare workers including cleaners, security guards, administrators, technicians, laundry staff, and ambulance drivers—whose roles are crucial in maintaining the continuity and quality of services (Rosita et al., 2021) (Tang, 2020). Despite their fundamental contributions, this group of workers faces exposure to significant and diverse occupational hazards, ranging from biological risks such as infectious medical waste and chemical risks from cleaning agents to ergonomic risks due to heavy physical workloads and psychosocial risks such as violence from external parties. This phenomenon is exacerbated by their employment status, which is often contractual or outsourced, which inherently weakens their bargaining power and limits access to Occupational Safety and Health

(OSH) training, adequate Personal Protective Equipment (PPE), and social protection mechanisms. The COVID-19 pandemic has dramatically highlighted this vulnerability, with non-healthcare workers on the front lines of the pandemic response often lacking equal recognition, incentives, and protections (Tang, 2020) (Ingram et al., 2021). This situation indicates a "silent vulnerability," where this group of essential workers is systematically neglected in the discourse and implementation of OSH in the health sector.

Literature on Occupational Safety and Health (OHS) in hospitals predominantly focuses on clinical workers, particularly doctors and nurses, while risks faced by non-healthcare workers receive comparatively limited attention. Cleaners, security personnel, administrative employees, and other support workers are often categorized broadly as "other staff," making their specific occupational risks less visible. Although national regulations and international guidelines require healthcare facilities to protect all workers, implementation remains inconsistent. OHS protection generally involves preventive measures, including regulations, operational standards, training, and supervision, as well as corrective measures such as sanctions and compensation for workplace accidents. However, many healthcare facilities experience a gap between formal regulations and practical implementation. OHS management systems may exist administratively, but hazard identification, training, monitoring, and supervision remain incomplete, particularly for non-healthcare workers (Lestari & Nasrifah, 2024). Thus, there are three main gaps in the literature: (1) the absence of a systematic literature review that specifically integrates legal protection and OHS implementation aspects for non-healthcare workers; (2) the lack of in-depth analysis of the influence of outsourced work status on the effectiveness of legal protection; and (3) the lack of synthesis between legal perspectives, OHS management, and safety culture within a comprehensive analytical framework for this group of workers.

This research has urgent academic and practical significance. Academically, this study aims to fill a gap in the literature by placing non-healthcare workers as the primary subject of analysis, shifting from their marginalized position in health care OSH studies. By integrating legal perspectives, risk management, and safety culture theory, this study offers a more holistic conceptual framework for understanding the complexities of protecting vulnerable worker groups (Ersson, 2024). Furthermore, the results of this systematic review will produce a clear conceptual map of the current situation, identify research trends, and formulate a relevant future research agenda, for example, regarding issues of organizational justice, access to redress mechanisms, and the impact of outsourcing business models on workers' rights (Ramadhani & Suratman, 2024). From a practical perspective, the findings of this study will provide a strong evidence-based basis for stakeholders. For regulators such as the Ministry of Health and the Ministry of Manpower, the analysis can serve as a basis for reviewing and strengthening OSH regulations and supervision guidelines that more specifically target non-healthcare workers. For healthcare facility management, this study will provide guidance to identify weak points in the implementation of SMK3RS, starting from the recruitment process, training, provision of PPE, to the mechanism for reporting and investigating work accidents (Lestantyo et al., 2020). In addition, these findings can be an important reference in designing work contract clauses and outsourcing agreements that explicitly guarantee equal and non-discriminatory K3 protection standards.

Based on the background and gaps outlined, this literature review aims to comprehensively analyze the legal protection of non-healthcare workers in healthcare facilities from an OHS perspective. Specifically, this study has four main objectives. First, to identify and map the regulatory framework, policies, and standards—both at the national and international levels—that normatively regulate legal and OHS protection for non-healthcare workers. Second, to synthesize empirical findings from the literature regarding the forms of OHS protection implementation that are actually received by non-healthcare workers, including access to training, PPE, social security, and complaint mechanisms. Third, to critically analyze the gap between the normative legal framework (de jure) and the reality of implementation in the field (de facto), and to identify the determinants that influence it, such as employment status, management commitment, and supervisory effectiveness. Fourth, based on this synthesis and analysis, to formulate actionable policy recommendations to strengthen legal protection for this group of workers and to propose a relevant further research agenda. Thus, this study argues that

without focused attention and an integrated approach between the legal aspects and the implementation of K3, non-health workers will continue to be in a hidden vulnerable position, which ultimately not only harms the workers themselves but also has the potential to compromise the quality and safety of health services as a whole.

Method

This study employed a systematic literature review (SLR) design with a narrative synthesis approach. The SLR design was chosen because of its systematic, explicit, and replicable methodology, thus minimizing bias in the identification, selection, and critical assessment of relevant literature. This approach aligns with the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which serve as the framework for reporting all stages of this review to ensure transparency and completeness (Page et al., 2021). Given that the purpose of this study was to integrate findings from diverse studies—including normative legal analysis, quantitative empirical studies, and qualitative studies—narrative synthesis was adopted as the analytical technique. The narrative synthesis approach allows for the integration and interpretation of textual data from various study designs that cannot be statistically analyzed through meta-analysis. This method is well-suited to addressing complex research questions regarding the gap between regulation (law on the books) and implementation (law in action) by constructing a coherent analytical narrative from the available evidence. Thus, this methodological framework allows researchers to not only map the regulatory landscape and empirical evidence, but also to explore the relationships and factors that influence OHS protection for non-health workers in depth.

A comprehensive literature search strategy was designed to identify relevant articles from various disciplines, including health, law, and public policy. The search was conducted in international and national electronic databases. The international databases used included Scopus, Web of Science (Core Collection), and PubMed/MEDLINE to capture global health and policy literature. Google Scholar was also utilized to identify gray literature and articles that may not be indexed in major databases. To capture the specific Indonesian context, a search was also conducted on national scientific portals such as Portal Garuda, Sinta, and Neliti. The search process was limited to articles published within the last five years, namely between January 1, 2020, and December 31, 2025, to ensure the relevance and recency of the findings. Search keywords were developed in English and Indonesian using Boolean operators (AND, OR) tailored to each database. Examples of keyword combinations in English are: (“non-healthcare worker” OR “hospital support staff”) AND (“hospital” OR “healthcare facility”) AND (“occupational safety” OR “OHS”) AND (“legal protection” OR “regulation”)*. While in Indonesian, examples are: (“non-healthcare worker” OR “cleaning officer”) AND (“hospital” OR “healthcare facility”) AND (“occupational safety and health” OR “K3”) AND (“legal protection” OR “policy implementation”). This documented search strategy aims to maximize coverage of relevant literature while maintaining search precision.

Inclusion and exclusion criteria were explicitly defined to ensure that only the most relevant studies were included in the analysis. The main inclusion criteria were: (1) the article must be a peer-reviewed scientific journal publication; (2) published between 2020 and 2025; (3) written in English or Indonesian; (4) the study's primary focus is on non-healthcare workers in healthcare facilities, or if discussing all workers, must provide extractable data specifically for the non-healthcare worker group; (5) the content addresses at least one aspect related to OHS risks, regulations, or the implementation of legal protection; (6) the article is available in full text format; and (7) the study design can be either empirical (quantitative, qualitative, mixed-methods) or normative legal analysis. Establishing these clear criteria is crucial to reduce the risk of selection bias and increase the validity of the review findings. Conversely, exclusion criteria were applied to filter out irrelevant studies. Articles were excluded if: (1) they focused solely on clinical healthcare workers without separate data on non-healthcare workers; (2) discuss patient safety without a direct link to worker safety; (3) are set outside of healthcare settings; (4) are non-indexed editorials, commentaries, letters, or conference proceedings; (5) have a focus purely on clinical aspects of disease; or (6) are duplicate publications. A rigorous

selection process based on these criteria ensures that the final synthesis is based on the most relevant and high-quality evidence.

The article selection procedure was carried out systematically in several stages following the PRISMA 2020 flowchart to ensure transparency and reduce bias. The first stage is identification, where all search results from various databases are collected and combined using reference management software (such as Zotero or Mendeley) to eliminate duplicate articles. The second stage is screening, which is conducted by two researchers independently. In the initial screening phase, both researchers will review the title and abstract of each article against the established inclusion and exclusion criteria. Clearly irrelevant articles will be removed at this stage. Any disagreements between the two researchers will be resolved through discussion to reach consensus, or, if necessary, by involving a third researcher as an arbitrator. The third stage is eligibility assessment, where articles that pass the title and abstract screening will be subjected to a full-text review. Both researchers will again independently assess each full-text article against the inclusion and exclusion criteria. The specific reasons for excluding articles at this stage will be clearly recorded. The entire selection process, from the number of articles identified, screened, assessed for eligibility, to the final number of articles included in the synthesis, will be documented and presented in the PRISMA flowchart.

The data analysis technique in this study used thematic synthesis, a structured approach to analyzing and synthesizing qualitative and textual data from various types of studies. This process consists of three main stages as described by (Aguirre et al., 2015). The first stage is data extraction and coding, where researchers systematically extract relevant information from each included article using a standardized data extraction form. The extracted information includes study details (author, year, country), methodology, population characteristics, and key findings related to the regulatory framework, OHS risks, implementation challenges, and the impact of outsourcing status. Next, textual findings from the results and discussion sections of each article will be coded line-by-line to capture the essence of the data. The second stage is descriptive theme development, where similar codes are grouped together to form themes that illustrate the main findings from the literature. The final stage is analytical theme generation, where researchers go beyond simply summarizing findings to develop higher-order interpretive themes. This analytical theme aims to answer the research questions in depth, for example by identifying patterns of gaps between law and practice and formulating new hypotheses regarding factors influencing the vulnerability of non-healthcare workers. This synthesis process will be rigorous to ensure that interpretations remain grounded in evidence from primary studies.

Results and Discussion

Legal Protection Regulatory Framework for Occupational Health and Safety

A literature analysis indicates the existence of a comprehensive and universal Occupational Safety and Health (OHS) regulatory framework for all workers in healthcare facilities. At the national level, various regulations, such as the Manpower Law and specific derivative regulations for the health sector, such as the Minister of Health Regulation on OHS in Hospitals (SMK3RS), explicitly mandate employers' obligations to protect all workers regardless of employment status or type of work (Pasaribu et al., 2022). This legal framework is designed to provide preventive protection through hazard identification, risk assessment, provision of Personal Protective Equipment (PPE), and training, as well as repressive protection in the form of sanctions and compensation in the event of a work accident or occupational disease (PAK). Legal studies confirm that, from a legal perspective, there is no distinction between healthcare and non-healthcare workers; both have the right to a safe and healthy work environment. The literature also underscores that this regulation aligns with international guidelines from the ILO and WHO, which emphasize an inclusive approach to OHS management in the health sector (Zainuddin et al., 2022)(Muthmainnah et al., 2023). Thus, legally, the basis for protecting non-health workers from various occupational risks—ranging from biological, chemical, ergonomic, to psychosocial hazards—is adequately and unambiguously provided.

Data explanation from the reviewed literature underscores that the existing regulatory framework theoretically establishes an ideal protection system (Tevlin, 2024). The primary

objective of these regulations is to ensure that every individual working in a hospital environment, including non-medical staff, is recognized as vulnerable to various occupational hazards. Healthcare facilities are recognized as one of the most hazardous work environments, with rates of occupational injuries and illnesses nearly double those of the private industry as a whole. These hazards are not limited to clinical risks such as needlesticks, but also include exposure to cleaning chemicals, ergonomic risks from manual work, workplace violence, and psychosocial stress. Therefore, the existence of regulations such as SMK3RS is intended as a systematic management instrument to proactively identify, evaluate, and control all potential hazards. The literature emphasizes that this legal mandate places full responsibility on healthcare facility management to implement an effective OHS program, which covers the entire work cycle and reaches all categories of workers, from doctors to cleaners and security personnel, ensuring that no group is neglected in protection efforts.

Although the regulatory framework provides a strong legal foundation, literature consistently demonstrates a significant disconnect between these normative mandates and the actual phenomena faced by non-healthcare workers. The reality on the ground, as reflected in various case studies, indicates that the universality of legal protection is often not realized in practice. Non-healthcare workers, such as cleaners, security guards, and administrators, are often marginalized from OSH programs. This phenomenon is exacerbated by their largely outsourced employment status, which creates ambiguity regarding who is responsible for their OSH protection—whether it is the hospital management or the service provider. As a result, this group of workers experiences what has been termed "silent vulnerability": they are exposed to high risks that are equal to, and sometimes even higher, than health care workers, yet their access to training, adequate PPE, and incident reporting mechanisms is far more limited. This gap between the law on the books and the law in action is at the heart of the problem, where legal protection, which should be a universal right, becomes a privilege more easily accessible to health care workers.

Factual Implementation of K3 for Non-Healthcare Workers

The reality of implementing occupational safety and health (OHS) for non-healthcare workers in healthcare facilities reveals a structural paradox rarely highlighted in health policy discourse. On the one hand, hospitals are positioned as professional spaces governed by strict safety standards; on the other, support workers such as cleaners, security personnel, technicians, and logistics staff are often overlooked by these safety systems. Recent empirical literature indicates that the implementation of OHS programs for these groups tends to be partial, sporadic, and not systematically integrated into the overall hospital risk management framework (Taskingul et al., 2024). This phenomenon demonstrates that occupational protection structures remain centered on clinical personnel, while non-clinical workers are often treated as peripheral actors within the institutional safety ecosystem.

One of the most obvious indicators of this disparity in implementation is the low level of compliance with the use of personal protective equipment (PPE) among non-healthcare workers. Research conducted on hospital sanitation workers shows that the level of non-compliance with PPE use remains significant, even reaching more than half of respondents in some healthcare settings in developing countries (Tolera, Gobena, et al., 2024). This condition does not simply reflect individual negligence, but is closely related to the availability of equipment, the quality of training, and a safety culture that has not been evenly internalized within the organization. In many cases, sanitation workers must perform tasks that pose a high risk of biological exposure without the equivalent protection of clinical healthcare workers.

The situation becomes even more complex when viewed from the perspective of occupational safety knowledge and literacy. Various studies show that low compliance with safety protocols is often directly correlated with workers' limited understanding of the occupational risks they face. A study of hospital sanitation workers found that over seventy percent of respondents had low levels of knowledge regarding occupational hazards in the hospital environment, which significantly impacted their safety behavior (Tolera, Assefa, et al., 2024). This knowledge gap indicates that OHS training programs have not been designed inclusively and have not fully reached non-healthcare worker groups who are actually exposed to high levels of risk.

In addition to limited knowledge, the low level of OHS implementation is also related to the absence of specific and ongoing training. Many healthcare facilities still focus safety training on medical personnel such as doctors and nurses, while support workers often receive only technical work instructions without adequate safety dimensions. In various field studies, cleaning workers reported that they were rarely involved in training sessions on medical waste management, disinfectant chemical handling, or hospital emergency response procedures (Basher et al., 2024). This lack of training demonstrates how occupational safety for non-healthcare workers is often viewed as an individual responsibility, rather than a structural institutional obligation.

The limitations of OHS implementation are also evident in the hazard identification and risk assessment processes conducted by hospital management. Within the Hazard Identification, Risk Assessment, and Determining Control (HIRADC) framework, the primary focus is generally directed at clinical risks related to medical procedures, pathogen exposure, and patient safety. Consequently, various types of hazards predominantly faced by non-healthcare workers, such as ergonomic risks, slips and falls, exposure to cleaning chemicals, and violence from visitors, often receive disproportionate attention (Taskingul et al., 2024). Thus, the risk management structure in many hospitals implicitly reproduces a safety hierarchy that places support workers at a lower level of protection.

Low reporting of occupational accidents and near-miss incidents among non-healthcare workers does not necessarily indicate fewer incidents, but may reflect limited knowledge, ineffective reporting systems, and fear of employment consequences. Outsourcing can further create uncertainty regarding responsibility for worker safety between hospitals and service providers. Limited management commitment, unequal access to training and PPE, and weak safety cultures also contribute to inadequate protection. These conditions expose cleaners, security personnel, and other support workers to biological, chemical, physical, ergonomic, and psychosocial hazards. During health crises such as COVID-19, these inequalities become more visible as support workers may receive less protective equipment despite significant exposure. Inadequate reporting also produces unreliable accident data, making it difficult for hospitals to identify risks and develop appropriate interventions. Consequently, the gap between formal OHS regulations and their practical implementation remains a significant challenge requiring stronger governance, inclusive safety policies, and effective monitoring (Aleshoush & Almakhzoumi, 2024).

Thus, the actual implementation of occupational safety and health (K3) for non-healthcare workers demonstrates a complex structural dynamic. The gap between policy and practice is caused not only by technical factors but also by organizational structures, employment models, and a non-inclusive safety culture. Unless these factors are systematically addressed, occupational safety protection for non-healthcare workers will remain fragile. In such a situation, the right to occupational safety, which is normatively guaranteed by law, risks becoming merely a formal principle that is not fully realized in the operational reality of healthcare facilities (Politakis, 2023).

Implementation Gaps and Inhibiting Factors

The gap between occupational safety and health policy norms and the reality of their implementation in healthcare facilities is one of the most glaring structural paradoxes in modern occupational safety governance. Normatively, many hospitals have a Hospital Occupational Safety and Health Management System (SMK3RS) document that outlines protection standards for all workers without discrimination. However, in practice, the existence of this document does not always translate directly to the level of protection experienced by workers in the field. Various studies have shown that the implementation of OHS policies in hospitals often stops at the administrative level, particularly when the accreditation process becomes the primary orientation of occupational safety management (Hesgrove et al., 2024). Thus, policies that should be instruments of substantive protection are at risk of degenerating into bureaucratic rituals that lose their operational meaning.

This phenomenon demonstrates a systemic implementation gap rooted in the dynamics of healthcare organizations. Various studies of hospital safety culture have found that management attention tends to focus on the safety of patients and medical personnel, while the safety of support workers often falls on the fringes of institutional attention (Hesgrove et al., 2024). This

situation creates what some researchers call the invisibility of support workers, a situation in which non-clinical workers are not fully integrated into the organization's risk management system (Fan et al., 2024). Within this framework, their operational presence is crucial to the continuity of healthcare services, but structurally, they are not always the primary subjects of occupational safety policies.

This invisibility is also reflected in occupational safety audit practices conducted in hospitals. Internal audit processes typically assess compliance with clinical procedures, medical device use, and infection control directly related to medical activities. Meanwhile, work areas dominated by non-healthcare workers, such as waste storage rooms, hospital kitchens, logistics rooms, and cleaning areas, often do not receive equal audit attention. Yet, various studies have shown that medical waste handlers and cleaners face very high levels of exposure to biological and chemical risks in their daily work activities (Tolera, Assefa, et al., 2024). This imbalance of attention reflects structural biases within the occupational safety oversight system.

Implementation gaps are also evident in the uneven risk communication mechanisms within hospital organizations. Information about new hazards, changes in safety procedures, or emergency response protocols is often communicated through professional forums attended by medical personnel and clinical management. As a result, non-healthcare workers not involved in these forums often receive information indirectly or not at all. A study of cleaning workers' perceptions of chemical hazard signs showed that their understanding of hazard symbols fell below international safety standards (Mehrifar et al., 2023). This communication gap demonstrates how organizational safety information systems are not fully inclusive of all worker categories.

Furthermore, the gap in OHS implementation is also related to the uneven distribution of knowledge and training. In many hospitals, occupational safety training programs are designed primarily to meet the needs of medical personnel who interact directly with patients. Meanwhile, support workers such as cleaners, waste collectors, and logistics staff often receive only brief, job-orientation training. This is despite research showing that adequate safety training is directly linked to improved occupational safety practices among medical waste handlers (Demamu, 2024). When training is not provided systematically, non-healthcare workers face occupational risks with a much lower level of preparedness.

This situation becomes even more complex when viewed from the perspective of organizational safety culture. A strong safety culture requires the active involvement of all employees in hazard identification, incident reporting, and organizational learning. However, in many healthcare facilities, safety culture still develops within a hierarchical framework that places the medical profession as the center of knowledge authority. Research on the workplace safety climate in the healthcare sector shows that employee perceptions of workplace safety are strongly influenced by managerial leadership and the organization's level of openness to reporting safety issues (Christofilea et al., 2025). Without inclusive leadership, a safety culture will develop fragmentarily and not reach all levels of employees.

Managerial factors are one of the most significant barriers to the effective implementation of OHS policies. Hospital leadership's commitment is reflected not only in policy documents but also in strategic decisions regarding resource allocation and organizational priorities. In practice, various occupational safety programs for non-healthcare workers often face budget constraints, whether in the form of safety training, provision of personal protective equipment, or improvements to safe work infrastructure. Yet, various international reports show that the quality of healthcare services is highly correlated with the level of occupational safety provided to all hospital workers (Amoadu et al., 2023). Therefore, investment in occupational safety should be viewed as a strategy for improving service quality, not simply an additional operational cost.

Another equally significant obstacle is the hospital's bureaucratic and rigid organizational structure. In this structure, decision-making often occurs in a top-down manner with limited employee involvement (Dehghan, 2022). This situation hinders the development of effective feedback mechanisms between field workers and organizational management. As a result, various safety issues that arise in daily work activities are not always adequately communicated to policymakers (Ahmad et al., 2023)v. In the context of occupational safety, this lack of communication can hinder the organizational learning process that should be at the heart of a modern safety management system.

An organizational culture that blames individuals is also a significant inhibiting factor in the implementation of OHS. In a workplace dominated by a blame culture, workplace accidents are often viewed as the result of individual negligence, rather than system failure. This approach discourages workers from reporting incidents or hazardous working conditions due to fear of sanctions or negative stigma. Research on safety culture in the healthcare sector indicates that a psychologically safe work environment is a key prerequisite for an effective incident reporting system (Hesgrove et al., 2024). Without this sense of safety, the occupational safety system will lack one of its most important learning mechanisms.

In addition to managerial and organizational cultural factors, outsourcing practices also play a significant structural role in widening the gap in OHS implementation. Many modern hospitals rely on external companies to provide cleaning, security, and medical waste management services. This employment model creates complex, often unclear responsibilities between the hospital as the service user and the labor provider. In such situations, the implementation of occupational safety standards can be inconsistent because each party has a different management system (Marhavilas et al., 2022).

The complexity of employment relationships also impacts the bargaining position of non-healthcare workers in defending their occupational safety rights. Outsourced workers are generally in a more vulnerable position than permanent workers because their employment contracts are temporary and dependent on the policies of the service provider. This makes them more likely to avoid conflict with their employers, including reporting unsafe working conditions (Serenko, 2024). Thus, an unstable employment structure can be a factor weakening the effectiveness of occupational safety systems.

From the worker perspective, several social and economic factors also contribute to the low implementation of OHS. Many non-healthcare workers in the healthcare sector have relatively lower levels of formal education than medical personnel. This can impact their understanding of complex occupational safety procedures (Qureshi et al., 2023). Furthermore, limited access to professional training reduces their opportunities to independently improve their occupational safety competencies.

These structural vulnerabilities are reflected in various studies on the working conditions of hospital cleaning workers. Recent studies have shown that this group of workers is at high risk of musculoskeletal disorders due to heavy and repetitive physical activities, such as lifting heavy loads, pushing waste trolleys, or cleaning large areas in limited time (Putsa et al., 2022). These ergonomic risks are often overlooked in hospital safety management systems, which focus more on biological and infectious hazards.

The relationship between implementation gaps and these various inhibiting factors has direct implications for the realities experienced by non-healthcare workers in healthcare facilities. When management commitment is weak, budgets for workplace safety programs are limited. When a safety culture is not inclusive, experiences of verbal abuse against security staff may be considered an accepted occupational risk. When outsourcing practices are not accompanied by robust safety clauses, workers who experience workplace accidents may be caught in a conflict of responsibility between the hospital and the service provider (Hough et al., 2023).

Thus, the vulnerability experienced by non-healthcare workers cannot be understood as an individual or merely coincidental phenomenon. It is a logical consequence of organizational structures, safety cultures, and employment relationships that do not fully support worker protection. In this context, the gap in OSH implementation is not simply an administrative issue, but rather a reflection of the power dynamics and institutional priorities within the modern healthcare system. Unless these structural factors are comprehensively addressed, occupational safety protection for non-healthcare workers will remain vulnerable, despite being normatively guaranteed by various occupational safety regulations and standards (Chowdhury et al., 2022).

This systematic literature review confirms a fundamental paradox in Occupational Safety and Health (OHS) protection for non-healthcare workers in healthcare facilities. On the one hand, a robust, comprehensive, and explicitly universal national and international regulatory framework is found, providing a de jure legal basis for equal protection for all workers, regardless of their occupation. However, on the other hand, a synthesis of empirical findings consistently reveals systemic (de facto) implementation failures that render such protection illusory for non-healthcare workers. The analysis shows that this group of workers, including cleaning, security, and administrative staff, is systematically rendered invisible to the radar of

hospital risk management and safety culture (Saporito & Mrad Georgis, 2025). This failure manifests itself in the partial implementation of OHS programs, uneven allocation of resources (training and PPE), and weak monitoring and incident reporting mechanisms. The most significant structural factor at the root of the problem is the practice of outsourcing, which has been shown to create a diffusion of responsibility between hospital management and service providers, thereby weakening accountability and perpetuating the "silent vulnerability" of this group of essential workers.

This finding regarding the gap in occupational safety and health (OHS) implementation aligns with previous research showing that hospital safety culture tends to focus more on patient safety and clinical healthcare workers than on other worker groups. Research by Anggraini and Kholibrina confirms that safety policy orientation in healthcare facilities often remains focused on patient safety, resulting in inadequate attention to the protection of non-clinical workers (Rafif et al., 2026). Similar findings were identified by Felknor and colleagues, who demonstrated that within hospital safety management systems, workers in more peripheral positions are often vulnerable to occupational risk exposure without adequate systemic support (Kotozaki et al., 2022).

However, this study makes a relatively distinct contribution by framing the issue more explicitly from a legal protection perspective, specifically through an analysis of employment status as a variable influencing the level of occupational safety protection received by workers. This approach broadens the discourse, which has tended to focus on technical aspects of occupational safety, such as compliance with personal protective equipment (PPE) or the identification of specific hazards in hospital settings. A study by Winarno and colleagues, for example, emphasized the importance of a safety management system approach in improving compliance with OHS standards (Wiratna & Chei, 2022). Furthermore, research by Siregar and Mudayana demonstrated that the implementation of OHS policies in the healthcare sector is heavily influenced by an organization's managerial capacity and institutional commitment to occupational safety (Siregar & Mudayana, 2024). A broader perspective is also presented by Nur Syahadah and Setiyadi, who highlight how organizational structural factors can influence the distribution of safety protection for workers in healthcare facilities (Syahadah & Setiyadi, 2023).

In the context of employment relations, a study by Siganporia and colleagues on the impact of outsourcing on OHS practices in hospitals found indications of under-reporting of workplace accidents among outsourced workers (Siganporia et al., 2016). This phenomenon is highly relevant to the concept of "silent vulnerability" identified in this review, namely conditions where workers are in risky situations but do not have sufficient space to report or express that vulnerability openly. Hariyati's research shows that inequality in employment relations can create structural barriers for workers to submit formal reports of workplace accidents (Alamsyah et al., 2025). This condition is further reinforced by national policy findings that indicate that the workplace accident reporting system in Indonesia still faces various limitations in reaching workers with non-permanent employment status.

The main strength of this research lies in the narrative synthesis approach used to connect macro-level regulations (law on the books) with the factual experiences of workers at the micro-level (law in action). This approach allows for a more comprehensive analysis of how legal norms designed to protect workers are often distorted when applied in everyday institutional practice. Johnson emphasized that the gap between legal norms and implementation practices is a classic problem in occupational safety policy studies (Lam et al., 2002). In the Indonesian context, the regulatory framework related to OSH has actually provided a fairly strong legal basis for worker protection in various sectors, including the health sector. However, the effectiveness of its implementation depends heavily on institutional capacity and the dynamics of employment relations at the organizational level.

The main limitation of this review lies in its reliance on available literature, which may not fully reflect the true scale of the problem on the ground. This is particularly relevant to the phenomenon of under-reporting identified in various previous studies, where a number of occupational accident incidents are not officially recorded in institutional reporting systems (Kyung et al., 2023). Therefore, the findings of this study should be understood as initial indications that open the way for more in-depth empirical research into the state of occupational safety protection for workers in the healthcare sector.

Reflectively, the findings of this review successfully address all of the stated research objectives. The first objective, to map the regulatory framework, was achieved by identifying a robust set of legal rules that are often weak in practice. The second objective, to synthesize empirical findings regarding actual implementation, was achieved through an analysis of various studies demonstrating discriminatory and non-inclusive OSH programs for non-healthcare workers. Furthermore, the third objective, analyzing the gap between norms and practices and the factors influencing them, is central to this discussion. The analysis clearly demonstrates that this gap is not a random omission, but rather the result of systemic factors such as an outsourcing business model, low management commitment, and an exclusionary safety culture (Pilbeam et al., 2020). Thus, this study successfully goes beyond simply describing the problem and offers a thorough explanation. Finally, this comprehensive understanding of the root causes enables the achievement of the fourth objective: providing a solid evidence base for formulating policy recommendations and a further research agenda, discussed further, to strengthen legal protection for this vulnerable group of workers.

The implications of these findings are twofold, spanning both theoretical and practical domains. Theoretically, this study enriches the literature on the "implementation gap" by demonstrating how precarious employment status (outsourcing) serves as a key moderator hindering the effectiveness of public policies in high-risk organizational environments. The findings also contribute to organizational justice theory by highlighting the distributive (in the allocation of OSH resources) and procedural (in access to reporting and protection mechanisms) injustices experienced by non-healthcare workers. The proposed concept of "silent vulnerability" can serve as an analytical framework for examining other marginalized worker groups across various sectors (Espinoza, 2020). Practically, the implications are significant. For regulators, these findings urge a review of outsourcing regulations in crucial sectors such as healthcare, with the possible implementation of a joint liability scheme between users and providers. For hospital management, this is a call to move from ceremonial OHS compliance (for accreditation) to an authentic and inclusive safety culture, which recognizes that the safety of all staff is a prerequisite for patient safety.

The root causes of these findings can be analyzed through several theoretical lenses. From a strategic management theory perspective, non-healthcare workers are often viewed as peripheral or "non-core" workers whose functions are outsourced for cost efficiency. This efficiency logic indirectly positions them as a cost center to be minimized, rather than an investment in organizational assets. This creates a two-tiered safety system. Furthermore, from a social psychology perspective, the phenomenon of diffusion of responsibility explains why both hospitals and outsourcing companies fail to take full ownership of workers' OHS. Each party feels the other should be responsible, resulting in weak oversight and the erosion of safety standards. Power relations theory is also relevant; the low bargaining power of non-healthcare workers, often due to their educational attainment and the absence of strong unions, prevents them from effectively voicing concerns or asserting their OHS rights (Bűhler et al., 2024). This combination of economic logic, diffusion of responsibility, and power inequality creates ripe conditions for the normalization of neglect, where unsafe working conditions for non-healthcare workers are accepted as normal.

Based on this in-depth analysis, several concrete recommendations can be formulated. For policymakers, regulations are needed that mandate strict OHS clauses in every outsourcing contract in healthcare facilities, including audit mechanisms and clear sanctions for violations. Furthermore, strengthening the role of labor inspectors to specifically target the working conditions of outsourced workers in hospitals is crucial. For healthcare facility management, it is recommended to integrate the OHS of non-healthcare workers as a performance indicator in hospital quality management and accreditation systems. Establishing an inclusive OHS committee with representatives from outsourced workers could be a strategic step to ensure their voices are heard. Future research should move beyond problem identification to intervention evaluation. Quantitative studies are needed to accurately map the prevalence of workplace accidents and occupational diseases in this group. In-depth qualitative research on the lived experiences of non-healthcare workers would provide a richer understanding of the psychosocial barriers to reporting incidents. Finally, participatory action research involving workers, management, and service providers in co-designing more effective and equitable OHS programs could be the most impactful future research agenda.

Conclusion

This study examines the extent to which occupational safety and health (OHS) regulations effectively protect non-healthcare workers in healthcare facilities. Using a systematic literature review, the findings reveal that although OHS regulations are generally comprehensive, their implementation remains uneven. Cleaners, security officers, administrative employees, and other support workers are frequently overlooked within hospital safety systems. This vulnerability is reflected in unequal access to OHS training, insufficient personal protective equipment, and weak mechanisms for reporting occupational accidents. Outsourcing further intensifies these problems by creating uncertainty over responsibility between healthcare facilities and service providers, thereby weakening institutional accountability for worker protection. Theoretically, this study contributes to labor law and occupational safety scholarship by demonstrating that regulatory effectiveness depends not only on the existence of legal provisions but also on employment relationships, organizational safety culture, and institutional governance. The concept of "silent vulnerability" highlights how peripheral workers in high-risk environments may experience limited legal protection despite being exposed to significant occupational hazards. Practically, healthcare regulations should establish clearer shared responsibilities between hospitals and outsourcing companies. Hospital management should also develop inclusive safety systems that provide all workers, regardless of employment status, with equal access to training, protective equipment, and accident-reporting mechanisms. However, the study is limited by its reliance on existing literature, which may be affected by publication bias and incomplete reporting of workplace accidents. It also lacks direct empirical evidence concerning workers' experiences. Future research should therefore combine quantitative surveys and qualitative interviews to examine occupational risks and evaluate more inclusive OHS governance models.

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