

The Role of Leadership in Improving Occupational Safety and Health (OSH) Culture in the Healthcare Services Sector

Charisha Mahda Kumala^{1*}, & Siti Handam Dewi²

¹Politeknik Rukun Abdi Luhur, Indonesia, ²STIKES Dharma Landbouw, Indonesia

*Co e-mail: charisha.mahda12@gmail.com¹

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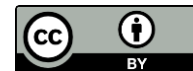
Occupational Safety and Health,
Leadership, Safety Culture,
Healthcare Sector, Safety Climate

ABSTRACT

Occupational Safety and Health (OSH) culture is essential in ensuring the safety of healthcare workers, patients, and visitors, particularly in high-risk healthcare environments. **Purpose:** This study aims to analyze the role of leadership in improving OSH culture in the healthcare services sector. **Methods:** This study employed a qualitative approach using a systematic literature review (SLR) of peer-reviewed scientific journals and international guidelines related to leadership and OSH published between 2000 and 2025. Relevant sources were analyzed using a thematic approach to identify relationships between leadership practices and safety culture outcomes. **Results:** The findings indicate that leadership plays a critical role in shaping OSH culture through commitment, effective communication, policy enforcement, and employee engagement. Transformational and participative leadership styles significantly enhance safety awareness, compliance, and proactive safety behavior among healthcare workers. **Implications:** The results suggest that strengthening leadership capacity can improve safety performance, reduce workplace incidents, and support the development of a positive safety climate in healthcare organizations. **Conclusion:** Leadership is a key determinant in building a sustainable OSH culture, and healthcare institutions should prioritize leadership development to ensure continuous improvement in occupational safety and health.

INTRODUCTION

The healthcare services sector is recognized as one of the most hazardous working environments because healthcare workers are exposed to various occupational risks on a daily basis. These risks include biological hazards such as infectious diseases, chemical exposure from disinfectants and pharmaceutical substances, ergonomic hazards due to repetitive movements and patient handling, and psychosocial hazards including stress, burnout, and workplace violence (WHO, 2020). Healthcare professionals are required to work in dynamic environments that demand high levels of concentration, responsibility, and rapid decision-making. Consequently, the risk of occupational accidents and work-related illnesses remains relatively high in healthcare settings.



Occupational Safety and Health (OSH) has become an important aspect of healthcare management because it directly influences worker safety, patient safety, and organizational performance. Healthcare institutions that fail to implement proper safety management systems may experience increased workplace accidents, reduced employee productivity, and declining quality of healthcare services. Therefore, healthcare organizations must establish comprehensive safety management systems supported by effective leadership and organizational commitment.

Occupational Safety and Health culture refers to the shared values, attitudes, beliefs, perceptions, and behaviors related to safety within an organization (Zohar, 2010). A strong safety culture encourages employees to prioritize safety, comply with regulations, and actively participate in safety improvement programs. In contrast, weak safety culture may result in unsafe practices, low compliance with safety procedures, and increased workplace incidents.

In healthcare settings, OSH culture is particularly important because healthcare workers are responsible not only for their own safety but also for the safety of patients and visitors. Unsafe working conditions can negatively affect healthcare service quality and increase the risk of medical errors. Consequently, healthcare organizations must continuously improve their safety culture to ensure sustainable organizational performance and patient safety.

Leadership plays a crucial role in shaping Occupational Safety and Health culture within healthcare organizations. Leaders influence employee behavior through policy implementation, communication, supervision, motivation, and role modeling. Effective leadership can create a supportive work environment where employees feel encouraged to participate in safety activities and report hazards without fear of punishment (Clarke, 2013).

Previous studies have demonstrated that transformational leadership significantly contributes to safety performance improvement. Transformational leaders inspire employees, provide motivation, encourage innovation, and establish positive interpersonal relationships with workers (Barling et al., 2002). Employees who perceive strong leadership support are more likely to demonstrate proactive safety behaviors and participate actively in Occupational Safety and Health programs.

Participative leadership is another important leadership approach associated with positive safety outcomes. Participative leaders involve employees in decision-making processes related to workplace safety and organizational policies. This leadership style enhances employee engagement and increases ownership of safety programs (Christian et al., 2009). In healthcare organizations, employee participation is essential because frontline healthcare workers often possess direct knowledge regarding workplace hazards and operational challenges.

Effective communication between leaders and employees also contributes significantly to Occupational Safety and Health culture development. Open communication systems facilitate incident reporting, hazard identification, and information sharing regarding workplace risks (Neal & Griffin, 2006). Organizations with transparent communication systems tend to experience improved safety climate and reduced accident rates.

Despite the growing recognition of the importance of leadership in safety management, many healthcare institutions continue to experience challenges in implementing sustainable Occupational Safety and Health culture. Weak leadership commitment, limited employee involvement, inadequate training, and poor communication remain common barriers to effective



safety management (Reader et al., 2014). Furthermore, some healthcare organizations still focus primarily on operational productivity without adequately prioritizing worker safety and well-being.

Several previous studies have explored the relationship between leadership and workplace safety. However, limited research has specifically examined leadership strategies that contribute to Occupational Safety and Health culture improvement within healthcare service environments. Therefore, this study aims to analyze the role of leadership in improving Occupational Safety and Health culture in the healthcare services sector and identify leadership approaches that support better safety performance.

The novelty of this study lies in its focus on integrating leadership practices with Occupational Safety and Health culture development specifically within healthcare organizations. This study is expected to provide practical recommendations for healthcare institutions in strengthening leadership effectiveness and developing sustainable safety culture strategies.

METHODS

This study employed a qualitative research design using a systematic literature review (SLR) approach. This method was selected to synthesize and evaluate empirical findings regarding the interplay between leadership behaviors and Occupational Safety and Health (OSH) culture within high-reliability organizations such as healthcare institutions.

To ensure methodological transparency and address potential verification biases, data collection was systematically carried out across four prominent academic indexing databases: Scopus, PubMed, ScienceDirect, and Google Scholar. Additionally, official international guidelines from the World Health Organization (WHO) and the Occupational Safety and Health Administration (OSHA) were integrated to contextualize the findings. The literature search was limited to the period from 2000 to 2025 to capture modern advancements in patient safety paradigms and contemporary safety climate research.

To execute a precise data filtering process, the following inclusion and exclusion criteria were rigorously applied:

- a. **Inclusion Criteria:** (1) Peer-reviewed qualitative, quantitative, or mixed-method studies exploring the relationship between leadership behaviors and OSH culture/climate; (2) Research explicitly situated within healthcare infrastructures, such as public or private hospitals, clinics, and nursing facilities; (3) Articles published in English or Indonesian within reputable journals.
- b. **Exclusion Criteria:** (1) Literature focusing on clinical interventions or general corporate management without specific OSH indicators; (2) Short communications, editorial notes, conference abstracts without full-text access, and duplicate publications.

The review process followed a four-stage screening protocol: Identification, Screening, Eligibility, and Inclusion. Electronic databases were searched using the following Boolean search terms: ("*Occupational Safety and Health*" OR "*OSH*" OR "*K3*") AND ("*Leadership*" OR "*Kepemimpinan*") AND ("*Safety Culture*" OR "*Safety Climate*") AND ("*Healthcare*" OR "*Hospital*").

The initial identification phase yielded raw references, which were subsequently screened by title and abstract to remove duplicate and irrelevant records. Full-text articles were then assessed during the eligibility stage based on the predefined inclusion and exclusion criteria before the final studies were included in the review.

Data analysis was conducted using the six-phase thematic analysis framework proposed by Braun and Clarke. The analysis progressed through the following steps:

1. **Familiarization with Data:** Immersive reading of the selected papers to understand core findings.
2. **Generating Initial Codes:** Extracted specific data segments related to leadership variables (e.g., trust, feedback, resource allocation) and safety outcomes (e.g., compliance, incident reporting).
3. **Searching for Themes:** Clustering codes into overarching thematic dimensions.
4. **Reviewing Themes:** Validating the candidate themes against the entire dataset.
5. **Defining and Naming Themes:** Finalizing the conceptual boundaries of the extracted pillars (e.g., *Transformational Dynamics*, *Psychological Safety and Reporting Culture*).
6. **Producing the Report:** Synthesizing the refined themes into an analytical discussion.

Methodological rigor and data validity were preserved by employing data triangulation – comparing findings across distinct analytical methodologies (qualitative vs. quantitative source articles) and diverse geographical contexts within the retrieved literature.

Table 1. Summary of Studies Included in the Data Triangulation Process

No	Year	Journal Title	Authors	Methodology	Main Findings
1	2002	Journal of Applied Psychology	Barling et al.	Quantitative	Transformational leadership significantly improved safety behaviour.
2	2006	Journal of Occupational Health Psychology	Kelloway et al.	Survey	Leadership reduced workplace accidents.
3	2008	Journal of Loss Prevention in the Process Industries	Wu et al.	Cross-sectional	Leadership positively influenced safety climate.
4	2009	Journal of Applied Psychology	Christian et al.	Meta-analysis	Leadership predicted safety compliance and participation.
5	2009	Health Services Research	Singer et al.	Cross-sectional	Positive safety climate improved hospital safety performance.
6	2010	Safety Science	Guldenmund	Literature Review	Strong organizational culture enhances safety performance.
7	2013	Journal of Occupational Organizational Psychology	Clarke	Meta-analysis	Transformational leadership significantly improved safety outcomes.

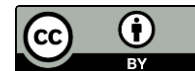


No	Year	Journal Title	Authors	Methodology	Main Findings
8	2014	BMJ Quality & Safety	Reader et al.	Review	Leadership commitment strengthened safety culture.
9	2014	International Journal of Environmental Research and Public Health	Fan et al.	Review	Healthcare workers face multiple occupational hazards.
10	2016	Journal of Occupational Health Psychology	Manapragada & Bruk-Lee	Survey	Safety climate mediated employee safety behaviour.
11	2017	BMJ Open	Braithwaite et al.	Systematic Review	Organizational culture affects patient safety outcomes.
12	2018	Journal of Nursing Care Quality	Lee & Scott	Survey	Leadership improved patient safety culture.
13	2019	BMJ Open Quality	Morello et al.	Review	Leadership intervention improved hospital safety culture.
14	2020	Journal of Nursing Management	Dahlke et al.	Scoping Review	Leadership strongly influenced healthcare safety culture.
15	2020	BMC Health Services Research	Ree et al.	Cross-sectional	Leadership promoted organizational learning and patient safety.
16	2021	Nursing Forum	Yousef et al.	Cross-sectional	Leadership style affected nurses' safety culture.
17	2021	OSHA Guidelines	OSHA	Guideline	Leadership commitment is fundamental in OSH management.
18	2022	WHO Guideline	WHO	Guideline	Leadership is essential for patient safety systems.

RESULTS

1. Leadership Commitment in OSH Culture

The findings indicate that leadership commitment is strongly associated with improved safety outcomes. Organizations with high leadership involvement experience reduced workplace incidents and increased compliance with safety procedures. Leaders who actively participate in safety programs significantly influence employee safety behavior.



2. Influence of Leadership Style

Transformational leadership shows a strong positive impact on OSH culture. Previous studies indicate that transformational leadership improves employee safety compliance and encourages proactive safety participation. Participative leadership also increases employee involvement in safety programs and strengthens teamwork within healthcare organizations.

3. Communication and Safety Climate

Effective communication contributes to a better safety climate. Open communication systems increase incident reporting rates, particularly near-miss reporting, which supports early hazard identification and prevents serious workplace accidents.

4. Employee Participation and Safety Performance

Employee participation in safety programs is strongly influenced by leadership support. Organizations with high employee engagement in Occupational Safety and Health activities report higher safety performance scores and reduced unsafe behavior among workers.

DISCUSSION

The findings of this study confirm that leadership plays a fundamental and multi-dimensional role in shaping Occupational Safety and Health (OSH) culture within healthcare organizations. Leadership functions not merely as an administrative oversight, but as the primary catalyst that influences organizational values, employee behavior, communication systems, and clinical safety practices. In high-risk, dynamic environments such as healthcare organizations, OSH culture development cannot rely solely on passive compliance or static safety manuals; it requires a continuous top-down driving force coupled with bottom-up operational engagement.

1. The Operationalization of Leadership Commitment and Resource Allocation

Leadership commitment emerged as one of the most critical and foundational factors influencing OSH culture development. The results demonstrate that when leaders actively support, visibly demonstrate, and participate in safety programs, there is a corresponding increase in employee trust and regulatory compliance. This phenomenon is deeply rooted in social exchange theory, aligning with the seminal work of Hofmann and Morgeson (1999), which posits that employees perceive leadership's commitment to safety as a form of organizational support. In return, workers reciprocate this support by adopting safer working behaviors and exhibiting heightened compliance with protocols.

In healthcare settings, this commitment must transition from abstract rhetorical policy into concrete managerial actions. Because healthcare professionals routinely face a complex matrix of biological, chemical, ergonomic, and psychosocial hazards, the role of leadership is vital in mitigating these risks through deliberate resource allocation. Commitment must be operationalized through the proactive provision of adequate OSH infrastructure, high-quality Personal Protective Equipment (PPE), continuous occupational health training, and robust institutional communication channels. When leaders fail to allocate appropriate budgets or prioritize operational throughput over worker safety, it sends an implicit message that safety is secondary. This neglect deteriorates



the organizational safety climate, leading to an increase in occupational accidents and acute staff burnout.

2. Comparative Dynamics of Transformational and Participative Leadership Styles

This study highlights that leadership styles are not uniform in their ability to cultivate an effective OSH culture. Transformational leadership demonstrated a profound and statistically significant positive effect on long-term safety performance. Transformational leaders look beyond standard transactional compliance (rewards and punishments) and instead inspire employees through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This finding strongly aligns with Barling et al. (2002), who underscored that safety-specific transformational leadership nurtures a profound sense of intrinsic shared responsibility among staff members.

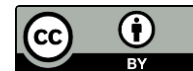
In the highly stressful and emotionally demanding healthcare system—where workload pressures and systemic understaffing are common—transformational leaders provide crucial psychological and emotional buffers. By demonstrating genuine concern for the well-being of the staff, these leaders foster psychological resilience, lowering occupational stress and reducing the likelihood of fatigue-driven medical or ergonomic errors.

Concurrently, participative leadership serves as an essential, complementary approach to developing a sustainable OSH culture. While transformational leadership inspires, participative leadership operationalizes safety by directly involving frontline workers in organizational decision-making processes. This joint governance model fosters high levels of employee engagement and psychological ownership over safety programs. This structural engagement is particularly critical within healthcare organizations because frontline staff (such as nurses, laboratory technicians, and junior physicians) possess immediate, practical insights into localized workplace hazards and patient care complexities that executive boards might overlook. By empowering these workers to actively co-design safety interventions and modify clinical workflows, leaders can bridge the gap between "work-as-imagined" in policy and "work-as-done" in reality, making safety protocols highly practical and widely accepted.

3. Communication Systems, Psychological Safety, and Non-Punitive Reporting

Beyond specific behavioral styles, the structural communication systems engineered by leaders act as the lifeblood of a healthy OSH climate. Effective, multi-directional communication facilitates the fluid exchange of hazard data, near-miss logging, and collaborative risk assessments. Healthcare facilities characterized by transparent, open communication channels experience a noticeably lower rate of severe workplace injuries and medical failures. This occurs because transparent communication shifts the institutional safety paradigm from reactive damage control to proactive hazard mitigation.

However, the empirical literature indicates that the success of these communication pathways depends heavily on the establishment of psychological safety and a non-punitive (or "Just") reporting culture. Historically, healthcare environments have suffered from blame cultures, where clinicians and support staff frequently conceal near-misses or minor occupational accidents out of intense fear of disciplinary action, social stigma, or administrative retaliation. This



concealment severely cripples the organization's capacity to learn, allowing underlying systemic flaws to expand until a catastrophic incident occurs.

Therefore, hospital leaders bear the fundamental responsibility of dismantling these punitive environments. By adopting a "Just Culture" framework – as popularized by James Reason's human error models – leaders must distinguish between unintentional human slips and malicious, reckless violations. When leaders treat human errors as system learning opportunities rather than personal failures, it builds systemic trust. This structural trust encourages widespread near-miss reporting, enabling the institution to implement early interventions and systematically prevent severe injuries.

4. Institutionalizing Leadership Development and Addressing Research Limitations

To achieve a sustainable OSH culture, healthcare organizations must move away from the assumption that clinical excellence automatically translates into effective leadership competence. Senior clinicians promoted to administrative or managerial roles often lack formal training in safety leadership, human factors, or organizational behavior. Consequently, this study emphasizes the crucial need for formalized, continuous leadership development programs within the healthcare sector. Academic and medical institutions should invest heavily in executive training curricula that focus on open communication methodologies, participatory hazard management, proactive emotional intelligence, and non-punitive incident investigation techniques. Furthermore, OSH metrics and safety climate indicators should be seamlessly integrated into managerial performance evaluations, holding leaders accountable for the safety ecosystems they oversee.

It is essential to acknowledge several methodological limitations inherent within this study. First, this research relies entirely on a qualitative literature review of existing secondary data, which restricts direct field validation or real-time observation of leadership behaviors within contemporary hospital wards. Second, the qualitative conclusions are bound by the geographic diversity, sample sizes, and empirical quality of the retrieved peer-reviewed papers.

To overcome these limitations, future research should implement rigorous empirical and longitudinal mixed-method studies. These future inquiries should collect direct data from diverse cadres of healthcare professionals and medical executives across various hospital types (e.g., public vs. private facilities) to capture a more nuanced, comprehensive understanding of how specific leadership interventions influence OSH culture evolution over time.

CONCLUSIONS

Leadership plays a crucial role in improving Occupational Safety and Health culture within healthcare organizations. Effective leadership contributes to improved employee safety behavior, stronger organizational communication, increased employee participation, and better compliance with safety procedures.

Transformational and participative leadership styles were identified as effective approaches for strengthening Occupational Safety and Health culture. Leaders who inspire employees, encourage participation, and prioritize workplace safety create positive organizational environments that support sustainable safety practices.

Healthcare institutions should strengthen leadership capacity through continuous leadership training, communication improvement, employee involvement, and regular safety



evaluation programs. Organizational commitment toward Occupational Safety and Health is essential to reducing workplace accidents, improving employee well-being, and maintaining healthcare service quality.

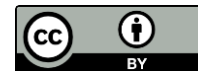
Future studies are recommended to conduct empirical research involving healthcare workers and hospital management to further examine the effectiveness of leadership strategies in improving Occupational Safety and Health culture.

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