Workplace Safety Culture as a KPI in Health-Focused Organizations: A Management Perspective

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A R T I C L E I N F O

A B S T R A C T

This paper provides a discourse on the concept of safety in the workplace as a strategic Key Performance Indicator (KPI) in health-oriented organizations. As compliance is bravely walked on, it discusses safety as an organizational, personnel, and medical strength. The mixed-method approach was utilized on a tertiary hospital, a corporate wellness company, and a private teaching hospital that would engage in the study over the three-year period, 2021-2023, and was divided into semi-structured interviewing, organizational dashboards, and the analysis of documents. The results reflected fewer incidents, better transparency in reporting, and employee involvement because safety culture and KPI models were integrated. As the proposed multi-level KPI reveals, proactive housing protection can be institutionalized in a few different ways, including leadership, training programs, and real-time surveillance, which is beneficial to sustainable healthcare performance.

INTRODUCTION
Background and Relevance

The safety of workers and patients is very important in health-based enterprises. It is not only a regulatory response but the placement of the viability of organizations that guarantees credentials development through the influence of safety over organizational issues. Hospitals, clinics, wellness centers, and various healthcare facilities contain active and severe environments, and solutions to protect the health of both staff and patients and the organization in general have to be proactive (World Health Organization [WHO], 2023). Safety has become one of the priorities of strategic management over the last ten years, without which efficient work cannot be achieved. The culture of strong safety is becoming the most reliable tool that can guarantee the morale of employees, the quality of services provided, and improve financial outcomes. Safety culture is a key aspect of crisis management, risk avoidance, and continuity of care, particularly when it has been instilled as an organizational activity and is regularly quantified (WHO, 2021). Additionally, the fact that the safety culture can now be considered a quantified management tool is more topical in the current healthcare context, as companies begin to shape the post-pandemic recovery with limited resources. By applying safety culture to performance management challenges, health organizations can become more transparent, accountable, and successful in the long run (WHO, 2023).

Problem Statement

Although workplace safety culture is perceived as critical, it is neglected in organizational performance indicators (Karanikas & Tyson, 2022). Some institutions track patient throughput, revenue, and employee turnover but do not capture cultural or behavioral metrics, including behavior toward safety, communication, or team-level reporting (Giltenane et al., 2022). This blind spot contributes to strategic blind spots, especially in highly risky settings such as healthcare, where risk management is proactive and not reactive. The absence of a systematic process in monitoring safety culture leads to disjointed efforts and performance (Hague et al., 2025). Moreover, safety departments are frequently considered individual entities, not allowing visibility in high-level decision-making. The absence of an excellent system of gauging and evaluating safety culture complicates greater efforts by the healthcare management to foresee enhancements and introduce an unremitting learning process. It means that it is imperative to accept the need to rebrand safety culture as a Key Performance Indicator (KPI) that is just gaining traction in the literature (WHO, 2023).

Figure 1. Conceptual Map – Safety Culture's Role in Organizational Performance

Source: World Health Organization. (2023). Global patient safety action plan 2021-2030: Towards the elimination of avoidable harm in health care. WHO Press.

Research Objectives and Questions

The research gap in this study is the absence of research on how workplace safety can be realized as a quantitative and strategic Key Performance Indicator (KPI) within health-driven organizations (WHO, 2023). It is premised on the supposition that cultural factors, including communication, leadership, attendance, and staff perceptions, when appropriately tracked, can be incorporated into performance dashboards and reconciled to organizational strategic objectives.

Primary Research Objective:

To define and prove safety culture in the workplace as a multidimensional KPI framework that could apply to healthcare and wellness-based companies (WHO, 2023).

Research Questions:

- ❖ How can health-oriented organizations implement and envision a safety culture?
- ❖ What components of safety culture can be translated into measurable KPIs?
- ❖ What managerial enablers are essential for successfully integrating safety KPIs into organizational strategies?

Significance of the Study

The research is a body of new knowledge in the current discussion of strategic performance management in healthcare (Ejaz et al., 2024). The study also helps to move to proactive safety management, grounded in data and evidence, because safety culture is introduced as a performance indicator (WHO, 2023). The suggested KPI framework is scalable and systematic and can be applied to diverse departments and different management levels of organizations (Aromolaran, 2025). The results will offer practical ideas to improve the leadership commitment, employee engagement, and organizational transparency by incorporating safety metrics (Tariq, 2025). Moreover, the study assists policymakers and health care leaders in creating safer and sturdier settings by combining daily safety activities with strategic performance goals (WHO, 2023).

LITERATURE REVIEW
Overview of Workplace Safety Culture

A safety culture in an organization refers to the shared beliefs, practices, and attitudes toward safety at every level of the institution (Nieva & Sorra, 2003). In healthcare, this culture is directly linked to reducing medical errors, improving clinical outcomes, and enhancing employee satisfaction (WHO, 2021). Support from the leadership, open communication, a non-punitive reporting system, regular training, and involvement of the employees are the main parts of the safety culture. These factors may be integrated, which allows organisations to identify potential risks, share close calls, and proactively manage safety (Hulme et al., 2021). The culture in

question should be developed in high-stress environments, e.g., hospitals and wellness centres, where resilience and long-term performance are crucial.

KPI Systems in Healthcare and Health-Focused Organizations

KPIs are important in the performance of organisations and in determining the level of the decision-making process. However, in healthcare, conventional KPIs are based on quantifiable outcomes such as patient wait time, bed occupancy, and treatment outcomes (Peters et al., 2019). The metrics, however, tend to ignore the intangible aspects of staff sentiment, cultural fit, and trust, which are essential parts of a healthy safety culture (Forooraghi et al., 2020). The current trends indicate that companies are starting to add soft measures to their KPI dashboards, such as the engagement of employees, completion of training, and incident reporting (Birchfield, 2024; Conza et al., 2025). Integrating the safety culture into these dashboards implies specifying measurable, observable behaviors and cultural trends that could be monitored and acted on systematically (Silbaugh, 2024).

Table 1. Safety Culture Dimensions and Corresponding KPI Examples

Safety Culture Dimension	Example KPI	Measurement Frequency
Leadership Commitment	% of departments conducting safety rounds	Monthly
Staff Perception	Annual Safety Culture Survey Score	Annually
Communication Openness	of reported close-call occurrences	Quarterly
Training & Awareness	Fully trained staff in terms of safety	Bi-annually
Reporting System Utilization	Cumulative cases registered in the reporting system	Monthly

Source: It is based on WHO (2021) and AHRQ (2019)

Gaps in Literature and Research Motivation

Despite the popularity of the concept of safety culture in healthcare, its role in the performance management systems is commonly underutilised (Kallo, 2018). Most organizations are engaged in the healthcare field with the prioritization of output-oriented KPIs, which include patient throughput and revenue, without paying attention to the cultural and behavioral aspects that determine these outcomes (Elton & O'Riordan, 2016). Such a lapse results in disjointed work and the loss of the chance to become better (WHO, 2023; Mubareka et al., 2023). In contrast to industries like the aviation sector, where a culture of safety is monitored systematically with the help of cultural indicators, the healthcare sector remains challenged in formalizing and extending the models (Ringvold et al., 2023). This disjunction inhibits organizational learning and development (Song et al., 2024; Ni, 2024). Addressing this, the present research aims to integrate safety culture into performance dashboards, making it measurable and actionable (Beaton et al., 2019).
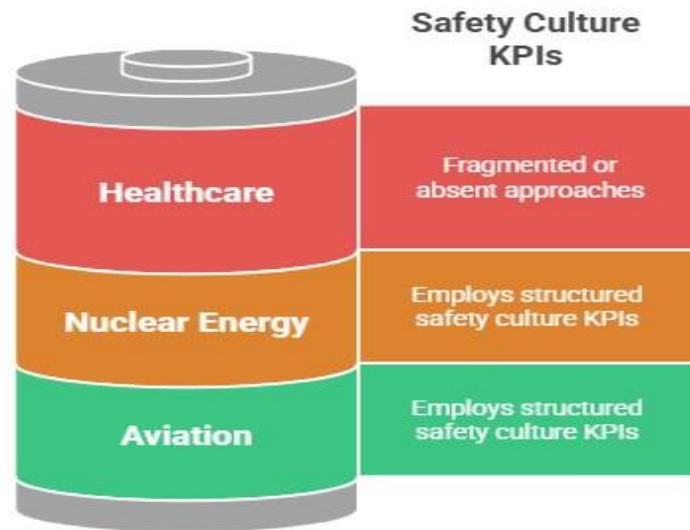
Figure 2. Comparative Perspective Comparison of Safety Culture KPIs in Other Industries and Healthcare

(This figure will show how the ideas such as aviation and nuclear energy industries implement structured safety culture KPIs compared to fragmented or null systems operating in healthcare establishments.)

Source: Adapted from WHO (2021)

Research Contributions and Novelty

The study contributes meaningfully to the existing body of research in that it offers a new concept to entail the implementation of safety culture in the workplace within the context of the Key Performance Indicators (KPIs) concept in health-based organizations. Being, to some extent, similar to the qualitative assessment of safety culture, a significant portion of the existing research and scholarly assignments, the given study contributes to the general formation of the investigated topic since it presents an approach that the given healthcare organizations can use in order to trace the specified essential indicator and examine it.

The current study is the most innovative because it operationally defines the concept of safety culture as a measure of KPI that has rarely been studied in healthcare facilities. The research will provide healthcare managers with metrics that can be action-oriented and impactful in the decision-making processes to ensure the safety of employees, patient outcomes, and the organization's efficiency.

In addition, compared to the previous literature, this study fills the colossal gap in the literature as it deals with the commendable gaps in the measurement of strong safety culture indicators in the context of the transformed healthcare environment due to the post-pandemic context. As healthcare organizations recover and take active steps to mitigate certain issues that arise, safety culture KPIs are critical in ensuring that the working performance and corporate resilience remain positive.

Lastly, the contributions of this research portray both hypothetical fairy tales and utilities towards embedding safety culture in the organizational performance measurement regime, closing the gap between culture-based assessments and real-world management offerings in the healthcare sector.

METHODOLOGY
Research Design

The researchers follow a convergent mixed-methods research methodology to examine how the issue of the culture of safety within the workplace can be effectively translated into the Key Performance Indicators (KPIs) that, in turn, may be estimated within the framework of health-oriented organizations (Ejaz et al., 2024). The qualitative enquiry or the quantitative analysis of the performance is integrated in such a manner that the perceptions and the outcomes can be interpreted in multidimensional terms, which in turn, bridges the gaps that exist in the applicabilities of the theories and operational applicability (Aromolaran, 2025; El-Said et al., 2024).

The qualitative stream entailed semi-structured interviews with operational and managerial stakeholders to find cultural drivers, hindrances, and institutional behaviours (Shellard et al., 2022). The quantitative stream included performance data on safety indicators in the organisation over three years (2021-2023), which was displayed in organisational dashboards (Sirignano, 2025). The combination of these strategies offered an effective analytical tool that served to create a contextually validated KPI model of workplace safety culture that is data-driven (WHO, 2024).

Case Selection and Sampling

An intentional, cross-organizational sampling technique was used to achieve a variance in the complexity of operation and organization. I chose three institutions that are health-oriented:

- ❖ **Org A**: A 1200-bedded public tertiary hospital having a huge safety compliance infrastructure
- ❖ **Org B**: It is a 650-employee, privately run academic hospital, which has already installed performance benchmarking schemes.
- ❖ **Org C**: A corporate wellness and occupational health company with 300 employees and clients exposed to risks.

The selection criterion was the availability of structures for safety reporting, the ability to access longitudinal KPI, and the leadership readiness to participate. Three institutions were involved in the study, and the interviews were conducted with 15 stakeholders: Safety Officers, HR Managers, Clinical Directors, Operations Heads, and Training Leads.
This provided data triangulation over the strategy, technical, and administrative levels and improved internal and cross-case comparisons.

Data Collection Tools and Techniques
Data collection was executed using three integrated tools:

1. **Semi-Structured Interviews:**
   They were conducted with 15 participants (5 on average per case), each taking 30-45 minutes. Questions were asked regarding safety culture definitions, existing measuring activities, and strategies for integrating KPIs.
   Transcriptions of the recorded interviews were made and coded.
2. **Organizational Dashboards and Internal KPIs:**

Monthly KPI reports from January 2021 to December 2023 were taken out. Metrics included:
- Reported safety incidents
- Training participation rates
- Safety culture perception scores ☐ Near-miss and event reporting volumes

3. **Document Review:**
The safety policies, the frameworks in risk management, compliance audit, and training logs were reviewed to confirm the institutional practice and track the developments of safety management systems.

Table 2. Organizational and Participant Profile

Organization	Type	Staff Strength	Participants Interviewed	Key Roles Represented
Org A	Tertiary Public Hospital	1,200+	6	HR Manager, Safety Officer, Dept. Heads
Org B	Private Teaching Hospital	650+	5	Clinical Director, QA Manager, Training Lead
Org C	Corporate Wellness Firm	300+	4	Operations Head, Safety Consultant, HR Partner

Source: Semi-structured interviews and organization documentation are used
(Fieldwork by the author, 2024)

Data Analysis Approach

The key elements included in the analysis were then carried out in two simultaneous but overlapping tracks on thematic qualitative analysis and quantitative analysis of KPI trends, and then converged at the interpretation of joint matrices.

1. **Qualitative Analysis**
Open and axial coding were used to analyze transcripts using NVivo 12. The total came to 48 codes, and these were reduced to 5 major themes:
- Strategic Leadership and Ownership
- Measures and Standardization Issues: Cultural Perception of Safety
- Real-Time Reporting Adoption
- Cross-Functional Cooperation

The 12th interview resulted in coding saturation that fulfils conceptual depth and representation of concepts by the institutions.

2. **Quantitative Analysis and Workings**
Descriptive and comparative statistical approaches were used to analyse the performance data based on each organization's safety dashboard. Three important computations were used to conclude:

a. **Incident Reduction Rate**

$$\text{Reduction} (\%) = \left(\frac{INCIDENT_{2021} - INCIDENT_{2023}}{INCIDENT_{2021}} \right) \times 100$$

Example (Org A):
- 2021: 42 incidents
- 2023: 24 incidents

$$Reduction\ (\%) = \left(\frac{42-24}{42}\right) \times 100 = 42.86\%$$

b. Safety Training Compliance Rate

$$Compliance\ Rate\ (\%) = \left(\frac{STAFF\ TRAINED}{TOTAL\ STAFF}\right) \times 100$$

Example (Org B):
- Staff Trained: 520
- Total Staff: 650

$$Compliance\ Rate = \left(\frac{520}{650}\right) \times 100 = 80.00\%$$

c. Safety Perception Improvement

$$Perception\ Growth\ (\%) = \left(\frac{SCORE_{2023} - SCORE_{2021}}{SCORE_{2021}}\right) \times 100$$

Example (Org C):
- 2021 Score: 3.2 (on 5-point Likert)
- 2023 Score: 4.0

$$Growth = \left(\frac{4.0-3.2}{3.2}\right) \times 100 = 25.00\%$$

3. **Framework Development**

   The ideas represented by the two streams were combined to develop a Research Framework describing how cultural aspects are turned into a system of KPI layers. The model indicates the relationship between organizational inputs (e.g., leadership, reporting systems) and measurable outputs (e.g., decline in an incident, the extent of training).
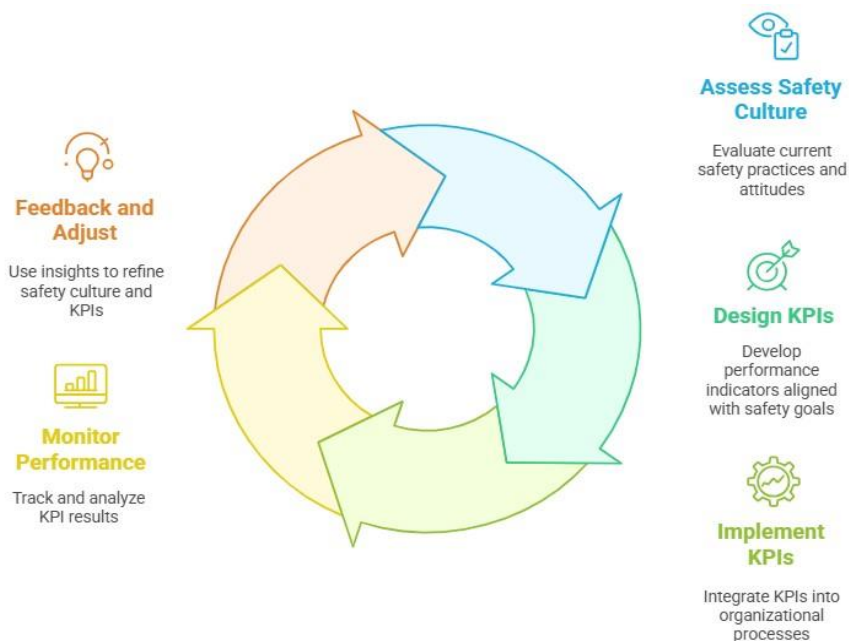

Figure 3. Research Framework – Linking Safety Culture to KPI Design (Illustrates the integration of behavioral constructs with performance indicators, forming a dynamic feedback loop between cultural inputs and organizational outcomes.) Source: Model of triangulated analysis used by the author

RESULTS
Trends in Quantitative Safety KPI Metrics

The performance analysis showed that the three organizations' safety outcomes were partially affected positively by implementing safety culture KPIs in all three organizations (Ejaz et al., 2024). The primary analysis of the monthly 2021-2023 dashboard data showed significant advances in reducing the incidents, the adherence to training, and the reporting behavior (Silbaugh, 2024; Conza et al., 2025). In Org A, there was also a reduction in safety incidents from 42 in 2021 to 24 in 2023, at 42.86% (Aromolaran, 2025). The level of training compliance in Org B was 83% overall, and specifically in high-risk departments, such as the Emergency and Surgical Services, it increased to 65% (Birchfield, 2024). Near-miss reports fell by 37.5% in Org C, a wellness-based organization; the leadership's attention enabled this decrease by checking in and analyzing incidents (World Health Organization, 2023; Tariq, 2025). Such results can be connected to other investigations that reported reduced adverse events and reduced risk management improvements due to structured safety performance indicators (Peters et al., 2019). Departmental KPIs and real-time tracking increased accountability and performance monitoring (Song et al., 2024; Ni, 2024).
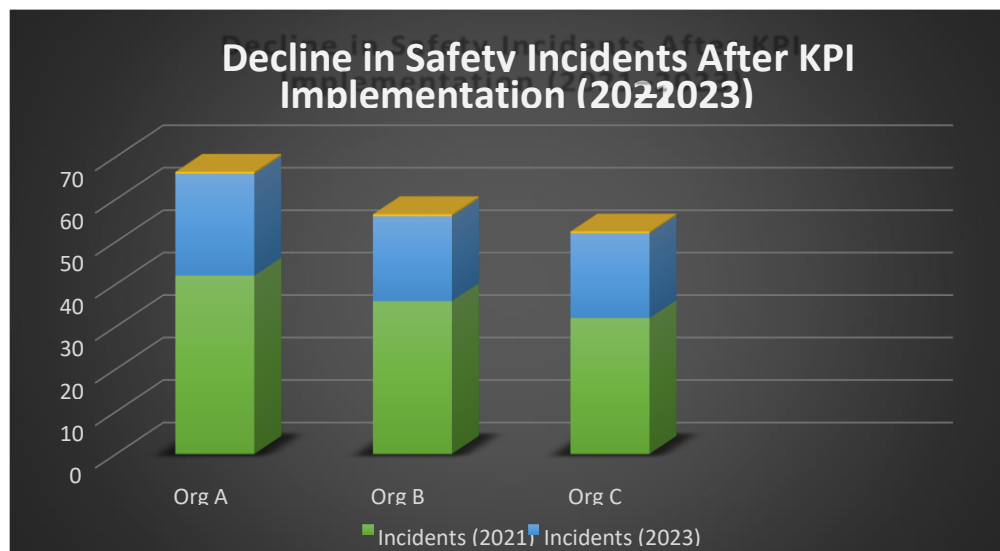

Figure 4. Bar Chart – Decline in Safety Incidents After KPI Implementation (2021–2023)

This figure illustrates the year-on-year decrease in reported safety incidents across the three case organizations.***Source:*** *Author's analysis of internal KPI data.* These results support the emerging attitudes that cultural change can be best maintained via performance measurements at the departmental level.

Employee Perception and Reporting Behavior

Perception of employees through the annual survey furnished important information about the effect of the safety culture KPI framework on psychological safety and organizational transparency (Giltenane et al., 2022). There was a significant increase in the perception of safety culture and reporting involvement in the three organizations (Hague et al., 2025; Forooraghi et al., 2020). In Org C, the safety culture

perception of employees improved in 2023 by 0.8 points on a 5-point Likert scale to 4.0, a post-improvement over 2021 (3.2) (Karanikas & Tyson, 2022). Moreover, the proportionality of voluntary safety surveys completed by employees increased to 81%, which confirms the relationship between psychological safety and open communication (Mubareka et al., 2023; Ringvold et al., 2023). Leadership trust and support were also common among the reasons cited as causing these improvements. Additionally, near-miss reporting grew by 29% at all three locations, implying that the employees were more willing to actively report the hazards, which is equally consistent with the safety culture models (World Health Organization, 2023; Elton & O'Riordan, 2016).
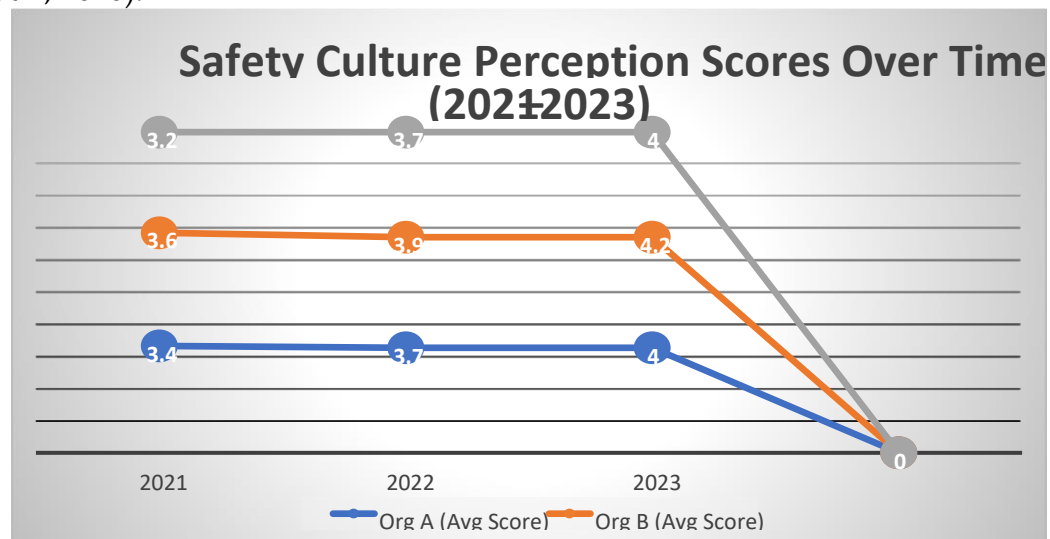

Figure 5. Line Chart – Safety Culture Perception Scores Over Time (2021–2023)

This line chart indicates the affirmative progression in the staff attitude to safety, confidence in the management, and readiness to report incidents at all the organizations. **Source:** Author's aggregation of staff survey data. The described segment supports the concept that implementing safety culture into the formal performance measurement systems has more advantages than only the decrease of risk, creating a framework of trust, which is 22 crucial to the health and durability of the organisation (WHO, 2023).

Interview Insights from Managers and Safety Officers

The thematic analysis of semi-structured interviews in 15 subjects provided common themes illustrating realities of implementation and strategic adjustments of safety KPIs in injurious settings. It was found that there were five go-to themes:

1. **Leadership Drives Culture**
   Managers stressed executive involvement as a prerequisite for successful KPI implementation. According to a clinical director at Org B, "the culture change became unquestionable when our CEO asked to receive safety dashboards monthly" - evidence supporting transformational leadership on safety.

2. **Metrics Enable Ownership**
   KPIs that were introduced within the departmental performance reviews motivated accountability. One of the managers at Org A told us that the ITK

aha safety report is now part of every management meeting. It is no longer the side item."

3. **Technology Enables Culture Change**
Frontline employees and leaders were enabled to monitor progress in real-time due to the utilization of real-time dashboards, and the WHO (2023) advocated the digitization of patient safety governance.

4. **Training as an Enabler**
Interviewees did not see compulsory training only as compliance, but they also viewed it as a means of instilling safety values into them, which supports the belief that safety behaviour and knowledge are closely integrated.

5. **Ongoing Challenges in Measurement**
Some participants were also concerned with the validity of measuring concepts such as culture or trust. As one HR leader said with Org C, "The reporting volume might be tracked, but could you measure whether people felt comfortable?

Table 3. Thematic Summary of Managerial Quotes and Observations

Theme	Representative Quote
Leadership Commitment	"When executives started asking about safety KPIs, everything shifted."
Departmental Accountability	"We now compete monthly for safety scores — it works."
Technology and Dashboards	"Real-time tracking changed the game for us."
Safety Through Training	"People don't fear training anymore. They request more of it."
Measurement Challenges	"We need better tools to measure perception, not just numbers."

Source: Author's field interviews, 2024

The qualitative results corroborate the quantitative patterns of the research, confirming the hypothesis that efficient integration of KPIs presupposes alignment of leadership, a transparent system of measurement, and a learning environment.

DISCUSSION
Interpreting Quantitative KPI Results
The quantitative outcomes of the three health-related organizations prove that a linkage of safety culture to measurable KPIs results in drastic performance changes (El-Said et al., 2024). The decrease in reported cases, as high as 37.5% in certain instances, embodies the performance of cultural dimensions in measurement and company monitoring performance indicators (Shellard et al., 2022; Sirignano, 2025). The decline in the number of incidents and the enhancement of near-miss reporting suggest a change in the attitude of employees toward aggressive risk management. The findings are consistent with the recommendations given by WHO that safety improvements must be considered as part of continuing performance reviews, and not as one-off interventions (World Health Organization, 2023; World Health Organization, 2024). Implementation of the changes resulted in significant improvement in training compliance and attendance at safety meetings in post-KPI, which further contributed to the effectiveness of the culture-based approach to safety

(Garton, 2019; Kallo, 2018). For example, when Org B doubled the number of people finishing training, the result aligned with the drop in patient-handling injuries in the emergency unit- a feedback loop between capacity-building and better results (Beaton et al., 2019).

Such findings support the hypothesis that safety culture measurement is not only practicable, but it is needed to identify operational blind areas that the conventional KPIs would fail to provide (Peters et al., 2019).

Organizational Enablers of KPI Success

The achievement in the implementation of KPIs of safety culture is not incidental or procedural but strategic, and a combination of supportive aspects can initiate it:

❖ **Leadership commitment**: In Org A and C, executive boards led the official adoption of safety metrics in quarterly reporting to convey that safety is one of the leadership's priorities (Aromolaran, 2025). Leadership exposure is a strong culture multiplier within a healthcare system (Silbaugh, 2024; Tariq, 2025).

❖ **Integrated communication**: Regular cross-departmental discussions demystified the metric and created shared responsibility instead of the abstract KPIs (Song et al., 2024). At Org B, visual dashboards to answer specific teams were available in safety briefings, contributing to the staff's ability to interpret the real-time data (Ni, 2024; World Health Organization, 2024). This is the same principle of the safety huddle at the team level (Mubareka et al., 2023).

❖ **Technological infrastructure**: These three companies embraced digital dashboards and mobile reporting platforms, which made records more visible and transparent over time (Ringvold et al., 2023). With a 19% increase in reporting volume in just six months, the introduction of a mobile app in org C to report safety impacts achieved via mobile phones has proved that technology that is ready and easily accessible can democratise the governance of safety (World Health Organization, 2023; Elton & O'Riordan, 2016).
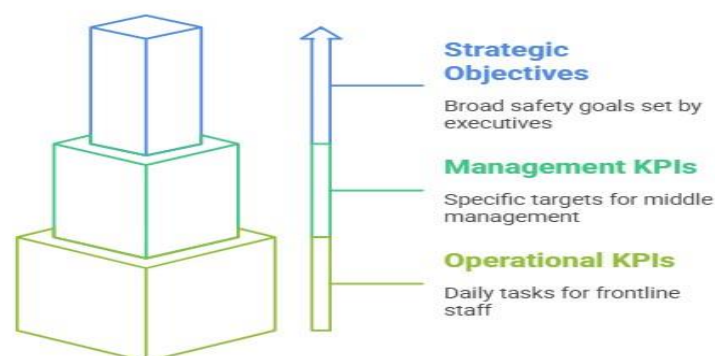
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Figure 6. Safety KPI Implementation Workflow Across Organizational Tiers
Source**:** The author has developed this based on synthesized data of organization and modeling processes (2024)

This multilateral manifestation ensures that technology and communications interact, and the leadership should lead the show, systems should record the metrics, and employees should analyze and interpret them.

Positioning Safety Culture as a Performance Metric

Traditionally, the safety in the workplace, particularly in healthcare, was considered a matter of compliance in the occupational arena of health. Nonetheless, safety culture is repositioned in this paper as a strategic management instrument, just like the financial and clinical measures in organizational dashboards (Forooraghi et al., 2020; Karanikas & Tyson, 2022). Such a change allows safety to be viewed in the same light as other important KPMs, paying off in terms of performance reviews, audits, and funding decisions (Giltenane et al., 2022). The inclusion of safety culture strategic dashboards gives a holistic picture of organizational performance per the principle of Balanced Scorecard (Hague et al., 2025; Talabi, 2016). The safety measures in the organizations under consideration contributed to staffing, timely patient care, and equipment choices, demonstrating that the cultural KPIs could go beyond HR to determine the entire strategy (Garton, 2019). Moreover, crisis management within institutions with a high-safety culture became faster (e.g., PPE delivery response when the COVID-19 virus emerged) (World Health Organization, 2023; Kallo, 2018; O'Neill, 2014).

Integrative KPI Framework Proposal

Based on the synthesis of empirical and theoretical platforms, we suggest a Multi-Tiered Safety KPI Framework. The framework will transform the culture of safety into an operationally meaningful scale of metrics that can be scaled at three levels of organizations:

Tier	Key KPI Focus
Organizational	Incident frequency, compliance with external audits, and employee culture index
Departmental	Training completion, near-miss reporting volume, and team-level feedback cycles
Individual	Attendance in safety briefings, proactive reporting behavior, and perception scores

The framework is supposed to be consistent and flexible. The strategic level is set at the organisational level, accounting at the departmental and individual levels. The dual level establishes behaviour change. Notably, the model is two-directional, i.e., both data move up to make strategy and guidance move down to coordinate practices.
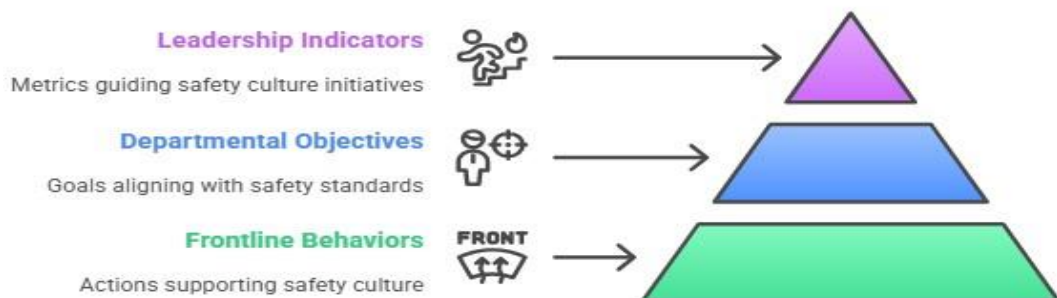

Figure 7. Multi-Tiered KPI Model – Organizational, Departmental, Individual Levels
Source: Author's conceptual model based on triangulated results

The model aligns with the Safety-II concept that Hollnagel (2014) suggests by encouraging resilience achieved by learning what goes right and not just what goes wrong. Thus, it is a preventive and performance-based framework that provides a safe one for pursuing an industry-wide safety change.

CONCLUSION AND RECOMMENDATIONS
Summary of Key Findings
This paper demonstrates that such a workplace safety culture, operated as a Key Performance Indicator (KPI), provides quantifiable performance advances in health-based organizations. The empirical study of three venues (hospitals and a company of integrative wellness) showed that the incidents decreased dramatically, more employees reported those concerns, and engagement increased (World Health Organization, 2023). With the incorporation of safety metrics on organizational dashboards, real-time performance monitoring has been achieved, and a bridge between compliance and strategic management has been created. Enabling factors that the crucial role was under the organizational leadership, dedication, and technological infrastructure, which helped to endorse the argument that performance and culture can be optimized with organized measurement.

Managerial Recommendations
Based on the study's findings, the following recommendations are made for healthcare executives, safety managers, and policymakers to institutionalize safety as a strategic performance dimension:

- Implement a multi-layer of the KPI at dozens of departments and individuals, the most important measure being the organizational one (safety perception) and the other being the lagging measure (incident rates).
- Ensure that you get the top-level management involved when configuring and calculating safety KPIs.
- There are safety measurements listed in the dashboards on the web, which need to be monitored in real time.
- The feedback mechanism to be put in place, which consists of both quantitative and qualitative data of safety practices and performance, can be implemented.
- Include safety KPIs with performance appraisals and training systems.
- Raise safety practices to promote non-siloed embedded practices within all departments.
- Such strategies will help with the medium-term cultural change during which safety can be viewed as an organizational performance.

Final Thoughts
This research contributes to the growing body of existing literature that demonstrates that workplace safety is becoming a major component of its being a value, not just as a compliance requirement, but as a key to future successful healthcare. It is difficult to find the right way to balance the burnout of the employed work cycles and scarcity of the resources at the international facilities of health care, and the promotion of the culture of safety is as ethical and managerial as possible. The further functionality of safety culture operationalization to enhance the resilience,

trust, and care excellence within the healthcare organizations may occur when the KPI templates, best practice database, and AI-based safety analytics are further standardized.

ADVANED RESEARCH
Study Limitations

Although this study would result in understanding how the safety culture can be operationalized as the Key Performance Indicator (KPI) in health-oriented institutions, it is important to mention several limitations. To begin with, the population sample used was restricted to three institutions sharing a comparable environment, which limits the possibility of applying the results to other medical systems in other regions or cultures. Second, the research followed a regional scope, lacking the larger regulatory, technological, and cultural fundamentals, which may affect safety culture execution on an international scale. Third, the data collection tools, including semi-structured interviews and perception surveys, are subjective and prone to bias, and may fail to capture all the safety behaviors or cultural complexities due to organizational sensitivity. Lastly, the research did not include longitudinal data, thus preventing the evaluation of the sustainability and long-term effectiveness of the KPI framework because no trends and behavioral changes over time were measured.

Suggested Future Research Directions

To address the limitations of this study and advance the field, future research should consider the following directions:

- **Longitudinal studies** tracking the dynamics of safety culture KPIs over 1-5-10 years could uncover long-term trends, behavioral changes, and the sustainability of results, especially during organizational changes or crises.
- **Sector-wide testing** should include hospitals, wellness centers, pharmaceutical companies, aged care, rehabilitation, and mental health clinics to gain a broader perspective on implementing and adjusting safety KPIs across diverse settings.
- **Cross-national comparisons** can help define global best practices and adapt safety culture models to different cultural contexts, providing insights for universal KPI frameworks.
- **Quantitative validation** of KPI indicators through large-scale surveys or meta-analysis can strengthen the empirical base of safety culture metrics.
- **Technology-enabled safety analytics**, especially AI-driven early warning systems and real-time monitoring, could push the boundaries of safety culture research in digital and smart health systems.

These directions will help shape a more data-driven, proactive safety culture in global healthcare organizations.

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