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Original Article



## Management Support as the Dominant Driver of Occupational Health and Safety Compliance among Hospital Security Personnel

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### Abstract

Occupational Health and Safety (OHS) compliance is essential to ensuring workplace safety in healthcare environments, yet research has predominantly focused on medical personnel, with limited attention to non-medical staff, such as hospital security officers. These personnel face unique occupational risks, including exposure to emergencies and workplace conflicts, making compliance with safety procedures critically important. This study aims to examine the influence of OHS training, supervision, availability of safety facilities, and management support on the compliance behavior of hospital security officers. A quantitative explanatory design with a cross-sectional approach was employed, involving all 30 security officers in a regional public hospital in Surabaya, Indonesia, using a total sampling technique. Data were collected through structured questionnaires and analyzed using multiple linear regression. The findings reveal that OHS training and management support have a positive, statistically significant effect on compliance, whereas supervision and the availability of safety facilities do not. The model demonstrates strong explanatory power, indicating that organizational factors collectively influence compliance behavior. Notably, management support emerges as the most dominant factor, highlighting the critical role of leadership commitment in fostering a safety-oriented work environment. The study concludes that improving compliance among hospital security personnel requires an integrated approach that prioritizes strong managerial support and continuous training, alongside improvements in supervision and effective utilization of safety facilities.



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## 1. Introduction

Occupational Health and Safety (OHS) has become an essential concern in healthcare organizations due to the complex and high-risk nature of hospital environments. Healthcare facilities expose workers to a wide range of hazards, including biological, physical, psychological, and environmental risks, which can compromise both employee well-being and service quality. Ensuring compliance with safety procedures is therefore critical not only for protecting healthcare workers but also for maintaining patient safety and organizational performance (Zungu et al., 2021; Mutwiri, 2025). Despite ongoing efforts to strengthen OHS systems, many healthcare institutions, particularly in developing and resource-constrained settings continue to face challenges in implementing effective safety

practices and achieving consistent compliance (Fadhel & Alqurs, 2025).

While the majority of OHS research in healthcare has focused on medical personnel such as doctors and nurses, non-medical staff, including hospital security officers, remain relatively underexplored. Security personnel play a vital role in maintaining order, responding to emergencies, and ensuring the safety of patients, staff, and visitors. Their work frequently exposes them to high-risk situations, including workplace violence, conflict management, and emergency response scenarios (Brown et al., 2022; Ferron et al., 2022). Repeated exposure to such risks can negatively affect their well-being and performance, emphasizing the need for effective safety management and compliance mechanisms tailored to this group (Brown et al., 2022).

OHS compliance refers to employees' adherence to established safety rules, procedures, and standards during work activities. It is widely recognized as a key indicator of safety performance and is influenced by both individual and organizational factors (Griffin & Neal, 2000). Previous studies highlighted that organizational factors, including training, leadership, safety climate, and resource availability, play a crucial role in shaping compliance behavior. For instance, safety training enhances employees' knowledge and skills, thereby improving their ability to recognize hazards and apply safe work practices (Abdallah et al., 2019; Brooks et al., 2021). Similarly, effective safety management systems and structured programs have been shown to significantly reduce workplace incidents and improve compliance outcomes (Lestari & Nasrifah, 2024).

Among organizational factors, management support and leadership commitment are consistently identified as critical drivers of OHS implementation and compliance. Strategic leadership contributes to creating a strong safety culture by promoting clear direction, ethical practices, and organizational control mechanisms (Fadhel & Alqurs, 2025). Leadership involvement also reinforces safety priorities and motivates employees to adhere to safety procedures, particularly in high-risk environments (Liu et al., 2022; Vu et al., 2022). In addition, organizational policies, communication, and safety climate significantly influence employees' perceptions and behaviors related to safety compliance (Zohar, 2010).

The availability of safety facilities and resources is another important determinant of compliance. Adequate provision of personal protective equipment, safety infrastructure, and operational support reduces barriers to safe work practices and encourages adherence to safety protocols (Mutwiri, 2025; Alharbi et al., 2024). However, studies also indicate that the mere availability of resources is insufficient without proper utilization, supervision, and integration into daily work routines (Brooks et al., 2021). Furthermore, workplace safety practices and organizational systems must be supported by continuous evaluation and improvement to ensure their effectiveness (Kartika & Nasution, 2024; Guzman et al., 2022).

Despite the growing body of literature on OHS compliance, empirical findings regarding the relative importance of different organizational factors remain inconsistent across contexts. Some studies emphasize the dominant role of training and awareness (Coca et al., 2025), while others highlight leadership, policy frameworks, and organizational commitment as more influential determinants (Zungu et al., 2021). Additionally, research on hospital security officers remains limited, creating a gap in understanding how OHS practices affect compliance among non-medical healthcare workers.

Therefore, this study aims to examine the influence of organizational factors, namely, OHS training,

supervision, availability of safety facilities, and management support, on hospital security officers' compliance. By focusing on a group often overlooked in healthcare safety research, this study seeks to provide empirical insights into the determinants of OHS compliance and to contribute to the development of more inclusive and effective safety management strategies in hospital settings.

## 2. Literature Review

Occupational Health and Safety (OHS) compliance represents a critical dimension of safety performance, particularly in healthcare environments characterized by complex risks and high uncertainty. Compliance refers to employees' adherence to safety procedures, standards, and protocols in their daily work activities. From a theoretical perspective, safety compliance is influenced by safety climate, employee knowledge, and motivation, which collectively shape safe behavior in organizations (Griffin & Neal, 2000). In healthcare settings, ensuring compliance is essential not only for protecting workers but also for safeguarding patients and maintaining service quality (Zungu et al., 2021).

Despite growing attention to OHS, empirical findings indicate that compliance behavior is not solely determined by individual awareness but is strongly shaped by organizational factors, such as training, supervision, resource availability, and management support. However, inconsistencies remain in the literature regarding the relative importance of these determinants across different contexts, particularly among non-medical healthcare workers.

### 2.1 OHS Training and Compliance

Training is widely recognized as a fundamental mechanism for improving safety compliance by enhancing employees' knowledge, skills, and awareness of workplace hazards. In healthcare settings, training equips workers with the competencies required to respond effectively to emergencies and apply safety procedures in dynamic situations. Empirical studies demonstrate that structured training programs significantly improve compliance behavior by reinforcing safety knowledge and promoting correct practices (Abdallah et al., 2019; Brooks et al., 2021).

Moreover, training tailored to specific job roles has been shown to be more effective in addressing contextual risks and improving compliance outcomes (Brooks et al., 2021). However, the effectiveness of training is not always consistent. Coca et al. (2025) note that although awareness is positively associated with compliance, gaps may persist in specific safety practices, suggesting that knowledge alone does not guarantee behavioral change. Similarly, Lestari and Nasrifah (2024) argue that training must be supported by continuous reinforcement and organizational commitment to sustain compliance over time. These findings suggest that while

training is essential, it should be integrated within a broader organizational system to maximize its impact. Based on this argument, the following hypothesis is proposed:

H1: Occupational Health and Safety (OHS) training positively influences the compliance of hospital security officers.

### **2.2 Supervision and Compliance**

Supervision plays a crucial role in ensuring that safety procedures are consistently implemented and deviations are corrected. Effective supervision provides guidance, monitoring, and reinforcement of safety standards, thereby increasing employee accountability. Prior studies indicate that supervisory practices, including safety communication and monitoring, significantly influence safety behavior (Liu et al., 2022).

However, the effectiveness of supervision is often contingent upon its quality and consistency. Brooks et al. (2021) found that monitoring by superiors can enhance compliance, yet inconsistent supervision or lack of enforcement may weaken its impact. This suggests that supervision alone may not be sufficient unless supported by strong organizational commitment and a positive safety climate. Thus, while supervision is theoretically important, its empirical influence remains context-dependent. Based on this reasoning, the following hypothesis is formulated:

H2: Supervision positively influences the compliance of hospital security officers.

### **2.3 Availability of OHS Facilities and Compliance**

The availability of OHS facilities, including personal protective equipment, safety infrastructure, and operational resources, is a key enabler of safe work practices. Adequate facilities reduce barriers to compliance and provide employees with the tools they need to perform their tasks safely. Studies show that effective implementation of safety measures, such as PPE usage and risk management systems, significantly enhances workplace safety outcomes (Mutwiri, 2025; Alharbi et al., 2024).

Nevertheless, the literature also highlights that the mere availability of facilities does not guarantee compliance. Brooks et al. (2021) identified barriers, such as discomfort, inconvenience, and unclear guidelines, that can discourage the proper use of safety equipment. Similarly, Zungu et al. (2021) found that even when resources are available, improper utilization can limit their effectiveness. These findings indicate that behavioral and organizational factors play a critical role in determining whether safety facilities are effectively used. Therefore, while OHS facilities are necessary, their impact depends on how they are integrated into daily

work practices. Based on this argument, the following hypothesis is proposed:

H3: Availability of Occupational Health and Safety (OHS) facilities positively influences hospital security officers' compliance.

### **2.4 Management Support and Compliance**

Management support is widely regarded as one of the most influential factors in shaping safety compliance. Leadership commitment to safety, reflected through policies, communication, and resource allocation, creates a strong safety climate that encourages employees to adhere to safety procedures. Strategic leadership has been shown to directly and indirectly improve OHS outcomes by fostering organizational alignment and reinforcing safety priorities (Fadhel & Alqurs, 2025).

Furthermore, leadership behaviors such as safety communication, supervision, and incentives significantly influence employee safety behavior (Liu et al., 2022). Organizational commitment to safety also enhances compliance by promoting shared values and expectations among employees (Zungu et al., 2021). In healthcare contexts, effective management support is particularly critical due to the complexity and unpredictability of work environments.

However, while many studies emphasize leadership as a key determinant, the mechanisms through which management support influences compliance may vary across contexts. This suggests the need for empirical investigation to determine its relative importance compared to other organizational factors. Based on these arguments, the following hypothesis is proposed:

H4: Management support positively influences the compliance of hospital security officers.

### **2.5 Integrated Effect of Organizational Factors**

OHS compliance is a multidimensional phenomenon influenced by the interaction of various organizational factors. Studies suggest that safety outcomes are not determined by a single factor but by the combined effect of training, leadership, resources, and organizational systems (Zungu et al., 2021; Kartika & Nasution, 2024). Similarly, workplace safety management practices have been shown to influence employee behavior through multiple interconnected mechanisms (Vu et al., 2022).

In addition, research in different industries demonstrates that safety culture, organizational systems, and employee perceptions collectively shape compliance behavior (Guzman et al., 2022). These findings highlight the importance of adopting an integrated approach to OHS management rather than focusing on individual factors in isolation. Thus, the following hypothesis is proposed:

**H5:** Occupational Health and Safety (OHS) training, supervision, availability of OHS facilities, and management support simultaneously influence hospital security officers' compliance.

Although prior studies have identified multiple determinants of OHS compliance, there is no consensus regarding which factor exerts the strongest influence. Some studies emphasize the role of training and awareness (Coca et al., 2025), while others highlight leadership and organizational commitment as more critical (Fadhel & Alqurs, 2025; Liu et al., 2022). This inconsistency suggests the need for further empirical investigation to identify the most influential determinant of compliance.

Moreover, existing research has largely focused on medical personnel, with limited attention given to non-medical workers such as hospital security officers. This group faces unique risks, including exposure to workplace violence and emergency situations, which may influence their compliance behavior differently (Brown et al., 2022; Ferron et al., 2022). The lack of research on this population represents a significant gap in the literature. Therefore, this study seeks to address these gaps by examining the relative influence of organizational factors on OHS compliance among hospital security officers. Based on the literature emphasizing the importance of leadership, the following hypothesis is proposed:

**H6:** Management support is the strongest predictor of compliance among hospital security officers compared to OHS training, supervision, and availability of OHS facilities.

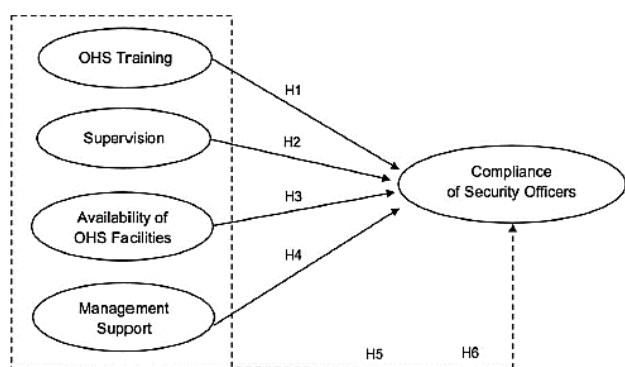


Figure 1. Research Framework

### 3. Materials and Methods

This study employed a quantitative explanatory research design to examine the causal relationships between organizational factors and Occupational Health and Safety (OHS) compliance among hospital security officers. A cross-sectional approach was adopted, allowing data to be collected at a single point in time to analyze how the independent variables influence

compliance behavior. The research was conducted at a regional public hospital in Surabaya, Indonesia. The study population comprised all security officers at the hospital, totaling 30 individuals. Given the relatively small population, a total sampling (census) technique was used, ensuring that all members of the population were included as respondents. This approach minimizes sampling bias and enhances the representativeness of the findings within the study context.

Primary data were collected using a structured questionnaire developed based on established literature on OHS and safety compliance. The instrument was designed to measure five key constructs: OHS training, supervision, availability of OHS facilities, management support, and compliance behavior. All items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), enabling consistent measurement of respondents' perceptions.

The independent variables in this study include OHS training, supervision, availability of OHS facilities, and management support, while the dependent variable is OHS compliance. Each construct was operationalized using multiple indicators adapted from prior empirical studies to ensure content validity. OHS training focuses on employees' safety-related knowledge and skill development, while supervision involves monitoring and enforcing safety procedures. The availability of OHS facilities captures the adequacy and accessibility of safety equipment and infrastructure, and management support represents leadership commitment through policies, communication, and resource allocation. OHS compliance, as the dependent variable, measures the extent to which security officers adhere to established safety procedures.

Data analysis was conducted using statistical software through several stages. Descriptive statistics were first used to summarize respondents' characteristics and the distributions of the variables. This was followed by validity and reliability testing to ensure the measurement instrument's accuracy and consistency. Classical assumption tests for normality, multicollinearity, and heteroscedasticity were then conducted to confirm that the data met the requirements for regression analysis. To test the proposed hypotheses, multiple linear regression analysis was applied. The partial effects of each independent variable on OHS compliance were examined using the t-test, while the F-test was used to assess the simultaneous effects of all variables. Additionally, standardized beta coefficients were analyzed to identify the most dominant factor influencing compliance behavior.

### 4. Results

Table 1 presents the results of the multiple linear regression analysis examining the effects of OHS training, supervision, availability of OHS facilities, and management support on hospital security officers'

compliance. Thus, the model demonstrates strong explanatory power, with an R Square ( $R^2$ ) value of 0.766, indicating that approximately 76.6% of the variance in compliance behavior can be explained by the four independent variables included in the model. The Adjusted R Square of 0.727 further confirms that the model remains robust after adjusting for the number of predictors. In addition, the F-statistic of 20.496 with a p-value of 0.000 indicates that the model is statistically significant as a whole, indicating that the independent variables jointly have a significant effect on compliance.

**Table 1.** Results of Hypothesis Testing

Variable	Coefficient ( $\beta$ )	Std. Error	t-statistics	Sig.
OHS Training	0.497	0.227	2.192	0.038
Supervision	-0.307	0.197	-1.555	0.133
Availability of OHS Facilities	0.092	0.205	0.448	0.658
Management Support	0.788	0.206	3.827	0.001
R Square ( $R^2$ )	0.766		F-Statistic	20.496
Adjusted R-Square	0.727		Prob. (F-Statistic)	0.000

Individually, the results indicate that OHS training has a positive, statistically significant effect on compliance ( $\beta = 0.497$ ,  $t = 2.192$ ,  $p = 0.038$ ). This finding suggests that increased training enhances security officers' knowledge and awareness of safety procedures, thereby improving their compliance behavior. Similarly, management support shows a positive and highly significant effect ( $\beta = 0.788$ ,  $t = 3.827$ ,  $p = 0.001$ ), indicating that leadership commitment plays a critical role in fostering adherence to OHS standards. Among all variables, management support has the largest coefficient and t-value, highlighting it as the most influential determinant of compliance.

In contrast, supervision does not have a statistically significant effect on compliance ( $\beta = -0.307$ ,  $t = -1.555$ ,  $p = 0.133$ ), despite the negative coefficient. This suggests that supervisory practices in the studied context may not be sufficiently effective or consistently implemented to influence compliance behavior. Likewise, the availability of OHS facilities is found to have a positive but insignificant effect ( $\beta = 0.092$ ,  $t = 0.448$ ,  $p = 0.658$ ), implying that merely providing safety equipment and infrastructure is not enough to ensure compliance without proper utilization and reinforcement.

The findings indicate that while organizational factors collectively influence OHS compliance, management support and OHS training are the key drivers, whereas supervision and safety facilities require further improvement to enhance their effectiveness in promoting compliance among hospital security officers.

## 5. Discussion

This study was written to examine how organizational factors, including OHS training, supervision, availability of safety facilities, and management support, shape compliance behavior among hospital security officers. The findings provide nuanced insights into the relative importance of these determinants and contribute to the broader OHS literature by focusing on a non-medical occupational group that remains underexplored.

First, the results confirm that OHS training significantly enhances compliance, supporting a substantial body of prior research emphasizing the role of training in improving safety knowledge and behavior. Training equips employees with the cognitive and practical competencies required to recognize hazards and implement appropriate safety measures (Abdallah et al., 2019; Brooks et al., 2021). This is particularly relevant in healthcare environments where risks are dynamic and often unpredictable. However, the findings also suggest that training should not be viewed as a standalone intervention. Consistent with previous studies, knowledge and awareness do not automatically translate into sustained compliance without reinforcement through organizational systems and leadership support (Coca et al., 2025; Lestari & Nasrifah, 2024). Thus, while training is a necessary condition for compliance, it is not sufficient on its own.

Second, the study identifies management support as the most dominant predictor of compliance, highlighting the central role of leadership in shaping safety behavior. This finding aligns with prior research demonstrating that strategic leadership fosters a strong safety culture by promoting clear policies, allocating resources, and reinforcing safety priorities (Fadhel & Alqurs, 2025). Leadership behaviors such as communication, supervision, and safety incentives have also been shown to directly influence employee compliance (Liu et al., 2022). Furthermore, organizational commitment to safety enhances employees' motivation to adhere to safety procedures by creating shared values and expectations (Zungu et al., 2021). The dominance of management support in this study reinforces the argument that compliance is deeply embedded in organizational culture and leadership practices rather than in individual capability alone.

Interestingly, supervision does not exhibit a significant effect on compliance, which contrasts with some prior studies that emphasize its importance as a control mechanism. While supervision is theoretically expected to reinforce safety rules, its effectiveness depends heavily on quality, consistency, and focus. Brooks et al. (2021) suggest that monitoring can improve compliance; however, inconsistent or task-oriented supervision may fail to meaningfully influence safety behavior. Similarly, Liu et al. (2022) highlight that supervision is effective only when integrated with broader leadership practices such as communication

and safety guidance. The non-significant result in this study may therefore indicate that supervisory practices in the observed context are not sufficiently aligned with safety objectives or are overshadowed by stronger organizational influences such as management support.

Likewise, the availability of OHS facilities is found to be statistically insignificant, despite its theoretical importance. This finding suggests that merely providing safety equipment and infrastructure does not guarantee compliance. Prior studies have similarly reported that barriers such as discomfort, inconvenience, and unclear safety procedures can limit the effective use of available resources (Brooks et al., 2021). In addition, Zungu et al. (2021) found that even when personal protective equipment is adequately supplied, improper usage can reduce its effectiveness. These findings indicate that the impact of safety facilities is mediated by behavioral and organizational factors, including training, supervision, and leadership commitment. Therefore, facilities must be accompanied by enforcement, monitoring, and a supportive safety culture to achieve meaningful outcomes.

From a broader perspective, the study confirms that OHS compliance is a multidimensional construct influenced by the interaction of multiple organizational factors. The significant F-test result indicates that these variables collectively contribute to compliance, supporting prior research that emphasizes the importance of integrated safety management systems (Kartika & Nasution, 2024; Vu et al., 2022). Similarly, studies in different industries have shown that safety performance is shaped by a combination of safety climate, organizational systems, and employee perceptions (Guzman et al., 2022; Griffin & Neal, 2000). This reinforces the need for a holistic approach to OHS management that considers both structural and behavioral dimensions.

Importantly, this study extends the literature by focusing on hospital security officers, a group often overlooked in OHS research. Existing studies highlight that security personnel face unique occupational risks, including exposure to workplace violence and high-pressure emergency situations (Brown et al., 2022; Ferron et al., 2022). These conditions require not only technical safety measures but also strong organizational support and psychological resilience. The findings of this study suggest that enhancing compliance among this group requires prioritizing leadership commitment and continuous training, while also improving the effectiveness of supervision and the utilization of safety facilities.

From a theoretical standpoint, the results support the relevance of safety climate and organizational behavior theories, which emphasize the role of leadership, communication, and shared perceptions in shaping safety outcomes (Zohar, 2010). The findings also align with broader organizational research demonstrating that workplace safety practices influence

employee behavior and organizational performance, particularly in high-risk and uncertain environments (Vu et al., 2022). By integrating these perspectives, this study contributes to a more comprehensive understanding of OHS compliance in healthcare settings.

However, several limitations should be acknowledged. The study is based on a relatively small sample from a single hospital, which may limit the generalizability of the findings. Future research is encouraged to include larger and more diverse samples across different healthcare settings and geographical contexts. Additionally, incorporating variables such as safety culture, motivation, or psychological factors could provide deeper insights into compliance behavior.

In conclusion, this study demonstrates that while multiple organizational factors influence OHS compliance, management support and training emerge as the key drivers, whereas supervision and safety facilities require further optimization. These findings underscore the importance of adopting an integrated and leadership-driven approach to OHS management, particularly for non-medical healthcare workers operating in high-risk environments.

## 6. Conclusions

This study examined the influence of organizational factors, including OHS training, supervision, availability of OHS facilities, and management support, on the compliance behavior of hospital security officers. The findings demonstrate that OHS compliance is shaped by a combination of factors rather than a single determinant. Specifically, OHS training and management support have a positive and significant effect on compliance, while supervision and availability of OHS facilities do not exhibit significant partial effects.

Among all variables, management support emerges as the most dominant predictor, indicating that leadership commitment plays a central role in fostering safety compliance. This suggests that compliance behavior is not solely driven by individual knowledge or the presence of safety resources, but is strongly influenced by organizational culture, leadership practices, and managerial involvement.

Furthermore, the significant simultaneous effect of all variables confirms the importance of adopting an integrated approach to OHS management in hospital settings. The study highlights that improving compliance among hospital security personnel requires not only technical interventions, such as training and facility provision, but also strong, consistent leadership support to ensure that safety practices are effectively implemented and sustained.

## 6.1 Research Implications

### 6.1.1. Theoretical Implications

This study contributes to the OHS and safety management literature by extending empirical evidence on compliance behavior to non-medical healthcare workers, particularly hospital security officers, who have received limited attention in prior research. The findings reinforce the importance of organizational and behavioral perspectives, particularly the role of management support and training, in explaining safety compliance. Additionally, the study supports the relevance of safety climate and organizational behavior theories, which emphasize leadership and organizational systems as key drivers of safety outcomes.

### 6.1.2. Practical Implications

From a practical standpoint, the findings provide several important insights for hospital management:

1. Strengthening management commitment should be prioritized, as leadership plays a decisive role in shaping compliance behavior.
2. Hospitals should implement continuous and context-specific OHS training programs to enhance employees' knowledge and preparedness.
3. Supervision practices need to be improved to ensure consistency, effectiveness, and alignment with safety objectives.
4. The provision of safety facilities should be accompanied by proper utilization strategies, monitoring, and enforcement mechanisms to maximize their impact.

By adopting a comprehensive, integrated OHS strategy, hospitals can improve compliance and reduce occupational risks for security personnel.

## 6.2 Limitations of the Study

Despite its contributions, this study has several limitations. First, the research was conducted in a single hospital with a relatively small sample size ( $n = 30$ ), which may limit the generalizability of the findings to other healthcare settings. Second, the use of a cross-sectional design restricts the ability to establish causal relationships over time. Third, the study relies on self-reported questionnaire data, which may be subject to response bias. Finally, the model focuses on a limited number of organizational factors and does not incorporate other potentially relevant variables such as safety culture, motivation, or psychological factors.

## 6.3 Directions for Future Research

Future studies are encouraged to address these limitations by expanding the scope and methodology. First, researchers should consider using larger, more diverse samples across multiple hospitals or regions to improve the generalizability of their results. Second,

adopting a longitudinal research design would allow for a deeper understanding of causal relationships and changes in compliance behavior over time. Third, future research could incorporate additional variables, such as safety climate, employee motivation, job stress, and organizational culture, to develop a more comprehensive model of OHS compliance.

Moreover, applying advanced analytical techniques such as Structural Equation Modeling (SEM) or Partial Least Squares (PLS-SEM) may offer deeper insights into the complex relationships among variables. Finally, qualitative or mixed-method approaches could be used to explore context-specific factors influencing compliance, particularly among non-medical healthcare workers.

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**Informed Consent Statement:** Informed consent was obtained from all participants involved in this study. Prior to data collection, respondents were provided with clear information regarding the purpose of the research, their role as participants, and their rights, including the right to withdraw at any time without any consequences.

**Data Availability Statement:** The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to confidentiality and privacy considerations of the participants.

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