



Workplace Safety Climate and Employee Behaviour: Examining the relationship between workplace Safety Climate and employee safety behavior

Stephen Anang Ankamah-Lomotey

Grace International Bible University

ABSTRACT: This study examined the relationship between workplace safety climate and employee safety behavior in high-risk industries in Ghana, including construction, manufacturing, and mining sectors. Using a quantitative research design, data were collected from 368 employees through structured questionnaires assessing perceptions of safety climate and self-reported safety behaviors, including compliance with rules and voluntary participation in safety initiatives. Hierarchical regression analysis was employed to determine the predictive influence of safety climate dimensions—management commitment, safety communication, and safety training—on employee behavior. Results revealed that workplace safety climate significantly predicts both safety compliance and safety participation, with management commitment emerging as the strongest determinant. Safety communication and training also contributed positively to safe behavior. The study highlights the critical role of organizational commitment, effective communication, and continuous training in fostering a positive safety culture and reducing workplace accidents. Findings provide practical implications for policymakers, organizational leaders, and safety managers seeking to improve occupational health and safety outcomes in Ghanaian high-risk industries.

Corresponding Author:
Stephen A. Ankamah-Lomotey

KEYWORDS:

Workplace Safety Climate, Employee Safety Behavior, Safety Compliance, Safety Participation, Occupational Health.

INTRODUCTION

Workplace safety remains a critical concern for organizations worldwide, particularly in industries where occupational hazards are prevalent, such as construction, manufacturing, mining, and healthcare. Safety climate, defined as employees' shared perceptions of organizational policies, procedures, and practices regarding safety, has emerged as a key factor influencing workplace safety outcomes (Zohar, 2010). A positive safety climate fosters an environment where employees are more likely to comply with safety procedures, report hazards, and engage in proactive safety behaviors, ultimately reducing workplace accidents and injuries (Neal & Griffin, 2006). In Ghana, high-risk industries continue to report frequent accidents and occupational injuries, suggesting that despite regulatory frameworks, safety outcomes remain suboptimal (Agyekum, Osei-Tutu, & Mensah, 2018). Understanding the link between safety climate and employee behavior is therefore essential for improving organizational safety performance.

Employee safety behavior refers to actions taken by workers to prevent accidents and protect themselves and others from harm. Such behavior is often categorized into two dimensions: safety compliance and safety participation (Griffin & Neal, 2000). Safety compliance involves adherence to formal rules and procedures, such as the use of personal protective equipment and following operational protocols, while safety participation encompasses voluntary behaviors that contribute to the overall safety environment, such as suggesting safety improvements or assisting colleagues in maintaining safe practices (Christian, Bradley, Wallace, & Burke, 2009). Research indicates that safety climate directly influences both compliance and participation, as employees who perceive their organization as committed to safety are more likely to internalize safe practices and engage proactively in risk prevention (Clarke, 2013).

The relationship between workplace safety climate and employee behavior has been examined extensively in developed countries, with studies demonstrating a strong positive association between perceptions of safety climate and proactive safety behavior (Zohar & Luria, 2005; Hofmann & Morgeson, 1999). In these contexts, organizations with robust safety climates experience lower accident rates, higher employee engagement in safety initiatives, and improved overall productivity. Conversely, a poor safety climate characterized by lax supervision, inadequate safety training, and inconsistent enforcement of rules correlates with higher incidences of unsafe behaviors and workplace accidents (Neal, Griffin, & Hart, 2000). These findings underscore the importance of

organizational culture, leadership commitment, and management practices in shaping employee attitudes and behaviors toward safety.

In Ghana, the literature on workplace safety climate is limited, particularly concerning its impact on employee safety behavior. Many organizations operate under formal occupational safety regulations, yet the translation of these regulations into daily practices is inconsistent (Annan, Addai, & Tulashie, 2015). Reports from high-risk industries indicate that employees often engage in unsafe practices due to inadequate supervision, insufficient training, or the perception that management prioritizes productivity over safety (Gyekye & Salminen, 2009). This gap suggests that understanding employees' perceptions of the safety climate could provide critical insights into the behavioral determinants of safety outcomes in the Ghanaian context.

The significance of examining the relationship between workplace safety climate and employee behavior extends beyond accident prevention. Safe work environments improve employee morale, reduce absenteeism, and enhance organizational reputation, which in turn positively affects productivity and sustainability (Clarke, 2010). By identifying the mechanisms through which safety climate influences behavior, organizations can design interventions that promote both compliance and proactive engagement in safety practices. Such interventions may include leadership development programs, participatory safety committees, regular safety audits, and targeted training programs. These measures not only align with regulatory requirements but also foster a culture of continuous safety improvement.

Several theoretical frameworks underpin the study of safety climate and employee behavior. Social exchange theory suggests that when employees perceive their organization as valuing safety, they reciprocate by engaging in behaviors that support organizational safety objectives (Blau, 1964). Similarly, the Theory of Planned Behavior posits that attitudes toward safety, perceived behavioral control, and subjective norms shape intentions to perform safe behaviors (Ajzen, 1991). These frameworks provide a foundation for understanding how employees' perceptions of the organizational environment influence their safety-related actions. Integrating these theories in the Ghanaian industrial context will help clarify the mechanisms through which safety climate impacts employee behavior and inform strategies to improve workplace safety outcomes.

In summary, workplace safety climate plays a crucial role in shaping employee safety behavior, influencing both compliance with formal procedures and voluntary participation in safety initiatives. Despite existing OSH regulations in Ghana, high-risk industries continue to report accidents, highlighting the need to examine employees' perceptions of safety climate and its behavioral consequences. By investigating this relationship, the study aims to provide empirical evidence that can inform policy, organizational practices, and training programs, ultimately improving occupational safety and contributing to sustainable workforce development in Ghana.

Statement of the Problem

Despite the existence of formal occupational safety regulations and organizational safety procedures, workplace accidents, injuries, and near-miss incidents continue to be reported in high-risk industries in Ghana, such as construction, manufacturing, and mining (Agyekum, Osei-Tutu, & Mensah, 2018; Gyekye & Salminen, 2009). While regulatory compliance is necessary, evidence suggests that the organizational safety climate—employees' shared perceptions of safety policies, procedures, and practices—plays a crucial role in influencing employee behavior and adherence to safety protocols (Neal & Griffin, 2006). In many Ghanaian organizations, safety procedures are often implemented formally but are not consistently reinforced through leadership commitment, training, or monitoring, leading to gaps between policy and practice (Annan, Addai, & Tulashie, 2015). These gaps raise questions about whether a positive safety climate can effectively promote safe behavior and reduce workplace accidents. Therefore, there is a critical need to examine the relationship between workplace safety climate and employee safety behavior in Ghana to understand the underlying mechanisms that influence compliance and proactive engagement in safety practices. Without empirical evidence on this relationship, interventions aimed at improving workplace safety may be inadequately targeted, reducing their effectiveness and leaving employees at risk.

Purpose of the Study

The purpose of this study is to evaluate the relationship between workplace safety climate and employee safety behavior in Ghanaian high-risk industries. Specifically, the study seeks to understand how employees' perceptions of organizational safety policies, procedures, and practices influence their compliance with safety protocols and their voluntary engagement in behaviors that promote workplace safety. By investigating this relationship, the study aims to provide evidence-based recommendations for organizations, policymakers, and regulatory bodies to enhance safety culture, reduce occupational accidents, and improve overall workplace health and safety outcomes.

Research Objectives

The study is guided by the following objectives:

1. To assess the extent to which workplace safety climate influences employee safety compliance in high-risk industries in Ghana.
2. To evaluate the impact of workplace safety climate on employees' voluntary participation in safety-related behaviors.

3. To identify which dimensions of workplace safety climate—such as management commitment, safety communication, and safety training—most strongly predict positive employee safety behavior.

LITERATURE REVIEW

Theoretical Literature

The study of workplace safety climate and its influence on employee behavior is grounded in several key theoretical frameworks, which provide insight into the mechanisms linking organizational environment to individual actions. One widely applied framework is **Social Exchange Theory** (Blau, 1964). According to this theory, employees engage in reciprocal relationships with their organizations: when they perceive that the organization values their well-being and prioritizes safety, they reciprocate through adherence to safety protocols and proactive engagement in safety practices. The theory suggests that the perception of management commitment to safety fosters trust and motivates employees to internalize safety norms, promoting a positive safety culture. In the Ghanaian context, where workplace accidents remain prevalent despite formal regulations, social exchange processes can explain why employees' perceptions of safety climate significantly affect their safety behavior.

Another influential framework is the **Theory of Planned Behavior (TPB)**, proposed by Ajzen (1991), which posits that an individual's behavior is determined by their intentions, which in turn are influenced by attitudes, subjective norms, and perceived behavioral control. Applied to workplace safety, employees' intentions to comply with safety procedures or engage in voluntary safety behaviors are shaped by their attitudes toward safety, the social norms within their organization, and their perceived ability to act safely. A positive safety climate strengthens these antecedents by creating norms that encourage safety compliance and participation, thereby increasing employees' intention and actual engagement in safe behavior (Neal & Griffin, 2006).

Systems Theory also provides a valuable lens for understanding workplace safety. According to Leveson (2011), accidents occur due to failures within complex organizational systems rather than solely individual negligence. Safety outcomes are thus the result of interactions among organizational policies, managerial practices, employee behavior, and environmental conditions. Applying this theory, workplace safety climate can be viewed as a critical system-level factor that shapes individual behavior by establishing expectations, reinforcing norms, and facilitating communication and training. In Ghanaian high-risk industries, where operational environments are dynamic and hazards are prevalent, understanding safety climate as part of a system highlights the importance of coordinated interventions at organizational and regulatory levels.

Additionally, **Motivational Theories of Safety Behavior**, such as Herzberg's Two-Factor Theory, suggest that employee engagement in safety is influenced by both intrinsic factors (e.g., sense of responsibility, personal well-being) and extrinsic factors (e.g., management commitment, recognition, enforcement) (Herzberg, 1966). The combination of organizational support, effective communication, and motivational incentives reinforces safe practices. In the context of Ghana, where enforcement resources may be limited, leveraging intrinsic motivation through a positive safety climate can compensate for structural gaps and encourage proactive safety behavior.

In summary, theoretical perspectives converge on the idea that workplace safety climate is a critical determinant of employee safety behavior. Social exchange theory emphasizes reciprocity and trust, TPB focuses on the cognitive antecedents of behavior, systems theory highlights the interaction of organizational components, and motivational frameworks identify the drivers of engagement. Collectively, these theories provide a conceptual basis for understanding why employees' perceptions of safety climate influence both compliance and voluntary safety behaviors.

Empirical Literature

Empirical research across industries and countries consistently demonstrates a positive relationship between workplace safety climate and employee safety behavior. Griffin and Neal (2000) categorized safety behavior into compliance (adhering to rules) and participation (voluntary engagement in safety initiatives) and found that employees' perceptions of safety climate significantly predicted both dimensions. In their study of manufacturing and service organizations, a strong safety climate was associated with higher compliance rates and increased reporting of hazards, suggesting that employees internalize organizational safety priorities and act accordingly.

Clarke (2010) conducted a multi-industry study examining safety climate dimensions, including management commitment, communication, and safety training. The study revealed that perceptions of management's dedication to safety significantly predicted employees' proactive engagement in safety-related behaviors, while training and communication enhanced the transfer of knowledge into practical safety actions. These findings indicate that the safety climate acts both as a guide for expected behavior and a facilitator of knowledge, thereby influencing employees' ability and willingness to maintain safe practices.

Zohar and Luria (2005) investigated the multilevel effects of safety climate, demonstrating that both organizational-level and group-level safety perceptions impact individual safety behavior. Employees embedded in units with strong shared perceptions of safety were more likely to comply with procedures and participate in voluntary safety initiatives. The study highlights the importance of considering safety climate not merely as an individual perception but as a collective phenomenon that shapes behavior through social norms and shared expectations.

In Ghana, empirical studies, although limited, provide similar insights. Gyekye and Salminen (2009) examined workplace safety perceptions in Ghanaian manufacturing firms and found that employees' perceptions of management commitment and organizational safety practices strongly predicted adherence to safety procedures. Employees who believed that their organizations prioritized safety were more likely to report hazards, comply with protocols, and engage in voluntary safety initiatives. Annan, Addai, and Tulashie (2015) also reported that gaps between formal regulations and practical enforcement contributed to unsafe practices, emphasizing the mediating role of perceived safety climate in shaping behavior.

The role of training and awareness programs as part of safety climate has been documented in multiple contexts. Mavis and Boateng (2018) found that in Ghanaian mining firms, training interventions increased both compliance and voluntary safety participation, especially when employees perceived management support and ongoing commitment to safety. Similarly, Christian, Bradley, Wallace, and Burke (2009) demonstrated through a meta-analysis that safety climate dimensions—such as supervisory support, safety communication, and organizational prioritization of safety—consistently predict individual safety behaviors across industries. Studies also indicate that a weak or negative safety climate is associated with higher rates of accidents and unsafe behaviors. Neal, Griffin, and Hart (2000) found that organizations with poor perceptions of management commitment, inconsistent safety communication, and limited employee involvement reported higher incidences of rule violations, accidents, and near-miss events. In the Ghanaian context, resource constraints, insufficient inspections, and informal work practices exacerbate these challenges, highlighting the importance of cultivating a positive safety climate to mitigate risk (Agyekum, Osei-Tutu, & Mensah, 2018). Collectively, empirical evidence underscores that workplace safety climate is a critical antecedent of employee behavior, influencing both compliance with formal safety procedures and voluntary participation in safety initiatives. In high-risk environments such as Ghanaian construction, mining, and manufacturing sectors, improving safety climate through leadership commitment, communication, training, and enforcement can significantly enhance employee behavior and reduce occupational hazards.

METHODOLOGY

Research Design

This study adopted a quantitative research design to examine the relationship between workplace safety climate and employee safety behavior in high-risk industries in Ghana, including construction, manufacturing, and mining sectors. A quantitative approach was deemed appropriate because it allows for the collection of numerical data, statistical analysis, and the testing of hypothesized relationships between variables (Creswell, 2014). The study employed a correlational research design to determine the strength and direction of the association between employees' perceptions of safety climate and their safety behavior. This design is suitable for establishing whether a positive safety climate predicts compliance with safety rules and participation in voluntary safety-related activities. The use of structured questionnaires facilitated the collection of standardized data from a large sample, enhancing the reliability and generalizability of the findings.

Population and Sample

The target population for this study comprised employees working in high-risk industries in Ghana, specifically within construction, manufacturing, and mining firms. These industries were selected due to their higher exposure to occupational hazards and the critical importance of safety behavior in preventing accidents and injuries. The accessible population included both managerial and non-managerial staff involved in daily operations, as both groups contribute to safety outcomes. A sample size of 400 respondents was determined using Krejcie and Morgan's (1970) formula for estimating representative sample sizes in social research, ensuring adequate statistical power for the analysis. Stratified random sampling was employed to ensure that employees from different industries, departments, and job levels were proportionally represented. This sampling method minimized selection bias and enhanced the representativeness of the data.

Data Collection Instrument

Data were collected using a structured, self-administered questionnaire divided into three main sections. The first section captured demographic information, including age, gender, educational background, job position, and years of experience. The second section measured workplace safety climate using an adapted scale based on Zohar's (2010) safety climate questionnaire and Neal and Griffin's (2006) organizational safety perception instruments. This scale included items assessing management commitment to safety, safety communication, safety training, and employee involvement in safety initiatives. Responses were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The third section assessed employee safety behavior, incorporating dimensions of safety compliance and safety participation as conceptualized by Griffin and Neal (2000). The use of validated scales ensured content validity, while pilot testing of the questionnaire with 30 respondents helped refine items for clarity and reliability. Cronbach's alpha values for the safety climate and safety behavior scales were 0.87 and 0.85, respectively, indicating high internal consistency.

Data Collection Procedure

Data collection was conducted over a period of six weeks. Prior to administering the questionnaires, formal permission was obtained from organizational management in the selected firms. Participants were informed about the purpose of the study, the voluntary

nature of participation, and the confidentiality of their responses. The questionnaires were distributed physically to respondents in their workplaces, with instructions provided on how to complete the items accurately. Follow-up visits were made to maximize the response rate, which ultimately reached 92%, ensuring a robust dataset for analysis. All completed questionnaires were checked for completeness and consistency before data entry.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize respondents' demographic characteristics and the central tendencies of safety climate and behavior variables. Pearson correlation analysis was employed to examine the bivariate relationships between workplace safety climate dimensions and employee safety behavior. Furthermore, hierarchical regression analysis was conducted to determine the predictive power of safety climate on employee compliance and participation, controlling for demographic variables such as age, gender, and years of experience. The assumptions of regression, including linearity, normality, homoscedasticity, and absence of multicollinearity, were tested and satisfied prior to running the regression models. Statistical significance was assessed at the 0.05 level.

Ethical Considerations

Ethical principles were strictly adhered to throughout the research process. Participation was voluntary, and informed consent was obtained from all respondents. Respondents were assured that their identities would remain confidential and that the data would be used solely for academic purposes. The study also ensured that participants were not exposed to any form of harm or discomfort during data collection. Ethical approval was obtained from the institutional review board of the researcher's university prior to commencement of the study.

ANALYSIS AND DISCUSSION OF RESULTS

The aim of this study was to examine the relationship between workplace safety climate and employee safety behavior in high-risk industries in Ghana. A total of 400 questionnaires were distributed, with 368 valid responses retained for analysis, yielding a 92% response rate. Descriptive statistics were first computed to summarize the demographic characteristics of respondents, followed by correlation analyses to explore bivariate relationships. To test the predictive influence of workplace safety climate on employee safety behavior, hierarchical regression analysis was employed. Employee safety behavior was measured in two dimensions: safety compliance (adherence to formal rules and procedures) and safety participation (voluntary engagement in safety-promoting activities). Safety climate was assessed across multiple dimensions, including management commitment, safety communication, and safety training. The hierarchical regression approach allowed the study to assess both the direct effect of safety climate on behavior and the incremental contribution of each dimension after controlling for demographic variables such as age, gender, and years of experience.

Hierarchical Regression Analysis

The hierarchical regression analysis was conducted in two models for each dependent variable—safety compliance and safety participation. In the first model, demographic variables were entered to control for their potential influence. In the second model, workplace safety climate and its dimensions were entered to examine their predictive power over and above demographic factors.

Table 1. Hierarchical Regression Predicting Safety Compliance

Predictor Variables	Model 1 β	Model 1 t	Model 2 β	Model 2 t
Age	0.08	1.45	0.06	1.12
Gender	0.04	0.78	0.03	0.65
Years of Experience	0.12	2.10*	0.08	1.56
Management Commitment	—	—	0.34	5.67**
Safety Communication	—	—	0.28	4.52**
Safety Training	—	—	0.21	3.11**
R ²	0.03	—	0.42	—

*Note: *p < 0.05; **p < 0.01

Table 2. Hierarchical Regression Predicting Safety Participation

Predictor Variables	Model 1 β	Model 1 t	Model 2 β	Model 2 t
Age	0.06	1.20	0.05	0.98
Gender	0.02	0.42	0.01	0.25
Years of Experience	0.10	1.84	0.07	1.32
Management Commitment	—	—	0.37	6.02**
Safety Communication	—	—	0.25	3.89**
Safety Training	—	—	0.23	3.45**
R ²	0.02	—	0.39	—

The hierarchical regression results indicate that workplace safety climate significantly predicts employee safety behavior in both compliance and participation dimensions. In the first model for safety compliance, demographic variables collectively explained only 3% of the variance ($R^2 = 0.03$), with years of experience showing a modest positive effect ($\beta = 0.12$, $p < 0.05$). This finding suggests that demographic factors alone have limited predictive power over safety compliance, highlighting the importance of organizational factors.

In the second model, which included safety climate dimensions, the explained variance increased substantially to 42% ($R^2 = 0.42$), indicating that management commitment, safety communication, and safety training together account for a significant portion of employees' compliance behavior. Management commitment had the strongest effect ($\beta = 0.34$, $p < 0.01$), suggesting that employees are more likely to follow safety rules when they perceive that leadership prioritizes and actively supports safety initiatives. Safety communication ($\beta = 0.28$, $p < 0.01$) and safety training ($\beta = 0.21$, $p < 0.01$) also showed significant positive effects, confirming that clear communication and adequate training facilitate adherence to safety procedures. These findings are consistent with Social Exchange Theory, which posits that employees reciprocate perceived organizational support through compliant and cooperative behaviors (Blau, 1964).

For safety participation, the first model revealed that demographic variables explained only 2% of the variance ($R^2 = 0.02$), with none of the variables achieving statistical significance. When safety climate dimensions were added in Model 2, the explained variance increased to 39% ($R^2 = 0.39$). Similar to compliance, management commitment emerged as the strongest predictor ($\beta = 0.37$, $p < 0.01$), followed by safety training ($\beta = 0.23$, $p < 0.01$) and safety communication ($\beta = 0.25$, $p < 0.01$). This indicates that employees' voluntary engagement in safety initiatives is highly influenced by the perception of organizational commitment to safety. The findings align with previous research suggesting that safety climate not only guides formal compliance but also fosters proactive safety behaviors such as hazard reporting and participation in safety improvement programs (Griffin & Neal, 2000; Clarke, 2010). Overall, the results demonstrate that workplace safety climate is a robust predictor of both dimensions of employee safety behavior. Management commitment consistently shows the strongest effect, emphasizing the pivotal role of leadership in shaping safety culture. Safety communication and training serve as critical enablers, translating organizational policies into actionable knowledge and behavior. These findings highlight the necessity of fostering a positive safety climate to enhance both compliance with safety rules and voluntary engagement in safety-promoting activities.

The study also underscores that demographic factors, including age, gender, and years of experience, have limited impact on safety behavior compared to organizational factors. This suggests that interventions aimed at improving workplace safety should prioritize structural and cultural initiatives—such as leadership engagement, effective communication, and continuous training—over demographic targeting.

In conclusion, the hierarchical regression analysis provides strong empirical support for the hypothesis that workplace safety climate significantly influences employee safety behavior. Organizations in Ghana's high-risk industries can enhance safety outcomes by strengthening leadership commitment, improving safety communication, and investing in ongoing safety training programs.

DISCUSSION OF RESULTS

The findings of this study provide empirical evidence supporting the significant role of workplace safety climate in shaping employee safety behavior in high-risk industries in Ghana. Consistent with previous research, management commitment emerged as the most influential predictor of both safety compliance and safety participation (Clarke, 2010; Griffin & Neal, 2000). This underscores that when employees perceive that organizational leadership prioritizes safety, they are more likely to adhere to safety protocols and engage voluntarily in behaviors that promote workplace safety. This aligns with Social Exchange Theory (Blau, 1964), which suggests that employees reciprocate organizational support and concern for their well-being by engaging in positive safety behaviors.

Safety communication and safety training also demonstrated significant positive effects on both compliance and participation. Employees who reported clear, consistent communication regarding safety policies and who received appropriate training were more likely to internalize safety norms and apply them in their daily tasks. These findings support the propositions of the Theory of Planned Behavior (Ajzen, 1991), indicating that perceived norms and knowledge influence employees' intentions and actual safety behavior. The results suggest that interventions targeting safety communication and training can reinforce management commitment and strengthen the overall safety climate within organizations.

The study further revealed that demographic variables—age, gender, and years of experience—had minimal influence on safety behavior. This finding suggests that while individual characteristics may play a minor role, the organizational environment exerts a more substantial influence on employee behavior. This observation aligns with previous studies in the Ghanaian context, where organizational factors such as leadership practices, enforcement of regulations, and cultural norms regarding safety were found to be more critical determinants of safety behavior than employee demographics (Gyekye & Salminen, 2009; Annan, Addai, & Tulashie, 2015).

The hierarchical regression models demonstrated that workplace safety climate dimensions collectively accounted for 42% of the variance in safety compliance and 39% in safety participation. These relatively high effect sizes indicate that the organizational environment is a major determinant of employees' adherence to safety protocols and their proactive engagement in safety-related activities. The findings are consistent with the broader literature on safety climate, which consistently highlights the centrality of leadership commitment, communication, and training in shaping safety outcomes (Zohar, 2010; Neal & Griffin, 2006). In the Ghanaian industrial context, the study highlights the practical implications of fostering a positive safety climate. Despite the presence of formal regulations, high accident rates suggest that regulatory compliance alone is insufficient. Employees' perceptions of leadership commitment, the clarity of safety communication, and the adequacy of training are critical in translating policies into consistent, safe behaviors. This emphasizes the need for organizations to adopt a more holistic approach, integrating cultural, behavioral, and procedural strategies to enhance workplace safety.

CONCLUSION AND RECOMMENDATIONS

This study examined the relationship between workplace safety climate and employee safety behavior in high-risk industries in Ghana. The findings demonstrate that workplace safety climate is a significant predictor of both safety compliance and voluntary safety participation. Among the dimensions examined, management commitment emerged as the most influential factor, while safety communication and training were also critical in enhancing employees' adherence to safety protocols and engagement in proactive safety behaviors. Demographic factors, including age, gender, and experience, had limited impact, underscoring the overriding influence of organizational climate on safety behavior.

In conclusion, cultivating a positive workplace safety climate is essential for improving employee safety behavior and reducing occupational hazards. Organizations that prioritize leadership engagement, transparent communication, and continuous training are likely to experience higher levels of compliance and participation, contributing to safer and healthier work environments.

Based on the findings, the study makes the following recommendations:

First, management should demonstrate visible commitment to safety by allocating resources, participating in safety programs, and consistently enforcing safety policies. Leadership engagement signals organizational priorities and motivates employees to internalize safety norms. Second, organizations should implement regular and structured safety communication strategies, including briefings, meetings, and digital platforms, to ensure that employees are aware of policies, procedures, and potential hazards. Clear communication reduces ambiguity and promotes consistent safe behaviors. Third, comprehensive safety training programs should be developed and maintained, focusing on both rule compliance and proactive safety practices. Training should be continuous, context-specific, and inclusive of all staff levels to ensure knowledge is effectively translated into action.

Furthermore, organizations should consider establishing employee safety committees and participatory initiatives that encourage employees to take an active role in identifying hazards, reporting unsafe practices, and suggesting improvements. Such initiatives foster a sense of ownership and engagement, reinforcing a positive safety culture. Policymakers and regulatory bodies should also support organizations by providing guidance, monitoring compliance, and facilitating capacity-building programs that strengthen safety climate and employee behavior.

Overall, enhancing workplace safety climate is not only a regulatory necessity but a strategic approach to improving organizational performance, reducing accidents, and protecting human capital. The study underscores that organizational commitment, communication, and training are central to promoting safe behaviors, providing actionable insights for organizations in Ghana and similar developing country contexts.

REFERENCES

1. Ajzen, I. (1991). *The theory of planned behavior*. Organizational Behavior and Human Decision Processes, 50(2), 179–211.
2. Agyekum, K., Osei-Tutu, E., & Mensah, P. (2018). Occupational safety and health practices in Ghanaian mining companies: Challenges and prospects. *Journal of Safety Research*, 65, 75–84.
3. Annan, J., Addai, I., & Tulashie, S. K. (2015). Workplace safety compliance and accident prevention in Ghanaian manufacturing firms. *Safety Science*, 78, 199–208.
4. Blau, P. M. (1964). *Exchange and power in social life*. John Wiley & Sons.
5. Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace safety: A meta-analysis of the roles of person and situation factors. *Journal of Applied Psychology*, 94(5), 1103–1127.
6. Clarke, S. (2010). An integrative model of safety climate: Linking psychological climate and safety outcomes. *Safety Science*, 48(3), 161–170.
7. Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: A framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5(3), 347–358.
8. Gyekye, S. A., & Salminen, S. (2009). Workplace safety perceptions in Ghana: Implications for safety management. *Safety Science*, 47(8), 1058–1065.
9. Leveson, N. (2011). *Engineering a safer world: Systems thinking applied to safety*. MIT Press.
10. Mavis, K., & Boateng, R. (2018). The role of training in enhancing occupational health and safety compliance in Ghanaian mining firms. *Journal of Occupational Safety and Health*, 10(2), 45–56.
11. Neal, A., & Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, and safety behavior. *Journal of Applied Psychology*, 91(4), 946–953.
12. Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34(1–3), 99–109.
13. Zohar, D. (2010). Thirty years of safety climate research: Reflections and future directions. *Accident Analysis & Prevention*, 42(5), 1517–1522.
14. Zohar, D., & Luria, G. (2005). A multilevel model of safety climate: Cross-level relationships between organization and group-level climates. *Journal of Applied Psychology*, 90(4), 616–628.