



Work Related Safety behaviour in Occupational Safety and Health- Evaluating the Outcomes of Work Related Safety behaviour on Culture of the Organization Predominantly and Accident in Industry

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ABSTRACT: This study examined the outcomes of work-related safety behaviour on organizational culture and accident occurrence within Ghanaian industries. Using a quantitative cross-sectional survey design, data were collected from 380 employees across manufacturing, construction, and energy sectors. The research investigated how safety compliance, participation, and proactive safety behaviours influence organizational safety culture and the frequency of workplace accidents. Statistical analyses, including correlation and regression tests, revealed that safety behaviours significantly shape organizational culture and contribute to accident reduction. Safety compliance was found to reinforce structured safety practices, while proactive safety behaviour emerged as the most critical factor in minimizing workplace accidents. The findings highlighted that a strong culture of safety develops when management commitment aligns with employees' behavioural engagement in safety practices. The study emphasized that sustainable occupational safety depends on integrating behavioural consistency with institutional support, thereby promoting a safer, more productive, and resilient industrial environment in Ghana.

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INTRODUCTION

Occupational safety and health (OSH) are vital components of industrial productivity and employee well-being. Within industrial organizations, the extent to which employees adhere to and promote safety standards determines not only the prevention of accidents but also the overall culture of safety within the workplace. Work-related safety behaviour encompasses individual and collective actions aimed at identifying, preventing, and responding to workplace hazards. Such behaviours include safety compliance adhering to established safety procedures and safety participation, which involves voluntarily engaging in initiatives that enhance workplace safety beyond minimum requirements.

In Ghana, industrial growth in sectors such as construction, manufacturing, and energy has contributed significantly to national economic development. However, these sectors are also associated with high rates of occupational accidents and injuries, often attributed to lapses in safety behaviour, limited safety awareness, and inadequate organizational safety systems. The Ghana Labour Act (Act 651) and the Factories, Offices and Shops Act (Act 328) provide legal frameworks for workplace safety, yet compliance and enforcement remain inconsistent. A recurring challenge is the gap between safety policies and actual employee behaviour, which determines the effectiveness of safety programs and the extent to which they are embedded within organizational culture.

Developing and maintaining a strong safety culture depends largely on the daily safety behaviours of employees and management. When safety behaviour becomes an integral part of organizational culture, accident prevention transitions from a compliance requirement to a shared value (Cooper, 2000). Conversely, when employees exhibit poor safety habits such as neglecting protective gear, ignoring hazard reporting, or taking shortcuts accident risks increase, undermining both productivity and organizational morale. Thus, understanding how work-related safety behaviours influence the culture of safety and accident occurrence is essential for developing interventions that enhance workplace resilience.

While many studies have explored the technical aspects of occupational safety, fewer have examined the behavioural dimensions that underpin safety outcomes in industrial contexts, particularly in Ghana. Most organizations still focus on reactive measures such as incident reporting and post-accident analysis, rather than proactive behavioural approaches that cultivate a positive safety culture. This study therefore seeks to evaluate the outcomes of work-related safety behaviour on the culture of organizations and the occurrence of accidents in industrial settings, offering evidence-based insights to support sustainable safety practices.

Statement of the Problem

In Ghana's industrial sector, workplace accidents continue to pose a significant threat to employee welfare and organizational productivity. Despite the existence of occupational safety regulations, many industries experience recurring safety incidents that could have been prevented through consistent adherence to safe work practices. Research suggests that while safety policies and systems exist, their success depends largely on the safety behaviour of individual employees (Delle & Arthur, 2020). Unsafe acts, negligence, and complacency remain key contributors to workplace accidents, reflecting a disconnect between formal safety policies and daily employee behaviour.

Organizations that fail to foster a strong safety culture often face increased accident rates, financial losses, and declining employee morale. In many Ghanaian industries, employees perceive safety compliance as a managerial obligation rather than a shared responsibility, which limits proactive participation in safety initiatives. The persistence of such attitudes suggests that the relationship between work-related safety behaviour and the broader culture of the organization remains underexplored. Moreover, little empirical research has systematically examined how safety behaviour outcomes influence both safety culture and accident prevalence within the Ghanaian industrial context.

Without a clear understanding of these relationships, organizations may continue to adopt fragmented or reactionary safety measures that fail to address the behavioural roots of occupational hazards. Therefore, this study seeks to fill this gap by evaluating how work-related safety behaviour—specifically safety compliance, participation, and proactiveness—impacts organizational culture and the incidence of industrial accidents. Understanding these dynamics will provide valuable insights for developing sustainable, behaviour-driven safety strategies aimed at achieving a safer and more productive industrial environment in Ghana.

Purpose of the Study

The purpose of this study is to examine the influence of work-related safety behaviour on organizational culture and the occurrence of industrial accidents in Ghanaian industries. The study seeks to determine how specific behavioural dimensions—such as safety compliance, safety participation, and proactive safety engagement—affect the development of a strong safety culture and the reduction of workplace accidents. By evaluating these relationships, the study aims to generate empirical evidence that will help organizations, safety managers, and policymakers develop effective strategies to promote sustainable safety practices and enhance occupational health outcomes in Ghana's industrial sector.

Research Objectives

The study is guided by the following objectives:

- To examine the relationship between work-related safety behaviour and the culture of the organization.
- To assess the effect of safety compliance, participation, and proactiveness on accident reduction in industrial workplaces.
- To determine how work-related safety behaviour predicts organizational safety performance and employee well-being.
- To identify behavioural and organizational factors that strengthen or weaken occupational safety culture in Ghanaian industries.

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LITERATURE REVIEW

Theoretical Literature

Understanding work-related safety behaviour and its influence on organizational culture and accidents is grounded in several theoretical frameworks that explain how individual attitudes, environmental conditions, and organizational norms interact to determine safety outcomes.

1. Theory of Planned Behaviour (Ajzen, 1991)

The Theory of Planned Behaviour (TPB) posits that an individual's actions are guided by their attitudes, subjective norms, and perceived behavioural control. Applied to occupational safety, this theory suggests that employees' safety behaviours are influenced by their beliefs about the importance of safety, the expectations of peers and supervisors, and their perceived ability to act safely. When employees view safety as a shared organizational value and believe they have control over safe actions, they are more likely to demonstrate compliance and proactive safety behaviours. In industrial settings, this means that fostering positive safety attitudes and norms can lead to safer workplace conduct and reduced accident rates.

2. Safety Climate Theory (Zohar, 1980)

Safety Climate Theory emphasizes that an organization's collective perception of safety policies, procedures, and leadership commitment shapes individual safety behaviours. A positive safety climate reflects employees' shared belief that management prioritizes safety over production pressures. According to Zohar, when safety becomes an integral part of the organizational culture, employees internalize safe practices as standard behaviour rather than external obligations. In the Ghanaian industrial context, where resource limitations and production demands often conflict with safety priorities, building a strong safety climate is essential for ensuring that safety behaviour becomes embedded in the daily work routine.

3. Social Exchange Theory (Blau, 1964)

Social Exchange Theory suggests that employees reciprocate positive treatment from their organizations with desirable behaviours, including commitment to safety. When management demonstrates genuine concern for employees' welfare through training, support, and fair enforcement of safety policies, workers respond with compliance and voluntary safety participation. This mutual reinforcement fosters trust, accountability, and a safety-oriented culture. In industries where employees perceive managerial indifference or neglect, however, safety behaviour tends to decline, increasing the likelihood of accidents.

4. Behaviour-Based Safety (BBS) Model (Geller, 2001)

The Behaviour-Based Safety approach provides a practical framework for linking individual behaviour to safety performance. The model posits that by observing, reinforcing, and rewarding safe behaviours, organizations can reduce unsafe acts and promote a culture of continuous safety improvement. BBS interventions often involve feedback, peer observation, and positive reinforcement, all of which enhance awareness and accountability. This approach aligns with the view that safety culture is not solely determined by written policies but by consistent, observable actions that reflect organizational values.

Together, these theories provide a conceptual foundation for understanding how work-related safety behaviour develops and how it shapes organizational culture and safety outcomes. They highlight the importance of integrating behavioural, psychological, and organizational perspectives to promote effective and sustainable safety management.

Empirical Literature

Empirical studies on occupational safety consistently demonstrate that work-related safety behaviour is a critical determinant of organizational safety performance and accident reduction. Globally, research has shown that employees who engage in safety compliance (adhering to rules and procedures) and safety participation (voluntary efforts to improve workplace safety) contribute significantly to a positive safety culture (Neal & Griffin, 2006). These behaviours not only minimize accidents but also reinforce shared organizational values of accountability and care.

In the African context, Delle and Arthur (2020) examined the predictors of safety compliance in Ghanaian manufacturing firms and found that employee perception of management commitment strongly influenced their willingness to follow safety procedures. Similarly, Boateng (2021) reported that organizations that prioritize employee training and feedback mechanisms experience fewer workplace incidents and stronger safety cultures. These findings support the idea that safety behaviour is both a personal and organizational responsibility, requiring leadership involvement and continuous reinforcement.

At the international level, Clarke (2006) conducted a meta-analysis and concluded that safety climate and safety performance are closely linked; workplaces with a positive safety climate report fewer injuries and higher productivity. The same relationship holds in emerging economies, where organizational culture plays a significant role in mediating the link between safety policy and employee behaviour (Kheni, 2008). For instance, in Ghana's construction industry, poor supervision and lack of consistent safety communication have been identified as major barriers to safety compliance (Amponsah-Tawiah & Dartey-Baah, 2011).

In recent studies, proactive safety behaviours have gained attention as key elements of modern safety management. Proactive safety refers to self-initiated actions that prevent accidents before they occur, such as hazard reporting and peer mentoring. Norman (2023) found that employees who engage in proactive safety practices demonstrate higher awareness and contribute to collective learning, which strengthens organizational resilience. However, in many Ghanaian industries, proactive behaviours are constrained by hierarchical communication structures and limited empowerment of lower-level employees.

Safety behaviour also has measurable outcomes on accident frequency. Antwi and Agyemang (2019) found that high levels of safety participation were associated with reduced accident rates in the mining sector. Conversely, weak safety culture and inconsistent policy enforcement were linked to higher accident prevalence. This aligns with global evidence that unsafe behaviours—rather than unsafe conditions alone—account for a majority of workplace injuries (Cooper, 2000).

The link between safety behaviour and organizational culture has also been emphasized in multiple studies. Neal, Griffin, and Hart (2000) demonstrated that safety behaviour mediates the relationship between safety climate and safety performance, implying that the culture of safety within an organization depends heavily on employee actions and attitudes. In Ghana, Adjei and Owusu (2022) confirmed that safety leadership, training, and employee involvement are strong predictors of positive safety behaviour. Their findings indicate that when management fosters open communication, trust, and recognition, employees internalize safety as a shared organizational value.

Despite these insights, research gaps remain. Few empirical studies in Ghana have simultaneously evaluated how safety compliance, participation, and proactive behaviours collectively affect both organizational culture and accident reduction. Many organizations emphasize safety compliance as a regulatory requirement rather than as a behavioural culture that promotes organizational learning and continuous improvement. Consequently, this study seeks to fill that gap by systematically evaluating how work-related safety behaviour contributes to shaping safety culture and reducing accidents within industrial organizations in Ghana.

By integrating behavioural, organizational, and cultural dimensions, this study contributes to the growing discourse on occupational safety and health in developing economies, providing empirical evidence to support interventions that move beyond compliance to cultivate lasting safety cultures.

METHODOLOGY

Research Design

This study adopted a quantitative cross-sectional survey design to examine the relationship between work-related safety behaviour, organizational culture, and accident occurrence within Ghanaian industries. The quantitative approach was selected because it allows for the objective measurement of behavioural constructs and facilitates the statistical examination of relationships among variables. The cross-sectional design enabled data collection at a single point in time from a diverse group of industrial employees, offering a comprehensive snapshot of prevailing safety attitudes and practices. This approach aligns with previous occupational safety research that has utilized survey methods to assess behavioural and cultural influences on workplace safety outcomes (Neal & Griffin, 2006; Boateng, 2021).

Population and Sampling

The target population for the study consisted of industrial employees working in manufacturing, construction, and energy-related sectors in Ghana. These industries were selected because of their high exposure to occupational hazards and the critical role of employee behaviour in accident prevention. The population included both managerial and operational staff, ensuring a holistic understanding of safety behaviour across organizational levels.

A stratified random sampling technique was employed to ensure representativeness across industries and job categories. The population was stratified first by industrial sector (manufacturing, construction, and energy), and then by employee role (management, technical, and support staff). Based on Krejcie and Morgan's (1970) sample size determination table and considering the large workforce across these industries, a total sample size of 400 respondents was deemed sufficient to achieve statistical reliability and generalizability. Each stratum contributed proportionally to the final sample, with approximately equal representation of gender to enable comparative analysis.

Data Collection Instrument

Data were gathered through a structured questionnaire designed to measure work-related safety behaviour, organizational safety culture, and accident outcomes. The instrument comprised four main sections:

1. Section A: Demographic Information — captured respondents' age, gender, educational background, job position, years of experience, and industrial sector.
2. Section B: Work-Related Safety Behaviour — measured using items adapted from Neal and Griffin's (2006) Safety Behaviour Scale, which includes dimensions such as safety compliance, safety participation, and proactive safety behaviour.
3. Section C: Organizational Safety Culture — measured through items adapted from Zohar's (1980) Safety Climate Scale and Cooper's (2000) Behavioural Safety Framework, focusing on management commitment, communication, supervision, and teamwork.
4. Section D: Accident and Safety Performance Outcomes — captured self-reported data on workplace incident frequency, near-miss occurrences, and perceived safety performance using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Higher mean scores indicated stronger safety behaviour or a more positive safety culture.

Validity and Reliability

To ensure content validity, the questionnaire was reviewed by three experts in occupational health, industrial psychology, and safety management. Their feedback informed refinement of ambiguous items and improved contextual relevance to Ghanaian industry settings. The instrument was further pilot-tested among 30 employees from a medium-sized manufacturing company not included in the main study sample.

Results from the pilot test indicated high internal consistency, with Cronbach's alpha coefficients of 0.87 for work-related safety behaviour, 0.89 for organizational culture, and 0.85 for accident-related outcomes. These reliability indices exceed the 0.70 threshold recommended by Nunnally (1978), confirming the scale's internal consistency and measurement stability. Construct validity was further confirmed through exploratory factor analysis (EFA), which supported the three-factor structure of the safety behaviour construct (compliance, participation, and proactiveness).

Data Collection Procedure

Prior to data collection, ethical clearance was obtained from the institutional review board of the affiliated university. Formal permission was also sought from management of the selected companies. The researcher distributed questionnaires both physically and electronically (via Google Forms) to accommodate respondents across different regions and shift systems.

Each participant received an introductory letter explaining the study's purpose, confidentiality assurances, and the voluntary nature of participation. Respondents were encouraged to answer honestly and were assured that their responses would remain anonymous and be used solely for academic purposes. Completed questionnaires were collected after two weeks, yielding a total of 380 valid responses (a 95% response rate), which were used for analysis.

Data Analysis Techniques

Data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics such as frequencies, means, and standard deviations were used to summarize demographic characteristics and key study variables.

To address the research objectives, several inferential statistical tests were employed:

- Independent Samples t-test: to determine differences in safety behaviour based on demographic factors (e.g., gender, education, and experience).
- Correlation Analysis: to assess the strength and direction of relationships between work-related safety behaviour, organizational culture, and accident outcomes.
- Multiple Regression Analysis: to evaluate the predictive effect of safety behaviour dimensions (compliance, participation, and proactiveness) on both organizational culture and accident reduction.

All hypotheses were tested at a 5% level of significance ($p < 0.05$). The results were interpreted to highlight both statistical and practical implications for occupational safety management.

Ethical Considerations

The study strictly adhered to established ethical research standards. Participants' informed consent was obtained prior to data collection. Respondents were assured of anonymity, confidentiality, and voluntary participation, with the right to withdraw at any stage without any consequence. Data were securely stored on a password-protected device, accessible only to the researcher. Moreover, the study ensured that findings were presented objectively, without manipulation or misrepresentation of results, in accordance with institutional and international research ethics protocols.

Analysis and Discussion of Results

This section presents the findings derived from the analysis of survey data collected from industrial employees across the manufacturing, construction, and energy sectors in Ghana. The analysis focused on the demographic characteristics of respondents, levels of work-related safety behaviour, and its relationship with organizational culture and accident outcomes. Descriptive, inferential, and regression analyses were performed using SPSS version 26 to test the study's objectives.

Demographic Characteristics of Respondents

A total of 380 valid responses were analyzed, representing a 95% response rate. Table 1 presents the demographic profile of respondents by gender, age, education, job position, and years of experience.

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	214	56.3
	Female	166	43.7
Age	21–30 years	72	18.9
	31–40 years	154	40.5
	41–50 years	104	27.4
	Above 50 years	50	13.2
Educational Level	Secondary/Vocational	68	17.9
	Diploma/HND	122	32.1
	Bachelor's Degree	136	35.8
	Master's and above	54	14.2
Sector of Employment	Manufacturing	146	38.4

Variable	Category	Frequency	Percentage (%)
Years of Experience	Construction	132	34.7
	Energy	102	26.8
	1–5 years	98	25.8
	6–10 years	156	41.1
	Above 10 years	126	33.1

The data show that the majority of respondents (56.3%) were male, reflecting the male-dominant nature of industrial work in Ghana. Most participants (40.5%) were between 31 and 40 years old, indicating a predominantly mid-career workforce. Educationally, 35.8% held bachelor's degrees, and 32.1% had diplomas or HNDs, showing that most respondents possessed formal technical training. The largest proportion (38.4%) worked in the manufacturing sector, followed closely by construction (34.7%). The majority had between 6–10 years of experience, suggesting that most respondents had sufficient exposure to workplace safety practices.

Descriptive Analysis of Key Variables

Descriptive statistics were used to summarize the main study variables work-related safety behaviour, organizational culture, and accident occurrence.

Variable	Mean	Standard Deviation	Interpretation
Safety Compliance	4.16	0.58	High
Safety Participation	4.05	0.61	High
Proactive Safety Behaviour	3.92	0.67	Moderately High
Organizational Safety Culture	4.09	0.55	High
Accident Occurrence (Reverse Scored)*	2.18	0.74	Low

The results indicate that respondents demonstrated high levels of safety compliance ($M = 4.16$) and safety participation ($M = 4.05$). These findings suggest that employees generally adhere to safety procedures and willingly engage in safety-promoting activities. Proactive safety behaviour recorded a moderately high mean ($M = 3.92$), implying that while employees occasionally take initiative to identify or report hazards, there is room for improvement. The overall organizational safety culture was strong ($M = 4.09$), indicating that management support and communication about safety are evident in most organizations. Conversely, the low mean score for accident occurrence ($M = 2.18$) suggests a relatively low frequency of reported accidents, likely reflecting effective safety practices.

Independent Samples t-Test: Gender and Safety Behaviour

An independent samples t-test was conducted to determine whether there were gender differences in safety behaviour. The results are presented in Table 3.

Table 3: Independent Samples t-Test Results for Safety Behaviour by Gender

Variable	t	df	Sig. (2-tailed)	Mean Difference
Safety Compliance	1.82	378	0.070	0.10
Safety Participation	1.47	378	0.143	0.09
Proactive Safety Behaviour	2.28	378	0.023	0.12

There was no significant gender difference in safety compliance and participation ($p > 0.05$). However, a significant difference was found in proactive safety behaviour ($t = 2.28$, $p = 0.023$), where male employees reported slightly higher proactivity in identifying risks and leading safety initiatives than females. This could reflect gendered job roles, with men often occupying technical positions that require active hazard engagement.

Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the three main variables: work-related safety behaviour, organizational culture, and accident occurrence.

Table 4: Correlation Matrix

Variables	1	2	3
1. Work-Related Safety Behaviour	1		
2. Organizational Safety Culture	0.68**	1	
3. Accident Occurrence	-0.57**	-0.61**	1

The results reveal a strong, positive correlation between work-related safety behaviour and organizational safety culture ($r = 0.68$, $p < 0.01$), indicating that employees who exhibit strong safety behaviours contribute positively to a strong safety culture. There is also a significant negative correlation between safety behaviour and accident occurrence ($r = -0.57$, $p < 0.01$), implying that higher levels of safety behaviour are associated with fewer accidents. Additionally, organizational culture is negatively related to accident occurrence ($r = -0.61$, $p < 0.01$), reinforcing that a positive safety culture helps prevent accidents.

DISCUSSION OF RESULTS

The primary aim of this study was to evaluate the outcomes of work-related safety behaviour on organizational culture and industrial accident occurrence in Ghana. Using quantitative methods, the study explored how safety compliance, safety participation, and proactive safety behaviour influence organizational safety culture and the frequency of workplace accidents. The results provide valuable insights into how behavioural patterns among employees affect occupational safety and the broader organizational environment, particularly within Ghana's manufacturing, construction, and energy industries.

The study found that work-related safety behaviour—comprising compliance, participation, and proactiveness—was significantly and positively correlated with organizational safety culture. This means that employees who consistently follow safety procedures, engage in collective safety activities, and take initiative in identifying hazards contribute meaningfully to cultivating a strong and positive safety culture within their organizations. This finding supports Cooper's (2000) behavioural safety model, which emphasizes that a robust safety culture is not merely the product of policies and regulations but of consistent behavioural reinforcement at all organizational levels.

The result also aligns with Neal and Griffin's (2006) conceptualization of safety behaviour as a dual construct involving compliance and participation. The high levels of safety compliance and participation observed in this study suggest that Ghanaian industrial employees generally acknowledge safety as a shared organizational value rather than an individual responsibility. When employees adhere to safety protocols and actively contribute to safety discussions, it creates an environment where management and staff share mutual accountability for preventing accidents.

Furthermore, the findings resonate with Zohar's (1980) seminal work on safety climate, which posits that consistent demonstration of safety behaviour reinforces employees' perception that safety is valued and rewarded within the organization. In the Ghanaian industrial context, where regulatory enforcement sometimes lags behind international standards, employee-led safety initiatives can compensate for institutional gaps. Therefore, developing a culture in which safety behaviour is encouraged, recognized, and rewarded can lead to sustainable improvements in organizational safety outcomes.

The study found that proactive safety behaviour—employees' voluntary efforts to identify, report, and eliminate hazards before accidents occur—was the strongest predictor of accident reduction. This result is consistent with findings by Christian et al. (2009), who established that proactive safety actions directly minimize accident risks by interrupting the sequence of unsafe conditions that typically precede incidents. Proactive safety behaviour reflects an advanced stage of safety culture maturity, where employees internalize safety as a personal and collective value rather than a management-imposed requirement.

In Ghana's industrial settings, proactive safety behaviour is often constrained by limited resources, hierarchical communication systems, and the perception that safety is the sole responsibility of supervisors. However, the current findings suggest that when employees are empowered to take ownership of safety processes—through open communication channels, regular training, and recognition of safe practices—the likelihood of accidents significantly decreases. This finding corroborates Reason's (1997) "Swiss Cheese Model" of accident causation, which posits that safety incidents often result from the alignment of latent organizational weaknesses and unsafe acts. Proactive behaviour acts as a barrier that blocks this alignment by addressing hazards before they escalate into accidents.

Safety compliance emerged as the most influential behavioural dimension in predicting organizational culture. Employees' adherence to safety rules, use of protective equipment, and observance of operational procedures are foundational to establishing a structured and consistent culture of safety. This result aligns with Clarke's (2010) meta-analytic review, which emphasized that compliance behaviour serves as the baseline upon which higher-order safety initiatives—such as participation and proactiveness—are built.

However, while compliance is necessary for safety, it is not sufficient on its own to ensure sustainable culture change. In many Ghanaian industries, compliance is often motivated by external monitoring or fear of sanctions rather than internalized safety values. As Fernández-Muñoz et al. (2007) note, true safety culture development requires a shift from compliance-based enforcement to commitment-based engagement. Therefore, organizational leaders should view compliance as a starting point and gradually integrate participatory and proactive strategies that engage employees emotionally and cognitively in safety management.

The t-test results indicated no significant gender difference in safety compliance and participation but revealed a slight variation in proactive safety behaviour, with male employees showing higher levels of proactivity. This finding may be explained by the gendered distribution of roles within Ghana's industrial workforce, where men are more frequently assigned to high-risk operational tasks that demand constant hazard assessment and physical safety interventions. The finding aligns with Gyekye (2010), who observed that occupational exposure and role assignments often shape safety perceptions and responses more than gender alone. Nevertheless, the absence of major gender disparities in compliance and participation is encouraging, suggesting that both male and female employees in Ghanaian industries are equally committed to safety. This pattern reflects the increasing gender inclusiveness of industrial employment and the growing awareness of workplace safety among female professionals in technical fields. Organizations should therefore ensure that safety training and promotion programs remain inclusive, addressing the unique needs and constraints faced by both genders.

The correlation and regression analyses collectively demonstrated that higher levels of safety behaviour are associated with stronger organizational cultures and fewer workplace accidents. These results are consistent with Griffin and Neal's (2000) framework linking safety behaviour to organizational outcomes, which asserts that safety behaviour mediates the relationship between safety climate and safety performance. Similarly, the strong negative correlation between safety culture and accident occurrence confirms that when organizations embed safety into their values and leadership practices, they experience fewer incidents.

In Ghana's industrial context, where safety compliance often depends on management initiative, these findings underscore the need for leadership-driven safety culture. The Cooper (2000) triadic model—which links organizational, behavioural, and psychological elements of safety—suggests that management commitment must be matched by behavioural consistency among employees. This study provides empirical support for this principle, demonstrating that safety culture and accident outcomes are behavioral reflections of the broader organizational system.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study set out to examine the outcomes of work-related safety behaviour on organizational culture and industrial accident occurrence within Ghanaian industries. By focusing on three dimensions of safety behaviour—compliance, participation, and proactiveness—the research provides a comprehensive understanding of how individual and collective actions contribute to occupational safety and organizational performance. The findings affirm that safety behaviour is a critical determinant of both safety culture and accident prevention.

The results revealed that when employees adhere to established safety protocols and actively participate in safety initiatives, the organization develops a stronger safety culture characterized by trust, communication, and shared accountability. Proactive safety behaviour emerged as the most influential factor in reducing accident rates, underscoring the need for anticipatory risk management practices. Furthermore, the study demonstrated that organizational safety culture mediates the relationship between individual behaviour and accident outcomes, confirming that safe workplaces are built not only on technical standards but also on behavioural consistency and cultural alignment.

The implications of these findings extend beyond the organizational level to national and policy contexts. For Ghanaian industries striving toward sustainable productivity, safety must be embedded in everyday work practices rather than treated as an external regulatory requirement. A culture of safety is cultivated when management commitment intersects with employee engagement, fostering a workplace environment where every worker assumes personal and collective responsibility for safety outcomes. Ultimately, promoting safety behaviour enhances not only accident prevention but also morale, productivity, and long-term organizational resilience.

Recommendations

To strengthen occupational safety and health outcomes across Ghanaian industries, organizations should prioritize the behavioural dimensions of safety management. Management must move beyond enforcing compliance to fostering a culture of commitment and

continuous learning. This involves creating systems that encourage employee participation in safety planning and decision-making while recognizing proactive contributions to hazard identification and risk mitigation.

Regular training and communication should be institutionalized to reinforce safety awareness at all levels of the organization. Such programs should emphasize the link between individual behaviour, organizational values, and safety outcomes, ensuring that employees understand the practical and ethical importance of safety in the workplace. Additionally, leadership must demonstrate visible commitment to safety by modeling the behaviours they expect from employees. When workers observe consistent leadership behaviour, it strengthens the perception that safety is a shared organizational priority.

Reward and recognition mechanisms should be integrated into performance appraisal systems to motivate compliance and proactive safety actions. Positive reinforcement, such as public acknowledgment or safety awards, encourages sustained engagement in safe work practices. At the same time, non-punitive reporting systems should be established to promote openness in hazard reporting and learning from near misses.

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