Volume 4, No. 2 February 2025 - (345-359)
p-ISSN 2980-4868 | e-ISSN 2980-4841
https://ajesh.ph/index.php/gp

Influence of Leadership Behavior on Safety Culture Integration at PT Cipta Kridatama Site PT Borneo Indobara

Yustinus Pramono Priambodo
Institut Teknologi Bandung, Indonesia
Email: yustinus_priambodo@sbm-itb.ac.id

ABSTRACT
The high risk that occurs in the mining environment requires the application of transformative leadership to build a culture of safety and encourage positive safety behavior. The purpose of this research is to empirically analyze the relationship between safety leadership, safety culture, and safety behavior, as well as to examine the mediating role of safety behavior in the relationship. The research method used is a quantitative approach with SEM-PLS analysis, involving a survey of 170 employees from various levels and departments. The results showed that safety leadership has a significant and positive influence on safety culture (path coefficient = 0.751, $p < 0.001$) and safety behavior (path coefficient = 0.874, $p < 0.001$). In addition, safety behavior is proven to mediate the relationship between safety leadership and safety culture. This research model is able to explain 76.3% of the variance in safety behavior (R-square = 0.763) and 90.1% in safety culture (R-square = 0.901). The Average Variance Extracted (AVE) values for safety leadership, safety behavior, and safety culture are 0.863, 0.754, and 0.829, respectively, while the Composite Reliability values for all variables are above 0.90, indicating high validity and reliability. The implications of this research provide valuable insights for the management of PT Cipta Kridatama in improving safety practices. The resulting recommendations include improving the safety mentoring program, increasing the frequency of safety discussions, improving the incident reporting and investigation system, and strengthening the safety leadership training program to create a safer and more conducive work environment.

Keywords: Safety Leadership, Safety Culture, Safety Behaviour, Mining.

INTRODUCTION

Safety in the workplace, particularly in high-risk industries such as mining and construction, is a critical concern that extends beyond mere compliance with regulations (Mutegi et al., 2023). Effective safety management involves cultivating a robust safety culture where safety behaviors are consistently practiced and reinforced by leadership at all levelsThe transformational leadership theory gives rise to the concept of safety leadership (Setiono & Andjarwati, 2019). It mentions the role of leaders as one who encourages and directs employees to keep safety first and foremost in all of their daily work activities. One of the methods used to gauge the effectiveness of safety leadership is through the level of maturity of the safety culture in the

organization that consists of the organization's core values, beliefs and safety related practices (Groves & Bunch, 2018); (Mutegi et al., 2023).

PT Borneo Indobara's drive for zero damage accompanied by aiming for contracts with PT Cipta Kridatama which is known for having an immature safety culture Ms. Please change the wording in the following sentence: Research shows that complementing the safety culture in such situations is difficult because the concessionaire company has a vested interest in, inter alia, musu's compliance with its safety protocols because there are hierarchical and deep-seated negative practices in the other/s and in subsidiaries: The research says that creating conditions for work safely is a lot of hard work because business owners have to be guided by not just the rules of safety but also cleaning up habits and ideas that are embedded in the small groups. part of this company that are likely to be resistant to such change (Trevino & Nelson, 2021). A challenge arises in the development of interoperability with an intact safety culture that supports the limits set by the head office but at the same time changes the attitudes and activities of the subsidiary teams regarding safety. In contrast, failure to properly facilitate this cultural integration would risk the overall safety performance and result in safety related problems and ultimately compromise the parent company's objectives of 'zero harm' (Rottig, 2017).

Safety behavior is fundamentally shaped by the underlying safety culture within an organization, which serves as the bedrock for promoting consistent and proactive safety practices among employees. (Schein, 2014) suggests that safety culture represents the shared values, beliefs, and norms within an organization that drive individuals to prioritize safety in their daily activities. The development of a strong safety culture is essential, particularly in organizations undergoing significant changes, such as after an acquisition, where alignment between the acquired and acquiring companies' safety practices is crucial. In this context, the role of safety leadership becomes paramount. Transformational leadership in safety, as outlined by (Lyubykh et al., 2022), involves leaders who inspire and motivate employees to adopt safe behaviors by embodying and promoting safety as a core organizational value (Yazdi, 2025). Effective safety leadership fosters a safety culture that not only emphasizes compliance with safety regulations but also encourages employees to engage in behaviors that exceed basic requirements, thereby reducing the likelihood of accidents and injuries. Theory of Planned Behavior (TPB) further supports this by indicating that safety behavior is influenced by an individual's attitude towards safety, the perceived norms, and the perceived control over their actions (Guerin & Toland, 2020). Thus, the establishment of a strong safety culture, driven by transformational safety leadership, is critical in shaping and sustaining the safety behaviors necessary to protect employees and enhance organizational safety performance (Asad et al., 2022).

As safety leadership is critical in establishing and maintaining a strong safety culture, it is important to understand the leadership frameworks of PT Borneo Indobara (PKP2B Concessionaire) and PT Cipta Kridatama (contractor) before and after the change of contractor to identify gaps that may need to be addressed. From internal sources, the ability to provide clear

safety direction, inspire commitment to safety goals, and lead by example are basic competencies expected of all leaders at PT Borneo Indobara. Following the contractor transfer, these competencies were aligned with leadership expectations at PT Cipta Kridatama, where leaders are tasked with guiding the actions and developing safety leaders to achieve results that not only meet, but exceed the company's safety objectives by ensuring the safety and well-being of employees. With this alignment in place, leaders from both companies, who serve as role models, are expected to demonstrate these competencies consistently. The challenge then is how to balance the strategic business objectives of the combined entity with the imperative to maintain the health and safety of all employees involved in the operations.

PT Cipta Kridatama, from Indonesia started in 1997 as a subsidiary of Trakindo Utama, which rented heavy machinery to customers. Today, the company serves a myriad of ventures along the Indonesian mining industry supply chain to deliver end-to-end services. Owing to the optimization of the mining business in Indonesia, Cipta Kirdatama gradually transitioned its services in 2002 to mining services which offered plug-and-play approach to commence projects within the country by tackling everything from the equipment logistics to the operational and infrastructural requirements.

Based on the safety statistics, PT Cipta Kridatama (PT CK) appears to be encountering considerable difficulties in keeping an enhanced safety culture and ensuring the implementation of safety measures . LT's data indicates a worrying trend in both lagging and leading indicators. The Total Recordable Incident Case (TR) fluctuated throughout the months and there was a particularly worrying increase of 8 cases in July which was the highest number of cases recorded over the reporting period of observation in the research. Aggravating this further, the Total Incident Frequency Rate (TIFR) which was overall on a decreasing trend has on most occasions hovered above the cut off point of 2.6 and in July the dramatic increase was to 6.62. What this indicates is that there remains a recurring issue which all attempts at enforcing measures to reduce the occurrence of cases still seem to miss the stump. In terms of critical hazards, operational procedure violations dominate with 11 breaches being recorded, demonstrating a concerning lack of compliance with minimum safety standards. Furthermore, poor supervision, a failure to comply with safety regulations on permits such as LOTO and even non-wearing of PPE continue to highlight the broader challenges bedevilling the safety management system.

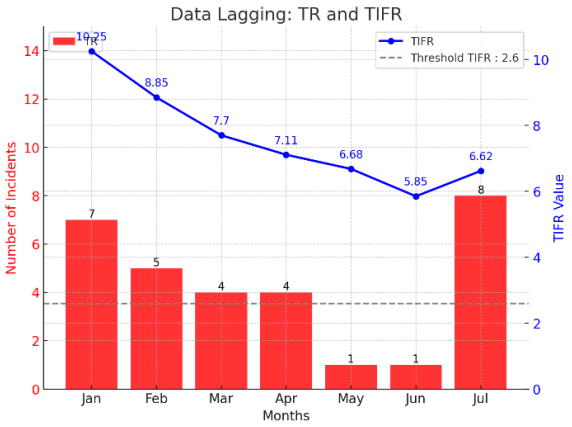

Figure 1. Data Lagging TR and TIFR

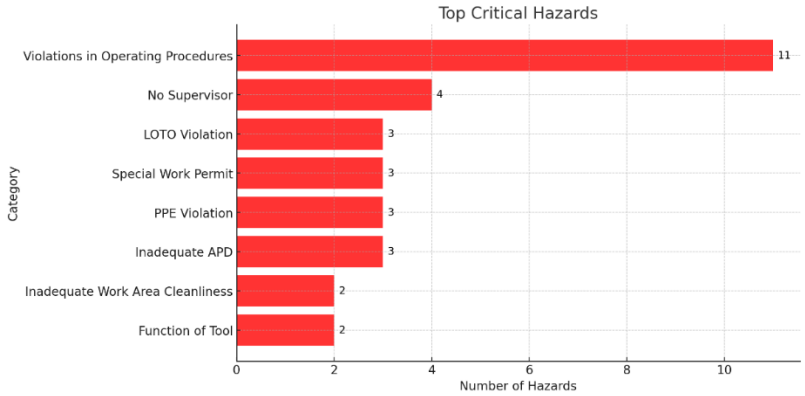

Figure 2. Top Critical Hazards

Based on the analysis, there are a great many hazard reports with the majority (KTA) which suggests that PT CK has been reporting hazards but does not follow up. It can also be deduced that encroachment hazard such as soft land, uneven surface, and further water collection overflow are likely to be the basic facts for safety concerns. This is made worse by poor garbage disposal practices, inappropriate location of fire extinguishers and lack of cleanliness which are all essential for the protection of employees.

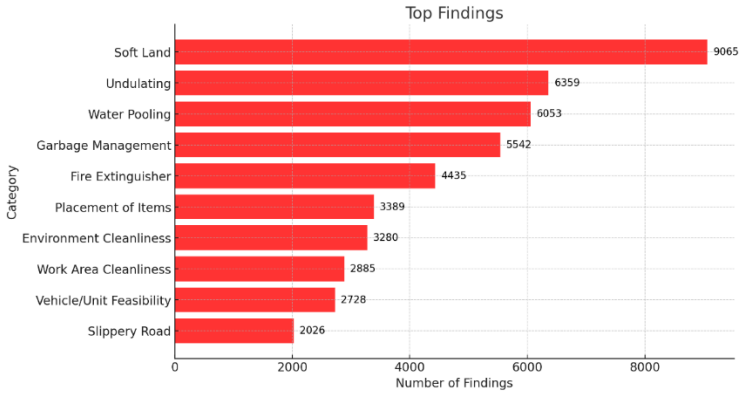

Figure 3. Top Findings Hazard

Management of PT CK's safety strategies has been brought into question as there is no correlation between the hazards reported, and the measures enacted afterwards. The evidence suggests that while numerous hazards are reported, the effective, practical management of such threats is low with the result that the threats keep occurring. With reference to the reports in July on TR and TIFR, failure to take these hazards seriously lead to accidents that could have been avoided. Further, the numerous violations of the rules on procedures and lack of adequate supervision point to a deficiency in leadership when it comes to safety. The weak correlation between safety leadership and employee conduct is demonstrated by the endless violations of PPE and poor maintenance of the work setting. This deficit in leadership is doubly compounded by the environmental and infrastructural hazards that abound and have been more than sufficiently reported , and have not been addressed adequately. It is against this background that an urgent round figure overhaul for the entire culture of safety practiced in CK to commence MTKA, with particular emphasis on the need to take leadership responsibility seriously, the effectiveness of hazard mitigation policies and procedures, as well as, the general security system management in order to avoid repeated crashes.

Based on the formulation of the problem that has been stated, this research aims to analyze the influence of transformational safety leadership on safety culture at PT Cipta Kridatama Site PT Borneo Indobara, as well as examine the influence of safety culture on safety behavior at the same location. In addition, this research also seeks to evaluate the direct influence of transformational safety leadership on safety behavior, as well as examine the mediating role of safety culture in the relationship between transformational safety leadership and safety behavior at PT Cipta Kridatama Site PT Borneo Indobara.

RESEARCH METHOD

Research Design

The research follows a structured approach, starting with identifying the business issue, such as safety leadership effectiveness and safety culture maturity. This leads to formulating research questions and objectives, focusing on the role of transformational leadership in shaping safety culture and behavior. Data collection is conducted through surveys involving employees and management, followed by data analysis to examine relationships between safety leadership, culture, and behavior. The research concludes with findings that highlight leadership's impact on safety improvements, providing insights for refining leadership styles and feedback mechanisms to enhance safety performance.

Data Collection

In this research, the main method of data collection was through questionnaires. The population includes all employees working at PT Cipta Kridatama Site PT Borneo Indobara from various departments, positions, and levels within the organization. To increase the validity of the research results and the applicability of the findings across company boundaries, a random

sampling technique will be applied. The appropriate sample size will be calculated through Hair's formula:

Minimum Sample Size = 17 × 10 = 170

Thus, the minimum sample size required is 85, but to be more credible, the number of respondents is recommended to target at least 170. This approach guarantees that the sample is representative of the entire PT Cipta Kridatama Site PT Borneo Indobara organization.

Data Analysis

The research employs Structural Equation Modeling (SEM) to analyze quantifiable survey data, allowing for the examination of complex multivariate relationships, particularly how safety leadership influences safety culture and behavior. The analysis begins with the outer model (measurement model), which assesses the reliability and validity of questionnaire items in measuring constructs like transformational leadership, safety culture, and behavior. Once confirmed, the inner model (structural model) evaluates the relationships between latent variables, using path coefficients and statistical tests to determine the impact of safety leadership on safety culture and behavior. Mediation analysis further explores whether safety culture serves as a link between leadership and safety behavior. Finally, model fit is assessed using indices like CFI, TLI, and RMSEA, ensuring alignment with the data. The results provide insights into the effectiveness of transformational leadership in fostering a strong safety culture and behavior at PT Cipta Kridatama Site PT Borneo Indobara, leading to practical recommendations for improving safety practices.

RESULT AND DISCUSSION

SEM Analysis

The data was analyzed using Structural Equation Modeling (SEM), a powerful statistical method that specializes in testing and estimating causal effects between variables.

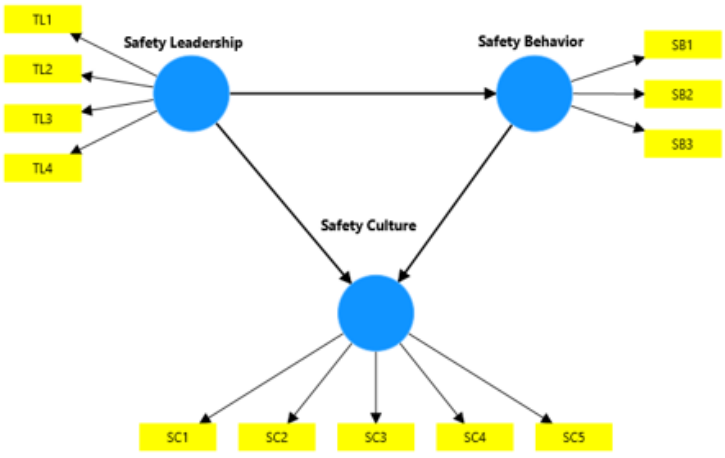

Figure 4. SEM Model Used

This SEM assessment of the research intends to:

1. Delve into the interconnections of the primary components which are Transformational Leadership, Safety Behavior and Safety Culture.
2. Investigate the correlation between these components in detail by calculating direct and indirect effects.
3. Verify the degree of fit of the suggested pattern by assessing the compatibility of the derived model and the facts obtained through observation.

Using SEM, the work intends to test the claimed relationships with a view to providing a justification for the theoretical claims and useful information for enhancing workplace safety measures. This analysis will be further developed in the following sections.

Evaluation of the Measurement Model

The outer model tests the reliability and validity of the construct measurements in this research, that for all factors, the loadings meet the cut-off points. This solid outer model complements the inner model well as it provides a strong basis for looking at the causality aspect.

Table 1. Outer Loading, Composite Reliability and Average Variance Extracted

Variable	Measurement Item	Dimension	Indicators	Outer Loading	Cronbach Alpha	Composaite Realibility	AVE
Safety Leadership	TL1	Idealized Influence	Role Model				
			Walk the Walk	0.937			
	TL2	Inspirational Motivation	Clear Vision				
			Optimism	0.918		0.948	
	TL3	Intellectual Stimulation	Innovation		0.947		0.863
			Creativity	0.951			
	TL4	Individualized Consideration	Mentorship				
			Empathy	0.908			
Safety Culture	SC1	Pathological	Safety as a Burden	0.906			
	SC2	Reactive	Incident Response	0.934			
	SC3	Calculative	Systematic Safety Management	0.906	0.948	0.952	0.829
	SC4	Proactive	Risk Mitigation	0.873			
	SC5	Generative	Continuous Improvement	0.932			
Safety Behavior	SB1	Attitudes Toward the Behavior	Positive Evaluation of Safety Practices	0.855			
	SB2	Subjective Norms	Perceived Social Pressure	0.881			
			Ease of Following Safety Protocols		0.947	0.838	0.754

Variable	Measurement Item	Dimension	Indicators	Outer Loading	Cronbach Alpha	Composaite Realibility	AVE
	SB3	Perceived Behavioral Control	Authority to Influence Safety	0.868			

Variabel Safety leadership is measured using 4 valid measurements where the outer loading ranged between 0,908-0,951, this signifies that all the 4 items are valid in defining the level of safety leadership. The level of reliability of the variable is acceptable which is shown by Cronbach alpha and composite reliability above 0,70 (reliable). The level of convergent validity is indicated by the AVE value of 0,863 > 0,50 has met the requirements of convergent validity well. When all variations of measures that are contained in the variable are considered, the total is 86.3 %

From the 4 items measurements, TL1 and TL5 has the highest outer loading TL 0.937 and 0.951 respectively, which indicates that the two items which are related to the role model, walk to walk and inovation creativity have been well established from the work environment of PT Cipta Kridatama site PT Borneo Indobara.

PT Cipta Kridatama is working on integrating safety culture with PT Borneo Indobara to achieve a zero incident target. The analysis showed several areas that require improvement. In leadership, TL2 and TL4 scored the lowest, indicating the need for more consistent and personalised communication from supervisors regarding the safety vision, as well as increased optimism in achieving safety goals through recognition of achievements and changing perceptions of challenges. In safety behaviour (SB1), there is still room to strengthen employees' belief in the importance of safety protocols through leadership engagement, reward programmes and fearless reporting of near-miss incidents. Safety culture (SC2 and SC4) shows that the company still tends to be reactive to safety issues and needs to improve risk mitigation efforts through more intensive training, better reporting systems, and employee involvement in risk identification. To accelerate integration, PT Cipta Kridatama needs to conduct employee training, standardisation of joint safety procedures, regular safety forums, and joint safety campaigns, as well as utilising technology and periodic audits for continuous improvement.

Discriminant Validity

To evaluate discriminant validity, it is necessary to examine Fornell and lacker criteria. Discriminant validity is an evaluation step whether the variables in consideration are different in theory and proven as such in empirical/statistical analysis. The safety behaviour variable is rooted at AVE (0.868), safety culture variable at (0.881), and safety leadership variable at (0.874).

Table 2. Fornel dan Lacker Discriminant validity

	Safety Behavior	Safety Culture	Safety Leadership
Safety Behavior	0.868		
Safety Culture	0.881	0.910	
Safety Leadership	0.874	0.948	0.929

The Discriminant Answer Table illustrates the relationship between the three most important safety components at PT Cipta Kridatama Site Borneo Indobara. The top third of the table shows the construct reliability values for each component - Safety Behaviour 0.868, Safety Culture 0.910, and Safety Leadership 0.929. Each of these values is above 0.8 which means it has good indicators. Meanwhile, measurements between constructs are strongly interconnected between the three components. The highest correlation is from Safety Culture to Safety Leadership with a value of 0.948, followed by a correlation from Safety Behaviour to Safety Culture 0.881, and a correlation from Safety Behaviour to Safety Leadership0. 874. The high value of this correlation indicates a close relationship between the three aspects of safety, i.e. an increase in the above aspect tends to be followed by an increase in the other aspects. This indicates that the three components support each other and have been well integrated in the company's safety management system.

Table 3. Cross Section Analysis Discriminant

	Safety Behavior	Safety Culture	Safety Leadership
SB1	0.855	0.717	0.757
SB2	0.881	0.789	0.807
SB3	0.868	0.787	0.708
SC1	0.817	0.906	0.800
SC2	0.794	0.934	0.911
SC3	0.819	0.906	0.877
SC4	0.771	0.873	0.767
SC5	0.811	0.932	0.943
TL1	0.759	0.893	0.937
TL2	0.837	0.865	0.918
TL3	0.821	0.934	0.951
TL4	0.827	0.825	0.908

Such a sophisticated bond between the three safety variables has been registered during the discriminant validity analysis that was carried out in PT Cipta Kridatama. In this case, Safety Culture and Safety Leadership were seen to have a strongly positive correlation of 0.682, which is enough to assert that higher Safety Culture is accompanied by higher Safety Leadership. In contrast, Safety Behaviour tended to show negative correlation with these two variables, -0.662 with Safety Culture and -0.437 with Safety Leadership.

What is particularly noteworthy is that Safety Behaviours indicators (SB1-SB3) return relatively high values of approximately between 0.855 and 0.881. On the other hand, the Safety Culture indicators (SC1-SC5) have very good scores that range between 0.873 and 0.934, while the Team Leadership indicators (TL1-TL4) have very good scores that range between 0.908 and 0.951. This demonstrates the disparity between realistic safety behaviour and the safety culture and leadership prevailing in the company. This situation suggests that unequal disruption should be placed on the integration of safety behaviours to the safety culture and the safety leadership behaviours that are prevalent in the workstation of PT Cipta Kridatama. Even if the individual values of the indicators are relatively high, the negative correlations mean that there is some underlying problem on the disintegration of the safety programme during the realisation of the safety programme.

Structural Model Evaluation

The analysis of the governance structures within the firm is done through inter-variable correlation checks to estimate the presence of hypotheses, as well as through VIF diagnostic figure assessments. The assessment of multicollinearity involves, as a first measure, estimating Inner VIF indicators. (Hair & Alamer, 2022) observed that Inner VIF coefficients of less than 5 depicts that there is no multicollinearity among the variables.

The second is corrected and hypothesis testing between the variables using the t-statistical value or the hypothesis significance level p-value. The primary requirement is that if the t-statistic calculated turns out to be greater than 1.96 – referencing the t-table – or vice versa if the p-value obtained from the test results turns out to be less than 0.05, between the for which there is intervention there is a significant influence. Sig. 0.05 indicates the decision boundary for a 95% interval. And it also needs to be communicated the obtained 95% interval estimate of the path coefficient parameters of the model and the respective t statistic calculated aginarsop ,22 established . And the third is the f square value, namely the effect of direct variables at the level of the structural model with criteria f high 0.35, moderate 0.15, and low 0.02. (Hair & Alamer, 2022) and the f square of the mediation effect is called the upsilon v's f square f', statisitic which is obtained from the square of the mediation) cumalative, (Lachowicz, 2018) interpreted in (Gaskin et al., 2023) is a low medium high.

Table 4. Inner VIF

	Safety Behavior	Safety Culture	Safety Leadership
Safety Behavior		4.224	
Safeti Culture			
Safety Leadership	1.000	4.224	

Referring to the correlation table, it evident that there exist relationships that are significantly correlated among the safety variables in the work environment of PT Cipta Kridatama site PT Borneo Indobara. In the implementation of the relationship, Safety Behaviour

and Safety Culture show a strong correlation which a value of 4.224 underthe work or mining operations. This indicates that a safety behavior has a close relationship with the safety culture in a high-risk workplace. In the same modo, Safety Leadership and Safety Culture also possesther strong correlation and equals 4.224 thus indicating themore the leadership have the position in shapingthe safety culture. Meanwhile, the relationship of the Safety Leadership and Safety Behaviour show a correlation of 1,000 which depicts a perfect linear relationship between thes variables. Clearly, it has been highlighted how the opertional management of PT Cipta Kridatama needs to devise and increase the speed of the regulatory system on the employees development in bringing about real and meaningful safety that would minimize accidents and findings that are not properly addressed by the supervisors.

In verifying the multicollinearity between variables in the structural model's hypothesis testing, it would be appropriate to examine the inner VIF statistic. The estimation yields an inner VIF value less than five, suggesting that multicollinearity among constructs is comparatively low. Results of parameter estimation in the SEM PLS are robust (unbiased).

Hypothesis Test

In attempts to integrate safety at PT Chipta Kridatama, especially in regard to operations at PT Borneo Indobara, three correlation relationships have been found out in the implementation of work safety at PT Cipta Kridatama operations at PT Borneo Indobara which are based on the site survey reports.

Table 5. Hypothesis Tes

Hypothesis	Path Coefficient	p-value	95% Confifence Interval Path Coefficient		F Square	Upsilon V
H.1 Safetry Behavior → Safety Culture	0.225	0.000	0.321	0.315	0.132	
H.2 Safety Leadership → Safety Behavior	0.874	0.000	0.837	0.904	3.224	
H.3 Safety Leadership → Safety Culture	0.751	0.000	0.664	0.838	1.484	
H.4 Safety Leadership → Safety Behavior → Safety Culture	0.196	0.000	0.115	0.277	0.196	0.156

This paper adopts the view that behavior can positively influence changes to a weak safety culture. In hypothesis 1 a positive and weak coefficient of 0.225 was described and some significant relationships with a p-value of 0.000 < 0.05 were established. Any change in Safety Behaviour will in turn result in an increase in Safety Culture in the operational area. Based on the findings and the analysis, in 95% of the confidence the Behaviour safety in the improvement of safety culture is between 0.132 to 0.315. the presence of safety behaviour in increasing work motivation has a small effect at the structural level f square = 0.132. The need for a programme is considered very important for increasing the empowerment of operational supervisors where

there is a policy or regulation of PT Cipta Kridatama or PT Borneo Indobara that seeks to significantly increase the empowerment of supervisors.

The Second Hypothesis formulated (H2) is accepted which states that there is a strong positive effect on leadership safety towards the enhancement of safety behavior Safety leadership has a very strong relationship with safety behavior with a path coefficient of 0.874 and a p value of 0.0001. The strength of the relationship with f square equals to 3.224 is also very large. This strong relationship confirms that the management and operational leaders of PT Cipta Kridatama have a crucial role in the safety behavior of employees. Safety leadership effectiveness is determined by behavioral standard enforcement, procedure adherence, and the development of a safety culture.

We accept the second hypothesis (H3) regarding the robust positive influence the relationship between Safety Leadership and Safety Culture at PT Cipta Kridatama that has been obtained through the analysis above is very satisfactory, -with path coefficient of 0.751 and p-value of 0.000 that suggests negative null hypothesis is to be rejected. The f square value of 1.484 indicates that safety leadership does significantly influence the safety culture formation in the organisation at f square 95% confidence interval that is between 0.664 to 0.838.

We can accept the Second Hypothesis (H4) which is that there is a functional relationship between the mediation of safety behaviour and the cultural integration at PT Cipta Kridatama site Borneo Indobara's efforts towards promoting a company culture of safety. Empirical evidence demonstrates that strong Safety Leadership from top management fosters greater Safety Behaviour in employees, and that leads to further deepening Safety Culture. There is good integration of safety culture between PT Cipta Kridatama and PT Borneo Indobara which has enhanced the synergy in execution of safety measures at the mining site. Where the evaluation shows that the mediation process is moving in the tools operating in space, there are opportunities for expansion to enhance safety behaviour by means of training, social outreach and firming up on management commitments. But if there are deficiencies in the mediation process that has existed in the operational level, there are improvements to be done such as; modification of any of the safety procedures, increasing oversight in the region, or altering safety intervention programs so that there is a better and more effective safety climate in the near future.

Even though safety leadership proved to be extremely critical in forming the safety culture in PT Cipta Kridatama, there are still aspects that need to be enhanced as the coefficient value has not been maximized Yet. Therefore, certain measures must be enforced, among which are the establishment of a better defined safety mentoring program, speeding up the frequency of safety talks, and other changes to the incident reporting and investigation system. There is, however, a need for PT Cipta Kridatama whereby management moves beyond a passive approach and collaborates with workers to ensure ongoing maintenance of the gained improvements through incorporating consistency in audits, inspections, behavioral observations and also

reinforcement of the safety leadership training program. Management-worker communication patterns should be modified to assist with the correct delivery of the safety program (Andriani et al., 2022). Following these validated PT Cipta Kridatama practices, aiming to get as close to being best practice as possible though, will assist in cultivating a better safety culture mechanistically.

Evaluation of Research Model Fit

The C square statistic determines the degree to which the model's other variables explain the variation in endogenous variables. This increases the explanatory power of the model and makes its prediction more precise. Low influence with R square value of 0.19, moderate with 0.33 and high with 0.66 (Tarmizi et al., 2023).

Table 6. R – Square Test

	R Square
Safety Behavior	0.763
Safety Culture	0.910

R square analysis shows that safety leadership significantly influences safety behaviour and safety culture at PT Cipta Kridatama. The R square value of 76.3% shows the influence of safety leadership on safety behaviour, and thus, safety leadership is very important in shaping employee safety behaviour. This indicates that management's efforts to develop and continue the implementation of safety practices through the existing safety leadership have been successful in changing employees' attitudes and behaviours towards safety. In addition, the 91 per cent influence of safety leadership on safety culture shows that safety leadership is also important in developing and improving safety culture in the company.

CONCLUSION

The research confirms that transformational leadership on safety leadership has a significant and strong influence on safety culture at PT Cipta Kridatama Site PT Borneo Indobara. Based on the analysis of the discriminant validity using the Fornell-Larcker criterion, the results show strong relationships between the key safety components at PT Cipta Kridatama Site Borneo Indobara. The construct reliability values for Safety Behaviour (0.868), Safety Culture (0.910), and Safety Leadership (0.929) all exceed 0.8, indicating good reliability of the indicators for each construct. The correlations between constructs reveal strong interconnections, with the highest correlation observed between Safety Culture and Safety Leadership (0.948), followed by Safety Behaviour and Safety Culture (0.881), and Safety Behaviour and Safety Leadership (0.874). These high correlations suggest that the three safety components are closely interrelated in the organizational context. The strong link between Safety Culture and Safety Leadership particularly highlights the crucial role leadership plays in shaping and maintaining the safety culture within the company. Overall, these results emphasize the integrated nature of safety practices at PT

Cipta Kridatama Site Borneo Indobara, where improvements in one area are likely to positively influence the others, contributing to a comprehensive approach to safety management.

REFERENCES

Andriani, A. D., Mulyana, A., Widarnandana, I. G. D., Armunanto, A., Sumiati, I., Susanti, L., Siwiyanti, L., Nurlaila, Q., Pangestuti, D. D., & Dewi, I. C. (2022). *Manajemen sumber daya manusia* (Vol. 1). TOHAR MEDIA.

Asad, M., Kashif, M., Sheikh, U. A., Asif, M. U., George, S., & Khan, G. U. H. (2022). Synergetic effect of safety culture and safety climate on safety performance in SMEs: does transformation leadership have a moderating role? *International Journal of Occupational Safety and Ergonomics*, *28*(3), 1858–1864.

Gaskin, J., Ogbeibu, S., & Lowry, P. B. (2023). Demystifying prediction in mediation research and the use of specific indirect effects and indirect effect sizes. In *Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications* (pp. 209–228). Springer.

Groves, P. S., & Bunch, J. L. (2018). Priming patient safety: A middle-range theory of safety goal priming via safety culture communication. *Nursing Inquiry*, *25*(4), e12246.

Guerin, R. J., & Toland, M. D. (2020). An application of a modified theory of planned behavior model to investigate adolescents' job safety knowledge, norms, attitude and intention to enact workplace safety and health skills. *Journal of Safety Research*, *72*, 189–198.

Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, *1*(3), 100027.

Lachowicz, M. (2018). *A general measure of effect size for mediation analysis*. Vanderbilt University.

Lyubykh, Z., Gulseren, D., Turner, N., Barling, J., & Seifert, M. (2022). Shared transformational leadership and safety behaviours of employees, leaders, and teams: A multilevel investigation. *Journal of Occupational and Organizational Psychology*, *95*(2), 431–458.

Mutegi, T. M., Joshua, P. M., & Kinyua, J. M. (2023). Workplace Safety and Employee Productivity of Manufacturing Firms in Kenya. *Cogent Business & Management*, *10*(2), 2215569.

Rottig, D. (2017). Meta-analyses of culture's consequences for acquisition performance: an examination of statistical artifacts, methodological moderators and the context of emerging markets. *International Journal of Emerging Markets*, *12*(1), 8–37.

Schein, E. H. (2014). National and occupational culture factors in safety culture. *Revised Draft for IAEA Meeting*.

Setiono, B. A., & Andjarwati, T. (2019). *Budaya keselamatan, kepemimpinan keselamatan, pelatihan keselamatan, iklim keselamatan dan kinerja*. Zifatama Jawara.

Tarmizi, R., Septiani, N., Sunarya, P. A., & Sanjaya, Y. P. A. (2023). Harnessing digital platforms for entrepreneurial success: A study of technopreneurship trends and practices. *Aptisi Transactions on Technopreneurship (ATT)*, *5*(3), 278–290.

Trevino, L. K., & Nelson, K. A. (2021). *Managing business ethics: Straight talk about how to do it right*. John Wiley & Sons.

Yazdi, M. (2025). The Impact of Leadership on Fostering a Safety-Oriented Organizational Culture. In *Safety-Centric Operations Research: Innovations and Integrative Approaches: A Multidisciplinary Approach to Managing Risk in Complex Systems* (pp. 31–50). Springer.