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Work Attitude and Standard Operating Procedure Compliance Toward Safe Work Behavior

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Abstract:
The high work risk demands serious attention from the company in mitigating hazards thru the improvement of safe work behavior and employe compliance with work regulations. This research aims to analyze the influence of work attitude and compliance with standard operating procedures, both partially and simultaneously, on the safe work behavior of employes in the engineering departement at SEZ Kura Kura Bali. This associative quantitative research uses saturated sampling techniques involving all 36 employes of the engineering department as respondents. Research data were collected thru closed questionnaires and analyzed using multiple linear regression analysis techniques thru t-test and F-test at a significantly level of 5%. The partial test result showed that work attiude did not significantly affect safe work behavior (p= 0,172 > 0,05), while SOP compliace significantly affected safe work behavior (p= 0,001 < 0,05). These findings indicate that a positive work attitude from individuals will not effectively improve work safety without strict supervision of rule compliance in the work area. Sumyltaneously, work attitude and SOP comliance significantly affected safe work behavior (p = 0,001 < 0,05). The determination coefficient analysis results indicated that these two variables could explain 34,2% of the variation in safe work behavior. This research concludes that SOP compliance is a key factor, and it is recommended to implement procedures thru flowcharts and provide an unsafe condition report form to enhance the supervision system and safety culture in the company.

Keywords: Work Attitude, Standard Operating Procedure Compliance, Safe Work Behavior

INTRODUCTION

Unsafe behavior continues to top the list of accident causes in workplaces globally. Consequently, building a culture of safety has become a critical problem for modern managements, particularly within highstakes engineering contexs. According to ILOSTAT (2024), roughly 2,93 million workers die annually owing to occupational accidents and work-related diseases and 11% from workplace accidents. In Indonesia, (BPJS Ketenagakerjaan;2024) registered 462,241 occupational accident cases in 2024, demonstrating an increasing trend compared with previous years. Furthermore, the (Indonesia safety center;2024) found that roughly 90% of workplace accidents are related with risky behavior caused by human factors. These figures show that increasing safe work practices is crucial to lowering workplace accidents and establishing a more secure workplace.

The engineering department of PT Bali Turtle Island Development, the business development and management organization of the Kura Kura Bali Special Economic Zone (SEZ), is also affected by this matter. Employees in this section execute engineering, infrastucture maintenance, and operational support duties that include numerous occupational dangers and require strict compliance with specified work regulations. The company record number of workplace mishaps rose from zero in 2023 to one in 2024, and two in 2025, despite the fact that internal corporate records indicate a comparatively low number of accidents. Even if the increase seems light, it shows that occupational risks remain present and emphasizes how crucial it is to promote safe work pratices. Based on the theory of planned behavior (Ajzen, 1991;2020), employees work attitude and compliance with standard operating procedures are expected to encourage safe work behavior in workplace.

According ro previous research, have reported that compliance with safety procedures approximately improves safe work behavior (Firdaus et al., 2024) while (Rahim & Rhezza Pratama, 2026) found that safety regulations and procedures also enhance workers understanding of appropriate workable. Findings about the impact of work attitude, however are still inconsistent. While (Parmasari et al., 2025) and (Rafi'ah et al., 2018) found no significant correlation between work attitude and safe work behavior, (Gh et al., 2021) and (Chi Tsang et al., 2019b) highlighted work attitude as an essential determinant of behavior. Whereas, tourism-based special economic zones have received little attention in prior research, which has mostly concentrated on the industrial, mining, construction, and healtcare sectors. To the best of authors knowledge, yet study has particularly evaluated the combined influence of work attitude and compliance with standard operating procedures on safe work behavior in the engineering department of PT Bali Turtle Island Development. Thus, the purpose of this research is to investigate how workers work attitudes and adherence to SOPs affect their safe work practices in the engineering department of PT Bali Turtle Island Development. The findings are expected to provide empirical evidance that addresses this contextual gap while supporting organizations in developing strategies to strengthen safe work behavior in high-risk operational environments, particularly within tourism-based special economic zones.

CONCEPT AND HYPOTHESIS

As stated by (Ajzen, 2020) the theory of planned behavior (TPB) explains that an individual behavior is influenced by behavioral intentions, which are formed through attitudes, aubjective norms, and perceived behavioral control. In the workplace context, safe work behavior is not only determined by employee internal beliefs regarding safety but also by organizational factors that encourage compliance with established work procedures. Therefore, TPB provides an appropriate theoretical foundation for explaining the relationship between work attitude, compliance with standard operating procedures and safe work behavior.

Work attitude refers to employee positive beliefs and evaluation toward workplace safety, including attitudes toward the importance of personal protective equipment, prioritizing safety, and commitment to workplace rules. According to TPB, employee with positive attitude aremore

likely to develop intentions that encourage safe work practices. Previous studies have reported that work attitude positively influance safety behavior (Chi Tsang et al., 2019; Gh et al., 2021). However, (Rafi'ah et al., 2018; Parmasari et al., 2025), found incosistent results, indicating that work attitude does not always significantly influence safe work behavior under certain organizational conditions.

Compliance with standard operating procedures reflects employee consistency in carrying out work according to establishing organizational procedures and safety standards. It includes compliance with organizational rules, understanding work procedures, and commitment to implementing them consistently. Within the TPB framework, compliance represents the implementation of behavioral intentions into actual workplace practices. Previous studies consistently reported that compliance with safety procedures contributes to improving safe work behavior (Aisyah, 2016; Rahim & Rhezza Pratama, 2026; Firdaus et al., 2024).

According to the theory of planned behavior, behavior is shapped by the interaction of multiple determinants rather than a singel factor. Employee with positive work attitude are expected to be more willing to practice safe work behavior, while consistent compliance with standard operating procedures reinforces the implementations of those intentions during daily work activities. Therefore, examining both variables simultaneously is expected to provide a more comprehensive explanations of safe work behavior among employee.

Based on the conceptual framework and empirical evidence presented above, this research the following hypotheses are:

1. H1: there is a significant influence of work attitude on safe work behavior in the engineering department at Kura Kura Bali SEZ
2. H2: there is a significant influence of standard operating procedure compliance on safe work behavior in the engineering department at SEZ Kura Kura Bali
3. H3: there is a significant simultaneous influence between work attitude and standard operating procedure compliance on safe work behavior in the engineering department at SEZ Kura Kura Bali

With these hypotheses, this research aims to examine the extent to which work attitude and compliance with standard operating procedures contribute to safe work behavior among employee in the engineering department of Kura Kura Bali SEZ. The findings are expected to provide empirical evidence on the role of individual and organizational factors in promoting safe work behavior and to enrich the limited literature on workplace safety within tourism special economic zones.

METHOD

This research adopted a quantitative cross-sectional approach with an associative research design to examine the effect of work attitude and compliance with standard operating procedure on safe work behavior. The research took a place in the engineering department of Kura Kura Bali SEZ. The researchers collected primary data by distributing a structured closed-endend online questionnaire to all employee in the engineering department. Since the department consisted of only 36 employees, this study applied a saturated sampling technique, allowing every employee to participate as a respondent.

Measurement of Variables

The questionnaire consisted of 18 items measured using a five-point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Work attitude was measured through six items representing attitude toward the benefit of personal protective equipment, safety priority, and commitment to workplace rules, adapted from (Chi Tsang et al., 2019b; Crase, 2022; Shaari & Mohd Puad, 2023). Compliance with standard operating procedure was assessed using six items covering compliance norms, understanding of work procedures, and commitment to established procedures, based on the same references. Safe work behavior was measured using six items representing work readliness, operational compliance, and self-control in preventing unsafe

actions, adapted from (Chi Tsang et al., 2019b; Kanesan et al., 2025; Parmasari et al., 2025; Shaari & Mohd Puad, 2023).

Data Analysis

The researchers analyzed the collected data using IBM SPSS statistic version 26. The analysis included validity and reliability tests, classical assumption tests, multiple linear regression analysis, the coefficient of determination (R^2), partial hypothesis testing (t-test), and simultaneous hypothesis testing (F-test) to evaluate the proposed hypotheses.

RESULT AND DISCUSSION

This study onvolved 36 employees engineering department of PT Bali Turtle Island Development, the developer and management entity of the Kura Kura Bali Special Economic Zone. All respondents completed the closed-ended online questionnaire during the data collection period. The collected data were analyzed using IBM SPSS Statistic version 26 to examine the effect of work attitude and comliance with standard operating procedures on safe work behavior.

The descriptive analysis indicates that respondents generally demonstrated positive perceptions of all research variables. Work attitude obtained a mean score of 4,15, suggesting that employee generally possess positive attitude toward workplace safety. Similarly, standard operating procedure compliance recorded an average score of 4,15, indicating that respondents consistently comlied with established work procedures. Safe work behavior achieved the highest mean score of 4,36, reflecting a very good level of safe work practices among employee. These findings provide an initial indication that respondents perceived workplace safety positively before hypothesis testing was conducted.

The research instrument was evaluate using validity and reliability test before conducting the regression analysis. The validity test showed that all questionnaire items were valid, with pearson correlation coefficients ranging from 0,410 to 0,768, exceeding the critical value of 0,361. Furthermore, cronbach's alpha values ranged from 0,617 to 0,724, indicating acceptable internal consistency. The classical assumption tests also confirmed that the regression model satisfied all required assumptions. The shapiro-wilk test produced a significance value of 0,839, indicating that the residuals were normally distributed. In addition, tolerance values exceeded 0,10, VIF values were below 10, and Glejser test producted significance values greater than 0,05, confirming that the regression model was free from multicollinearity and heteroscedasticity.

To examine the influence of work attitude and standard operating procedure compliance on safe work behavior, multiple linear regression analsis was performed. The results are presented in table 1.

Table 1. Result of multiple linear regression analysis

Variables	B	t	Sig
Work Attitude	-0,332	-1,395	0,172
Standard Operating Procedure	0,517	3,811	0,001

The results og the multiple linear regression analysis examining the effects of work attitude and compliance with standard operating procedure compliance on safe work behavior. Therefore, H1 is rejected. In contrast, standard operating procedure compliance has a positive and statistically significant effect on safe work behavior, indicating that employee who consistently comply with established procedures are more likely to demonstrate safe work behavior. Accordingly, H2 is supported.

The regression model was statistically significant (F= 8,572, p= 0,001). The model explained 34,2% of the variance in safe work behavior (R^2= 0,342), while the remaining 65,8% may be attributed to other factor like motivation and safety culture. These results indicate that work attitude and standard operating procedure compliance simultaneously contribute to explaining variations in employee safe work behavior.

DISCUSSION

Research Findings

The findings indicate that work attitude does not have a statistically significant effect on safe work behavior among employees in the engineering department of Kura Kura Bali SEZ. Although employee generally reported positive attitude toward workplace safety, these attitude alone were insufficient to predict whether they consistenly demonstrated safe work behavior. This finding suggests that positive attitudes do not automatically result into safe work practices. The result is consistent with the research by(Parmasari et al., 2025), which found that work attitude was not a significant determinant of safe behavior under certain working conditions. Similarly, (Rafi'ah et al., 2018) reported that positive attitudes alone were insufficient to encourage workers to consistenly perform safe work behavior. These findings imply that organizational conditions may play a more influential role than individual attitude in shaping employees safety behavior.

This finding can be explained using the theory of planned behavior (Ajzen, 2020), which states that attitude is only one of thr factors influencing behavior. According to the theory, behavior is also detremined by subjective norms and perceived behavioral control. In the context of engineering operations, employees are more likely to demonstrate safe work behavior when supported by clear organizational rules, effective supervision, and established operational procedures. Therefore, although employees may possess positive work attitudes, theseattitude may not directly influence their behavior without reinforcement through organizational systems and consistent safety management pratices.

In contrast, compliance with standard operating procedures has a positive and statistically significant effect on safe work behavior. This finding indicates that employee who consistenly comply with established procedures are more likely to perform their work safely and avoid unsafe actions. The result is consistent with previous studies by (Firdaus et al., 2024), which concluded that compliance with safety procedures plays a significant role in promoting safe work behavior, similar findings were reported by (Aisyah, 2016), found a positive relationship between compliance with work instructions and employee safe behavior. Furthermore, (Rahim & Rhezza Pratama, 2026) explained that work procedures not only regulate employee behavior but also improve workers understanding of correct work practices, thereby reducing unsafe actions during operational activities.

The significant influence of standard operating procedures compliance also support the theory of planned behavior. Employee who understand and consistenly follow work procedures tend to have stronger perceived behavioral control, enabling them to result their intentions into actual safe work behavior. These findings demonstrate that organizational procedures function not only as administrative requirement but also as practical mechanisms that guide employee in performing their daily tasks safely. Consequently, strengthening compliance with standard operating procedures is an effective strategy for improving safe work behavior, particularly in engineering activities that involve relatively high operational risk.

The regression model further indicates that work attitude and standard operating procedures compliance simultaneously influence safe work behavior, with an R^2 value of 0,342. This result shows that 34,2 % of the variation in safe work behavior can be explained by the two independent variables, while the remaining 65,4% may be influence by other factor such as motivation and safety culture. These findings support the theory of planned behavior by demonstrating that safe work behavior is formed through the interaction between individual factors and organizational control mechanisms rather than by personal attitudes alone.

Research Contribution

From a practical perspective, this research contributes beyond empirical findings by developing two practical outputs, namely SOP safety compliance and monitoring system and the Non-Conformance Report (NCR) Compliance Form. These outputs are intended to strengthen

monitoring activities, facilitate the reporting of procedural deviations, and support continuous improvement in employee safe work behavior. In addition, this study provides empirical evidance from the engineering department of Kura Kura Bali SEZ. To the best of the authors knowledge, studies examining the relationship between work attitude, standard operating procedures compliance and safe work behavior within this organizational context remain limited. Therefore, this research extends previous studies by providing evidence from a tourism-oriented special economic zone, contributing to the broader understanding of safe work behavior in high-risk operational environments.

CONCLUSION

This research examined the influence of work attitude and standard operating procedure compliance on safe work behavior among employee in the engineering department of Kura Kura Bali SEZ. The findings indicate that work attitude does not significantly influence safe work behavior, whereas standard operating procedure compliance has a positive and significant effect. Simultaneously, both variables contribute to explaining variations in safe work behavior, although standard operating procedure compliance emerged as the dominant factor. The findings suggest that imporving organizational safety systems through consistent standard operating procedure implementation is more effective in promoting safe work behavior than focusing solely on employee attitude.

By examining employee in the engineering department of the Kura Kura Bali SEZ, this research broadens current understanding of safe work behavior within a reserch context that remains underexplored in previous studies. The findings extend previous research by demonstrating that procedural compliance plays a more dominant role than individual work attitudes in shaping a safe work behavior within a tourism-oriented special economic zone. In theory of planned behavior, this research offers practical contributions by developing a safety compliance and monitoring system standard operating procedure and a Non-Conformance Report (NCR) Compliance Form to support continuous monitoring and improvement of workplace safety pratice, to provide practical tools that organizations may adopt to strengthen safety monitoring and continuously improve employee safe work behavior. Future studies are encouraged to include additional variables, such as safety leadership, safety climate, safety communication, or safety culture, and involve broader industrial sectors to improve the generalizability of the findings.

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