

How does management commitment to safety and employee satisfaction impact safety performance in cleaning workers?

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Abstract

Management commitment to safety, which reflects managers' dedication to the physical well-being of workers, is a critical component of the safety climate. It serves as the primary indicator of worker safety behavior and plays a crucial role in reducing injuries across diverse job roles. This study aims to investigate the relationship between safety-committed management and employee satisfaction and how this relationship influences safety performance among cleaning staff at PT WIS Malang. We employed purposive sampling to select 113 respondents who completed online questionnaires. Data collected were analyzed descriptively and using inferential statistical analysis. The results of this study underscore the importance of enhancing the role of management in promoting workplace safety and improving employee job satisfaction. We found that management commitment to safety and employee satisfaction have a positive impact on safety performance. These findings hold significant practical implications for companies like PT WIS Malang, aiding in the cultivation of a strong safety culture within the organization.

Keywords: Employee satisfaction, Management commitment to safety, Safety performance

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How to cite:

Nurbaya, S., & Hasan, H. (2023). How does management commitment to safety and employee satisfaction impact safety performance in cleaning workers? *Jurnal Penelitian*, 20(1), 33-42. <https://10.26905/jp.v20i1.11099>

1. Introduction

A positive safety climate is essential for keeping workers safe in the workplace (Nahrgang et al., 2011). Management commitment to safety, which refers to the value and commitment shown by managers to the physical safety of workers, is the most important dimension of the safety climate, and the main indicator of worker safety behavior as well as a step to mitigating injuries in various jobs (Zohar & Luria, 2010). However, even though there have been publications that attempt to review the importance of company commitment to work safety and its impact on safety performance, in fact there are still few scholars who attempt to discuss this topic (Bayram, 2018). This study as an important production factor, human resources influence the profitability and productivity of an organization. Decisions that will affect employee satisfaction taken by managers may be very helpful to the company, or conversely can incur quite high costs (Pinder et al., 2016).

Article Info:

Received: 2023-02-20

Revised: 2023-03-28

Accepted: 2023-05-14

Published: 2023-06-28



E-ISSN: 2809-7688

P-ISSN: 1410-7295

According to the social exchange theory explained by [McGonagle et al. \(2016\)](#) in the context of workers, workers will show commitment and perform to the extent they believe that they benefit from organizational activities. Perceived organizational support is defined as “employees’ perceptions of the extent to which the organization values their contributions and cares about the worker’s well-being and the feeling that activities affecting the worker have been undertaken voluntarily by the organization ([Tanpipat et al., 2021](#)).” In other words, organizational support is a situation where organizational values are able to accommodate employee welfare which is characterized by increasing the quality of employee happiness ([Berhan, 2020](#)). The high costs associated with workplace injuries and the time required for accident investigations have made companies look for other paradigms to reduce the potential for work accidents ([Jasiulewicz-Kaczmarek et al., 2015](#)). Occupational safety programs viewed from a traditional perspective place the responsibility for accident prevention and safety coordination on each individual worker ([Olak et al., 2021](#)). However, if the paradigm is shifted to a more modern one, the responsibility related to occupational health and safety lies with top management in each company ([Kaynak et al., 2016](#)).

PT Werbel Indonesia Services (PT WIS) is a cleaning service provider company located on Jalan Perunggu Utara No.3 Malang. Many holding companies have entrusted the management of environmental cleanliness to PT WIS such as Brawijaya University, Malang Town Square, Olympic Garden Mall and various other office agencies such as the North Malang KPP Tax Directorate General and related agencies. Before being placed in a company or agency that requires cleaning services, PT WIS also provides all workers with standardized K3 education. The primary aim of this study is to assess the influence of management commitment to safety and employee satisfaction on the safety performance of cleaning workers at PT WIS Malang.

2. Hypotheses Development

Management Commitment to Safety

Organizational commitment to occupational safety expresses the extent to which top management of an organization prioritizes occupational safety during the decision-making process and how much resources are allocated to it. Specifically, an organization’s interest in safety issues is represented by three basic elements, (1) Safety Values—Values expressed by top management responsible for their behavior and safety (verbally or through actions), (2) Safety--Principles Compliance with organized safety principles such as training requirements, manuals and procedures and equipment maintenance, and (3) Other Safety Measures—Priority is given during the allocation of organizational resources (equipment, staff time) even if it does not require any regulations. There are two indicators and four items used to measure management commitment in supporting occupational health and safety according to [Bayram \(2018\)](#). Standard operating procedures commitment is a commitment that must be adhered to by the company regarding consistent implementation of SOPs. This indicator can be explained through two items, including management’s ability to create standard operating procedures related to occupational health and safety, as well as management’s ability to carry out periodic revisions to standard operating procedures for occupational health and safety. Commitment to compliance is a commitment that must be upheld by management in complying with applicable laws and regulations and updating issues related to occupational health and safety. This indicator can be measured using two items, including management’s ability to comply with applicable occupational health and safety laws and the requirements of the organization of which it is a member and management’s ability to pay attention to current issues related to occupational health and safety. Thus, it can be hypothesized as below:

H₁: management commitment to safety influences safety performance

Employee Satisfaction

Öhring (2014) revealed that employee satisfaction reduces work accidents, thereby positively influencing safety performance revealed that there is a positive relationship between job satisfaction and safety climate, indicating that employees who are more satisfied with their jobs have a positive perspective on safety climate. Rodríguez-Fernández et al. (2021) revealed that employee satisfaction or job satisfaction defines the extent to which employees are satisfied with their jobs. Most organizations are considered successful when their employee satisfaction levels are high. Studies related to the importance of job satisfaction for organizations, especially in terms of productivity, efficiency, employee relations, absenteeism and leave from work. Therefore, employees who are more satisfied with their work are more committed to work safety management policies, so that organizations with these employees have lower accident rates (Kaynak et al., 2016). Thus, it can be hypothesized as below:

H_2 : employee satisfaction influences safety performance

Safety Performance

Safety performance can be defined as a measurement of activities carried out to protect employees from work accidents and work-related diseases. An organization's performance measurement system includes two separate monitoring data; namely proactive (positive) and reactive (negative) data. Proactive data should be used for measurement and monitoring. Reactive data should be used when safety performance is inadequate (McGonagle et al., 2016). The potential benefit of safety performance is that it can motivate businesses to voluntarily invest in accident prevention activities, rather than simply complying with rules and regulations (Feng, 2013). Utami (2020) revealed that safety performance in the context of janitors can be seen when workers are able to participate in work safety programs, are involved in work safety campaigns, remind each other to comply with work safety rules, join work safety training programs, are able to apply knowledge about the results of work safety training and being able to use safety equipment while working. Thus, it can be hypothesized as below:

H_3 : management commitment of safety and employee satisfaction influences safety performance simultaneously

3. Methods, Data, and Analysis

This research is explanatory research with a quantitative approach. Explanatory research is a type of research that emphasizes the causal relationship between two or more variables that influence each other (Riduwan & Kuncoro, 2014). The population in this study were 160 cleaning service employees from PT WIS Malang. Determining the sample in this study used a sample of 113 respondents which was calculated using the Krecjie Morgan Table (Sekaran & Bougie, 2016) which are explained in the following Table 1.

Table 1
Krecjie Morgan Table

Number of Population (N)	Number of Sample (n)
110	86
120	92
130	97
140	103
150	108
160	113

Data Source: Sekaran & Bougie (2016)

According to the Krejcie and Morgan table for a population (N) of 160 respondents, the sample that used for research (n) is 113 people. In taking samples, researchers used probability sampling with the cluster sampling category. [Kuncoro \(2013\)](#) explains that cluster sampling is a sampling method by dividing the population into several sub-groups based on simple criteria or those available in the data. Researchers divide subgroups into equal numbers. Based on this understanding, the researchers present the sample distribution of PT Werbel Indonesia Services workers as shown in [Table 2](#).

Table 2
Samples Distribution

Location	Populations	Samples
Malang Town Square (Matos)	15	11
Mall Olympic Garden (MOG)	15	11
Universitas Brawijaya	76	54
Universitas Negeri Malang	53	37

Data Source: PT WIS Malang, 2023

The data was collected through a survey by giving questionnaire to respondents. These questionnaires were distributed to 113 respondents that cleaning service employees at PT WIS Malang. Our collection data process were distributed manually as follows: (1) the researcher visits the respondent to see if the respondent have a spare time. (2) After getting responses from potential respondents, the researcher then asked permission to provide a research questionnaire. Previously, the researcher will explain how to fill out the questionnaire and provide an explanation of the content contained in the questionnaire. (3) After the potential respondent understands the technicalities of filling out the questionnaire, the researcher will then provide the potential respondent with writing tools to fill out the questionnaire. (4) If the questionnaire has been completed, the questionnaire will then be given back to the researcher for subsequent data tabulation. (5) After the primary data has been collected, it will then be analyzed using descriptive statistical analysis and inferential statistical analysis.

The data analysis method used in this research is descriptive statistical analysis and inferential statistical analysis. Descriptive statistical analysis methods with a quantitative approach are used to obtain an overview of the demographic elements inherent in the characteristics of respondents such as gender, age and the respondent's most recent education. In the process of inferential statistical analysis, various kinds of tests are carried out including instrument validity tests, instrument reliability tests, normality tests, heteroscedasticity assumption tests, and multiple linear regression tests, coefficient of determination, and hypothesis tests which are carried out using the SPSS version 26 application.

Validity Test

In this study, the validity test of the research instrument was carried out on 113 respondents to ensure that every question and statement contained in the instrument could be properly understood by the respondents used as research samples. This test was carried out using the SPSS version 26 application. The item requirements in the research instrument can be declared valid if the calculated r value is positive and is more than or equal to 0.6 ([Hair et al., 2017](#)). Based on the results of validity testing, it is known that all items in the research instrument can be declared valid and capable of being used as data collection tools in this research.

Reliability Test

The reliability test in this research used the SPSS version 26 application by paying attention to the Cronbach's Alpha value. The reference value for alpha or composite reliability as

stated by Sarstedt & Cheah, (2019) must be greater than 0.7 although a value of 0.6 is still acceptable. Based on the results of the first stage of reliability testing, it is known that all items in the research instrument can be declared reliable and capable of being used as data collection tools in this research. The results of the instrument reliability test could be seen in Table 3.

Table 3
 Reliability Test Analysis

Variable	Alpha Value	Justification
Management Commitment to safety (X ₁)	0.755	Reliabel
Employee Satisfaction (X ₂)	0.832	Reliabel
Safety Performance (Y)	0.857	Reliabel

The heteroscedasticity assumption is used to determine whether the residuals have a homogeneous (constant) variance or not. Testing the heteroscedasticity assumption, it is expected that the residuals will have a homogeneous variance. Testing the heteroscedasticity assumption can be seen through the scatter plot. According to Ghozali (2013), the basis for making a decision as to whether heteroscedasticity has occurred is if there is a certain pattern such as the dots forming a certain regular pattern (wavy, widening then narrowing), then this indicates heteroscedasticity has occurred. Then if there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then heteroscedasticity does not occur. The test criteria state that the residual points are distributed randomly (do not form a particular pattern), so the assumption of heteroscedasticity is fulfilled. The results of testing the heteroscedasticity assumption using a scatter plot show that the residual points are distributed randomly. In this way, the assumption of heteroscedasticity is fulfilled, or in other words, the respondent's answer pattern has an even distribution of results.

The normality assumption test assesses whether the residuals in a regression model adhere to a normal distribution, a key assumption for the validity of the model. This assessment is conducted by examining a probability plot, where the distribution of residual points should ideally align with the diagonal line to indicate normality. In our analysis, we found that the residual points closely followed the diagonal line on the probability plot. This observation provides strong evidence that the residuals in our regression model are indeed normally distributed.

4. Results

As a result, we can conclude that the assumption of normality, a crucial requirement for statistical analyses, is met in our study. In other words, it suggests that respondents who participated in the questionnaire survey align with the established criteria and do not significantly deviate from a normal distribution in terms of their responses, strengthening the validity of our research findings.

Table 4
 Coefficient of Regression

Dependent Variable	Independent Variables	Coefficient of Regression	Sig
Safety Performance (Y)	Management Commitment to safety (X ₁)	0.424	0.031
	Employee satisfaction (X ₂)	0.775	0.000
Constanta		3.784	0.000
R-Square		0.680	
Adjusted R Square		0.463	

The multiple linear regression test was used to test the influence of the Management commitment to safety (X_1) and employee satisfaction (X_2) variables on the safety performance variable (Y). This regression analysis is intended to determine changes in the value of the dependent variable due to changes in the independent variable. Based on Table 4, the correlation coefficient (R) is 0.775, which means that the variables management commitment to safety (X_1) and employee satisfaction (X_2) have a fairly strong relationship with safety performance (Y). The coefficient of determination/adjusted R^2 is $0.680 = 68\%$, meaning that the diversity of the safety performance (Y) variable can be explained by the management commitment to safety (X_1) and employee satisfaction (X_2) variables of 68%, and the remaining $1-0.680 = 0.32$ or 32% is a contribution from other variables not discussed in this research. Then the results of the multiple regression test can be formulated into a regression line equation as follows:

$$Y = 3.784 + 0.424X + 0.775X + e$$

From the equation, the following explanation could be drawn $\alpha = 3.784$, this value means that if the management commitment to safety (X_1) and employee satisfaction (X_2) variables have not been changed or are assumed to not exist, then the safety performance (Y) is equal to 3.784. The constant states that the rate of change in safety performance will be greater if the management commitment to safety (X_1) and employee satisfaction (X_2) have a constant value of 3.784. The regression coefficient of 0.424 indicates a positive relationship between management commitment to safety (X_1) and safety performance (Y). This means that as the level of management commitment to safety increases, safety performance also tends to rise. When cleaning service workers at PT WIS consistently prioritize workplace health and safety, it positively affects their job performance in their assigned areas. The regression coefficient of 0.775 suggests a positive relationship between employee satisfaction (X_2) and safety performance (Y). In simpler terms, when employee satisfaction increases, it tends to lead to an increase in safety performance. When cleaning service workers at PT WIS are content with their work processes and management's efforts to ensure their well-being, it can positively impact their job performance in their designated work areas.

Hypothesis Testing

In this research, the first hypothesis (H_1) suggests that the management commitment to safety (X_1) can impact safety performance (Y). The results indicate that the significance value ($0.031 < 0.05$) and the calculated t value ($2.191 > 1.65$) meet the criteria for acceptance, confirming the first hypothesis. Similarly, the second hypothesis (H_2) posits that Employee satisfaction (X_2) influences Safety Performance (Y). The significance value ($0.000 < 0.05$) and the calculated t value ($5.767 > 1.65$) satisfy the criteria, leading to the acceptance of the second hypothesis.

Lastly, the third hypothesis (H_3) suggests that both management commitment to safety (X_1) and Employee satisfaction (X_2) together influence safety performance (Y). The combined significance value ($0.000 < 0.05$) and the calculated f value ($47.367 > 3.08$) meet the necessary conditions for accepting the third hypothesis.

In summary, all three hypotheses are accepted as they fulfill the comparison assumptions, indicating that both individual and combined factors of management commitment to safety and employee satisfaction have a significant influence on safety performance.

5. Discussion

Occupational health and safety (K3) is centered on reducing work-related injuries and illnesses through the evaluation of work methods in compliance with relevant regulations. K3 encompasses a range of measures designed to safeguard the well-being of workers, individuals involved in the work environment, and the work processes themselves.

PT Werbel Indonesia Services Malang specializes in providing outsourced cleaning personnel and diligently adheres to K3 regulations in its operational activities. The company's goal is to establish favorable working conditions and minimize the occurrence of work-related accidents, striving for zero accidents. To achieve a work environment with minimal risks and optimal employee performance, a strong commitment to enforcing occupational health and safety measures is essential. This research seeks to investigate the impact of both management's commitment to safety and employee satisfaction on safety performance. In addition to conducting individual assessments, this research aims to examine the causal relationship between these factors from a comprehensive perspective, considering simultaneous testing.

Regarding the first hypothesis, our findings demonstrate that the management's commitment to safety variable indeed influences safety performance. This aligns with [Bayram's \(2018\)](#) research, which emphasizes that an organization's commitment to workplace safety reflects the degree to which top management prioritizes safety in decision-making and allocates resources to it. Specifically, an organization's dedication to safety is characterized by three fundamental elements: (1) Safety values—Values expressed by top management responsible for their behavior and safety (verbally or through actions), (2) Compliance with organized safety principles such as training requirements, manuals and procedures and equipment maintenance, and (3) Other safety measures—priority is given during the allocation of organizational resources (equipment, staff time) even if it does not require any regulations. When PT WIS Malang upholds its commitment to implementing K3, including the creation and evaluation of Standard Operating Procedures (SOPs), it can significantly enhance the work performance of its cleaning staff.

Regarding the second hypothesis, our findings confirm that employee satisfaction indeed has an impact on safety performance. These results are consistent with research conducted by [Öhrling \(2014\)](#), which highlights that higher employee satisfaction reduces work-related accidents, thus positively influencing safety performance. Öhrling's study also establishes a positive connection between job satisfaction and the safety climate, suggesting that employees who are more content with their jobs tend to perceive a safer work environment.

Furthermore, our research aligns with the findings of [Rodríguez-Fernández et al. \(2021\)](#), which define employee satisfaction or job satisfaction as the degree to which employees are content with their work. When employees at PT WIS experience satisfaction with the quality of their work, it has a notable impact on improving physical quality, subsequently contributing to enhanced safety performance.

This research also reveals the third hypothesis, which examines the combined influence of management's commitment to safety and employee satisfaction on safety performance. Safety performance, in this context, refers to the measurement of efforts taken to safeguard employees from work-related accidents and occupational diseases. An organization's performance assessment system typically comprises two distinct sets of data: proactive (positive) and reactive (negative) data. Proactive data are employed for measurement and ongoing monitoring, while reactive data come into play when safety performance falls short ([McGonagle et al., 2016](#)). One significant advantage of focusing on safety performance is that it can incentivize businesses to proactively invest in accident prevention activities, rather than merely adhering to mandatory regulations and rules ([Feng, 2013](#)). When all facets of cleaning workers at PT WIS Malang demonstrate their commitment to upholding K3 alongside heightened job satisfaction, it statistically leads to an improvement in work performance among PT WIS Malang employees.

The results of this research indicate that at PT WIS Malang, both management commitment to safety and employee satisfaction have an influence on safety performance. However, there are several research limitations to consider.

The first limitation is that this study was conducted exclusively on cleaning service workers employed by PT Werbel Indonesia Services (WIS) in Malang. Therefore, the findings may not be broadly applicable to other contexts or industries.

The second limitation pertains to the management commitment to safety variable, which primarily focuses on the company's ability to establish and consistently enforce standard operating procedures (SOPs), including their creation, implementation, and regular evaluation. This variable does not encompass the crucial aspect of work culture, which plays a pivotal role in fostering a sense of safety and health during operational activities. Given the importance of work culture in supporting K3-related SOPs, future research should explore and measure the influence of work culture on the company's commitment to workplace safety.

The third limitation revolves around the employee satisfaction variable, which encompasses two dimensions: satisfaction with the work process and satisfaction with the improvement of workers' physical health. While job satisfaction theoretically correlates with enhanced work performance, this study does not delve into the potential role of financial compensation, which is known to impact employee job satisfaction. Future research should consider examining the relationship between satisfaction with job quality and physical health and the influence of financial compensation as an antecedent of employee satisfaction.

Additionally, further studies are warranted to gain deeper insights into safety knowledge management among employees with diverse educational backgrounds. Exploring the impact of demographic factors such as age, gender, and relevant work experience on safety performance is also an avenue for future research.

6. Conclusion

The research findings yield three significant conclusions: (1) management commitment to Safety: In the context of cleaning workers in Malang, the management commitment to safety variable has a discernible impact on safety performance. (2) Employee satisfaction: The employee satisfaction variable also plays a noteworthy role in influencing safety performance among cleaning workers. (3) Combined influence: simultaneously, the management commitment to safety and employee satisfaction variables jointly influence safety performance. This research underscores the strategic importance of management commitment in promoting workplace safety and enhancing employee satisfaction to bolster safety performance within the cleaning worker context. Notably, it contributes to the development of social exchange theory by highlighting the reciprocal relationship between companies that provide safety assurances to workers, resulting in increased job satisfaction and a greater willingness among workers to adhere to safety practices.

As practical advice for PT WIS Malang, a cleaning company, the research suggests intensifying the role of management in enforcing workplace safety and fostering job satisfaction. By doing so, the company can potentially achieve higher levels of safety performance among its workforce.

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