

THE INFLUENCE OF OCCUPATIONAL HEALTH AND SAFETY, WORKLOAD, AND WORK ENVIRONMENT ON EMPLOYEE WORK PRODUCTIVITY AT CV. SURYA INDAH, MADIUN CITY

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Abstrak

Produktivitas karyawan merupakan salah satu faktor penting dalam keberhasilan perusahaan yang dipengaruhi oleh berbagai aspek, seperti Keselamatan dan Kesehatan Kerja (K3), beban kerja, dan lingkungan kerja. Penelitian ini bertujuan untuk menganalisis pengaruh Keselamatan dan Kesehatan Kerja (K3), beban kerja, dan lingkungan kerja terhadap produktivitas karyawan pada CV Surya Indah Kota Madiun. Penelitian ini menggunakan pendekatan kuantitatif dengan metode asosiatif. Pengumpulan data dilakukan melalui penyebaran kuesioner kepada 33 karyawan CV Surya Indah Kota Madiun, kemudian dianalisis menggunakan regresi linier berganda dengan bantuan aplikasi SPSS. Hasil penelitian menunjukkan bahwa K3, beban kerja, dan lingkungan kerja berpengaruh positif dan signifikan terhadap produktivitas karyawan, baik secara parsial maupun simultan. Temuan ini menunjukkan bahwa peningkatan produktivitas dapat dilakukan melalui penerapan K3 yang konsisten, pengelolaan beban kerja yang sesuai, serta penciptaan lingkungan kerja yang mendukung. Penelitian selanjutnya disarankan untuk memperluas objek penelitian dan menambahkan variabel lain yang berpotensi memengaruhi produktivitas karyawan.

Kata Kunci: Keselamatan dan Kesehatan Kerja, beban kerja, lingkungan kerja, produktivitas karyawan.

Abstract

Employee productivity is an important factor in achieving organizational success and is influenced by various aspects, such as Occupational Health and Safety (OHS), workload, and work environment. This study aims to analyze the effect of Occupational Health and Safety (OHS), workload, and work environment on employee productivity at CV Surya Indah, Madiun City. This research used a quantitative approach with an associative method. Data were collected through questionnaires distributed to 33 employees of CV Surya Indah, Madiun City, and analyzed using multiple linear regression with the assistance of SPSS. The results showed that

Occupational Health and Safety (OHS), workload, and work environment had a positive and significant effect on employee productivity, both partially and simultaneously. These findings indicate that productivity improvement can be achieved through consistent OHS implementation, appropriate workload management, and the creation of a supportive work environment. Future research is suggested to expand the research object and include other variables that may influence employee productivity.

Keywords: Occupational Health and Safety, workload, work environment, employee productivity.

A. INTRODUCTION

Human resources are a strategic asset that plays an important role in achieving organizational goals. In facing increasingly intense business competition, companies are required to optimize employee productivity in order to produce effective, efficient, and high-quality work. Employee productivity is not only influenced by individual abilities but is also influenced by various work environment factors, such as the implementation of Occupational Health and Safety (OHS), workload, and supportive working conditions (Sedarmayanti, 2001).

Occupational Health and Safety (OHS) is one of the important aspects in human resource management because it is related to efforts to protect employees from the risks of workplace accidents and occupational diseases. Ardana (2012) explains that OHS is a form of protection to ensure that employees and other parties in the workplace remain safe and healthy so that production resources can be utilized effectively and efficiently. Proper implementation of OHS not only aims to reduce the risk of workplace accidents but can also create working conditions that support increased employee productivity.

The automotive repair and maintenance sector is one of the fields of work that has a relatively high level of occupational risk because employees directly interact with machinery, chemicals, work equipment, noise, and other potential physical hazards. Therefore, the implementation of OHS becomes an important factor in maintaining worker safety while sustaining company productivity. Research conducted by Jayati et al. (2021) shows that the use of Personal Protective

Equipment (PPE) among automotive workshop workers is associated with factors such as knowledge, attitudes, safety training, and work supervision. Meanwhile, Prasstiawan and Ramdani (2024) found that a lack of understanding regarding the importance of OHS can cause workers to not use PPE optimally even though the facilities have been provided.

In addition to OHS, workload is another factor that can affect employee productivity. Workload refers to the amount of work demands that must be completed within a certain period, which can affect workers' physical and psychological conditions (Sunyoto, 2013). Excessive workload can cause fatigue, decreased concentration, and an increased risk of work errors. In automotive workshops, the number of vehicles that must be handled and the demand to complete work according to predetermined targets can increase employee workload.

Another factor that contributes to productivity is the work environment. Sedarmayanti (2009) explains that the work environment refers to all equipment, materials, surrounding conditions, and work methods used in organizational activities. A comfortable and safe work environment can improve employee focus and work enthusiasm, whereas an inadequate work environment can cause health problems and reduce productivity.

The phenomenon examined in this study was found at CV Surya Indah Madiun City, a company engaged in vehicle repair and painting services. Based on initial observations, some employees were still found not using Personal Protective Equipment (PPE) consistently even though the company had provided safety facilities. In addition, work activities related to vehicle painting, machinery operation, dust exposure, paint odors, thinner vapors, and equipment noise indicate working conditions that have potential risks to employee health and safety.

Previous studies have shown that OHS has a relationship with employee work productivity. Rosento et al. (2021) found that OHS has an influence on employee work productivity. Similar results were also found by Swastika et al. (2022), who showed that OHS has a significant effect on productivity. However, most previous studies were conducted in large companies or certain industrial sectors, so they do not fully represent the conditions of small and medium-scale automotive repair and car salon businesses.

Furthermore, previous research on automotive workshops in Madiun City has been limited to examining OHS as a single variable. Saputra and Riandadari (2020) showed that OHS affects the productivity of automotive mechanics, but their study did not examine the relationship between OHS and other factors such as workload and work environment simultaneously. Differences in research findings regarding the influence of workload and work environment on productivity also indicate the need for further testing in different research objects.

Based on these phenomena and research gaps, this study aims to analyze the influence of Occupational Health and Safety (OHS), Workload, and Work Environment on Employee Productivity at CV Surya Indah Madiun City. This research is expected to provide academic contributions in the form of additional empirical evidence regarding factors influencing employee productivity in automotive repair and car salon businesses. In addition, this study is expected to provide practical benefits for companies in evaluating OHS implementation, workload management, and work environment improvement.

1. Grand Theory

This study uses Human Capital Theory as the main theoretical foundation. Schultz (1961) explains that humans are a form of capital that can be developed through certain investments, such as education, training, health, and proper working conditions. Becker (1964) further developed this concept by explaining that investment in human resources will generate increased value and productivity for individuals and organizations.

Based on the perspective of Human Capital Theory, the implementation of OHS, workload management, and the provision of a good work environment represent forms of company investment in employees. Employees who receive safe, healthy, and comfortable working conditions will have more optimal work capabilities, which can improve organizational productivity.

2. Literature Review

Employee Productivity

Work productivity is the comparison between achieved results and the resources used in the work process. According to Sutrisno (2009), productivity describes the relationship between output produced and the overall input used. Productivity indicators include ability, improvement of work results, work enthusiasm, self-development, quality, and efficiency.

Occupational Health and Safety (OHS)

OHS is a worker protection system that enables employees to work in safe and healthy conditions. OHS indicators include the use of PPE, work instructions, safety signs, work supervision, safety training, work equipment conditions, and a safe work environment.

Workload

Workload refers to the amount of work and responsibilities that must be completed by employees within a certain period. An inappropriate workload can create work pressure and reduce employees' ability to achieve optimal productivity. Workload indicators include work targets, work conditions, work standards, number of tasks, and task completion time.

Work Environment

The work environment refers to physical and non-physical conditions surrounding employees while performing their duties. Work environment factors such as lighting, temperature, noise, ventilation, and cleanliness can influence employee comfort and productivity.

B. METHOD

This study uses a quantitative approach with an associative research method. The quantitative approach was chosen because this research aims to examine and analyze the influence of Occupational Health and Safety (OHS), workload, and work environment on employee productivity. This method allows researchers to test the relationship between research variables through numerical data analysis and statistical testing.

The research was conducted at CV Surya Indah, Madiun City, an organization engaged in vehicle repair and painting services. The object of this study was selected because the company's

operational activities involve various workplace conditions related to occupational safety risks, workload demands, and physical work environment conditions. The problems identified in this study include the inconsistent use of Personal Protective Equipment (PPE), workload conditions caused by work targets and completion demands, as well as workplace environmental conditions involving exposure to dust, paint odors, thinner vapors, and noise from work equipment.

The population in this study consisted of all employees of CV Surya Indah, Madiun City, with a total of 33 employees. Due to the relatively small population size, this study used a saturated sampling technique, in which all members of the population were used as research samples. Therefore, the total number of respondents involved in this study was 33 employees.

Data collection was conducted through questionnaires and observations. The questionnaire was prepared based on indicators of each research variable, namely Occupational Health and Safety (OHS), workload, work environment, and employee productivity. The questionnaire statements were measured using a Likert scale to assess respondents' perceptions regarding the implementation of OHS, workload conditions, work environment conditions, and employee productivity. Observation was also conducted to identify actual conditions in the workplace, particularly related to safety practices, employee activities, and the physical work environment at CV Surya Indah.

The research variables consist of three independent variables and one dependent variable. The independent variables are Occupational Health and Safety (OHS) (X1), Workload (X2), and Work Environment (X3), while the dependent variable is Employee Productivity (Y). Occupational Health and Safety was measured through indicators including work instructions, safety signs, work supervision, safety training, work equipment conditions, Personal Protective Equipment (PPE) usage, and workplace safety conditions. Workload was measured through work targets, work conditions, work standards, number of tasks, and time required to complete tasks. The work environment variable was measured through physical workplace conditions, including lighting, temperature, noise, ventilation, and cleanliness. Employee productivity was

measured through ability, improvement of work results, work enthusiasm, self-development, quality, and efficiency.

The data analysis process was carried out using statistical analysis with the assistance of SPSS software. The analysis began with instrument testing through validity and reliability tests to determine the accuracy and consistency of the questionnaire. Furthermore, classical assumption tests were conducted, including normality test, multicollinearity test, and heteroscedasticity test, to ensure that the regression model met the required statistical assumptions.

After fulfilling the requirements of the classical assumption tests, multiple linear regression analysis was conducted to examine the influence of Occupational Health and Safety (OHS), workload, and work environment on employee productivity. Hypothesis testing was performed through partial tests (t-test) to determine the effect of each independent variable individually and simultaneous tests (F-test) to determine the combined influence of all independent variables on employee productivity. The coefficient of determination (R^2) test was also conducted to determine the contribution of Occupational Health and Safety, workload, and work environment variables in explaining variations in employee productivity.

C. RESULTS AND DISCUSSIONS

1. Instrument Testing Results

This research was conducted at CV Surya Indah, Madiun City, which is a company engaged in automotive repair and car salon services, including body repair, painting, oven painting, and vehicle maintenance services. The respondents in this study were 33 employees of CV Surya Indah. Data analysis was performed using multiple linear regression analysis with the assistance of SPSS to examine the influence of Occupational Health and Safety (OHS), workload, and work environment on employee productivity.

The validity and reliability tests were conducted to ensure that the research instrument used was capable of measuring the research variables accurately and consistently. The reliability test

results showed that the Occupational Health and Safety (OHS) variable obtained a Cronbach's Alpha value of 0.948, workload obtained a value of 0.938, work environment obtained a value of 0.938, and employee productivity obtained a value of 0.898. All variables obtained Cronbach's Alpha values above 0.70, indicating that all questionnaire items were reliable and consistent for use in this study.

Table 1. **Reliability Test Results**

Variable	Cronbach's Alpha	Description
Occupational Health and Safety (OHS)	0.948	Reliable
Workload	0.938	Reliable
Work Environment	0.938	Reliable
Employee Productivity	0.898	Reliable

2. Classical Assumption Test Results

The classical assumption test was conducted before multiple linear regression analysis to ensure that the regression model met statistical requirements. The normality test was performed using the Shapiro-Wilk and Kolmogorov-Smirnov tests.

The results showed that the Shapiro-Wilk significance value was 0.690 and the Kolmogorov-Smirnov significance value was 0.200. Both values were greater than 0.05, indicating that the residual data were normally distributed. Therefore, the regression model used in this study met the normality assumption and was appropriate for further analysis.

3. Multiple Linear Regression Analysis

Multiple linear regression analysis was used to determine the influence of Occupational Health and Safety (OHS), workload, and work environment on employee productivity at CV Surya Indah.

The coefficient of determination (R^2) test showed that the R Square value was 0.785. This value indicates that 78.5% of employee productivity variation can be explained by Occupational Health and Safety (OHS), workload, and work environment simultaneously. Meanwhile, the remaining 21.5% is influenced by other variables outside the research model, such as compensation, work motivation, job satisfaction, and leadership style.

Table 2. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square
1	0.886	0.785	0.763

4. Hypothesis Testing Results

Hypothesis testing was conducted using the partial test (t-test) to determine the influence of each independent variable on employee productivity.

Table 3. Partial Test (t-Test) Results

Variable	Regression Coefficient	t-value	Significance	Decision
Occupational Health and Safety (OHS)	0.247	2.579	0.015	Accepted
Workload	0.355	3.357	0.002	Accepted
Work Environment	0.272	2.829	0.008	Accepted

The results of hypothesis testing showed that Occupational Health and Safety (OHS), workload, and work environment had a positive and significant effect on employee productivity. Therefore, the first hypothesis (H1), second hypothesis (H2), and third hypothesis (H3) were accepted.

5. Discussion of Research Findings

The Influence of Occupational Health and Safety (OHS) on Employee Productivity

The results showed that Occupational Health and Safety (OHS) had a positive and significant effect on employee productivity. The regression coefficient was 0.247, the t-value was 2.579 (>2.045), and the significance value was 0.015 (<0.05). These results indicate that better OHS implementation can improve employee productivity at CV Surya Indah.

The implementation of OHS provides employees with a sense of safety and comfort while performing their duties. However, the implementation of OHS at CV Surya Indah still requires improvement, particularly regarding the consistency of PPE usage. The lowest average score was found in the PPE usage indicator with a value of 2.52, indicating that employee discipline in using PPE needs to be strengthened through supervision, safety socialization, and continuous training.

The Influence of Workload on Employee Productivity

The results showed that workload had a positive and significant effect on employee productivity. The workload variable obtained a regression coefficient of 0.355, a t-value of 3.357 (>2.045), and a significance value of 0.002 (<0.05). Therefore, H2 was accepted.

This finding indicates that workload that is managed appropriately can encourage employees to achieve better productivity. A balanced workload accompanied by company support can help employees complete tasks effectively. The workload variable also had the strongest influence compared with other variables, as indicated by the Beta coefficient value of 0.368. Therefore, CV Surya Indah needs to maintain proportional workload distribution through structured scheduling and adequate support for employees.

The Influence of Work Environment on Employee Productivity

The results showed that work environment had a positive and significant effect on employee productivity. The regression coefficient was 0.272, the t-value was 2.829 (>2.045), and the significance value was 0.008 (<0.05), indicating that H3 was accepted.

This finding indicates that a supportive work environment contributes to increasing employee productivity. The physical work environment at CV Surya Indah, including lighting, temperature, noise levels, and workspace conditions, generally supports employee activities. However, noise remains an aspect that requires attention because automotive repair and painting activities produce relatively high noise levels. Improvement of workplace arrangement, noise control, ventilation, and lighting maintenance can further increase employee comfort and productivity.

The Simultaneous Influence of Occupational Health and Safety (OHS), Workload, and Work Environment on Employee Productivity

The results of the determination coefficient test indicate that Occupational Health and Safety (OHS), workload, and work environment simultaneously contribute significantly to employee productivity. The R Square value of 0.785 demonstrates that the three independent variables have a strong contribution in explaining employee productivity at CV Surya Indah. This finding confirms that employee productivity is influenced not only by individual capabilities but also by

organizational efforts in providing safe working conditions, appropriate workload management, and a supportive work environment.

D. CONCLUSIONS

Based on the results of the research conducted at CV Surya Indah, Madiun City, it can be concluded that Occupational Health and Safety (OHS), workload, and work environment are important factors that influence employee productivity. The implementation of OHS contributes to creating a safe and comfortable working condition, allowing employees to carry out their duties more effectively. Proper workload management also plays an important role in maintaining employee performance, as an appropriate workload can encourage employees to complete their tasks optimally. In addition, a supportive work environment contributes to improving employee comfort, focus, and productivity during work activities.

This study provides practical implications for CV Surya Indah in improving employee productivity through continuous improvement of workplace safety practices, workload management, and work environment conditions. Companies need to maintain the implementation of occupational safety procedures, strengthen employee awareness regarding the use of Personal Protective Equipment (PPE), ensure balanced task distribution, and improve workplace conditions to support employee performance.

This research has several limitations. The study was conducted only at one company, namely CV Surya Indah, Madiun City, so the findings may not fully represent other automotive repair and service businesses with different characteristics. In addition, this study only examined three factors affecting employee productivity, while other factors that may influence productivity, such as compensation, motivation, job satisfaction, leadership style, and organizational culture, were not included in the research model.

Future research is expected to expand the research scope by involving more companies or different industrial sectors to obtain broader findings. Further studies may also consider adding

other relevant variables that can influence employee productivity and use different research approaches to provide a more comprehensive understanding of factors affecting employee performance.

E. SUGGESTIONS

Based on the results of this research, future researchers are expected to develop studies related to employee productivity by using the same variables, namely Occupational Health and Safety (OHS), workload, work environment, and employee productivity, but applying them to different research objects or industrial sectors. Research on different types of organizations, such as manufacturing companies, construction companies, or other service industries, may provide broader perspectives regarding the factors that influence employee productivity.

Future research may also consider adding other variables that are relevant to employee productivity, such as work motivation, compensation, job satisfaction, leadership style, organizational commitment, or work discipline. The addition of these variables is expected to provide a more comprehensive model for explaining factors that affect employee productivity.

Researchers in subsequent studies are also encouraged to use different research approaches, such as mixed methods or qualitative approaches, to obtain deeper information regarding employee experiences, perceptions, and workplace conditions. Further research with a wider population and a larger number of respondents is expected to produce findings that have stronger generalizability and contribute to the development of human resource management studies.

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