



Research Article

Implementation of 5S for Safety and Worker Productivity at Expedition Services Companies (A Study in the JNE Express Operations Department)

Tsabita Butsaina Salma¹ | Ana Islamiyah Syamila^{1*} | Reny Indrayani¹ | Globila Nurika¹ | Dhuha Itsnanisa Adi¹

¹Study Program of Public Health, Faculty of Public Health, University of Jember, Indonesia

***Corresponding Author:**

Ana Islamiyah Syamila, Study Program of Public Health, Faculty of Public Health, University of Jember, Indonesia.
Email: ana.islamiyah@unej.ac.id

DOI: 10.33086/mtphj.v9i1.5415

Article History:

Received, May 14th, 2024

Revised, June 27th, 2024

Accepted, February 12th, 2025

Available Online: March 27th, 2025

Please cite this article as:

Salma, T. B., et. al., "Implementation of 5S for Safety and Worker Productivity at Expedition Services Companies (A Study in the JNE Express Operations Department)" Register: Medical Technology and Public Health Journal, Vol. 9, No. 1, pp. 78-90, 2025

ABSTRACT

Delays in delivering goods to consumers via expeditions continue to pose a challenge, leading to inaccuracies in the established delivery schedule. This issue is closely related to the productivity of couriers and warehouse staff involved in the delivery process. 5S Safety (Sort, set in order, Shine, Standardize, Sustain, and Safety) is recognized as a factor influencing employee productivity. This study examines the relationship between the implementation of 5S Safety and the work productivity of operational workers at JNE Express Jember. This research was designed as a quantitative analytic study with a cross-sectional approach. It was conducted at JNE Express Jember in December from October 2022 to May 2023 and involved 74 operational workers as respondents. Respondents were selected using the proportionate random sampling method. Research data were gathered through interviews based on a questionnaire. The data were analyzed univariately and bivariate using the Spearman test, and the results were presented in tabular form accompanied by narrative explanations. This study's findings indicate no discernible relationship between individual characteristics (age, education level, and years of service), training, work motivation, and the implementation of 5S Safety concerning work productivity among JNE Express Jember's operational workers. Management needs to monitor and evaluate the implementation of 5S Safety, enhance the training provided, and offer motivation and recognition to employees who perform their duties effectively. Employees are also encouraged to take responsibility for diligently applying 5S Safety practices and utilizing the skills and knowledge acquired from their training in their daily work.

Keywords: 5S Safety, courier, expedition, work productivity

INTRODUCTION

One of the products of technological innovation in the industrial sector is e-commerce or online sales. Sellers are starting to get involved in online sales or e-commerce to advertise and sell products online. It turns out that online shopping behavior also has various shortcomings and



constraints, so consumers feel dissatisfied. Delivery delays and errors, undelivered packages, and defective product shipments are the leading causes of dissatisfied e-commerce purchases (Aisyiyah, et al., 2019). (APJII, 2022) in 2022 also emphasizes this problem where the reasons for individuals no longer shopping online is because the delivery time is relatively long and not on schedule a sizable percentage, namely 13.42%. This is a form of lack of work productivity in shipping or expedition workers.

Productivity is a way of thinking that aims to increase efficiency, effectiveness, and quality to improve the quality of work sustainably. Factors that can affect worker productivity can be grouped into three, namely: labor factors (training, motivation, work ethic, and physical condition of workers), supporting facilities factors (work environment and welfare), and supra facilities factors (industrial relations, policies government, and management professionalism) (Tjiptoheriyanto and Nagib, 2008). In addition, individual characteristics such as age, level of education, and years of service also play a role in shaping worker productivity. The 5S concept (Sort, set in order, Shine, Standardize, Sustain) originating from Japan or Indonesian is often known as the 5S concept of Concise, Neat, Clean, Caring, and Diligent is one form of effort that can be made to implement housekeeping to create a safe and comfortable work environment (Prasmono, et al., 2021). The application of 5S Safety is one of the stages to encourage increased work productivity or changes in worker attitudes by implementing arrangements and maintaining a clean work environment. 5S Safety can be implemented in a management system as an approach to creating an integrated management system to increase work productivity (Aisyah and Sukarno, 2022). Based on research conducted by (Suryawan, 2019), 5R culture has a significant influence on work productivity. Other research also states that the 5S program has a great impact on worker work productivity (Sartono and Abduh, 2019).

JNE Express Jember has implemented the 5S Safety concept which has one goal to increase the level of productivity of its workers. Based on preliminary studies, the implementation of 5S Safety in the JNE Express work environment, including the warehouse or warehouse area, does not yet have an implementation standard and there has been no monitoring and evaluation carried out regarding the 5S Safety concept that has been implemented. This condition is also one of the obstacles for JNE Express to implement 5S Safety and can also affect the level of worker productivity considering that if packages in the warehouse are not properly organized, there is an increase in the risk of various problems occurring, such as package damage, errors, and delays in package delivery. Based on the conditions of the problems that have been described, the researchers conducted a study entitled *The Relationship Between the Implementation of 5S Safety and Work Productivity in Operational Workers at JNE Express, Jember Regency*. This research needs to be carried out to find out how worker productivity is and its relationship with the implementation of 5S that has been implemented and also possible things that need to be repaired and improved to achieve good productivity with a good work system. The purpose of this study was to analyze the relationship between the implementation of 5S (Sort, Set in order, Shine, Standardize, Sustain) Safety and work productivity for workers at JNE Express, Jember Regency.

MATERIAL AND METHODS

Materials

This type of research is an analytic using a quantitative approach with a cross-sectional study design. The independent variables in this study include age, education level, years of service, training, work motivation and implementation of 5S Safety and the dependent variable is

work productivity. This research was conducted at JNE Express Jember Regency in October 2022 – May 2023. The population in this study were JNE Express Jember operational workers totaling 90 workers and the sample was calculated using the proportion estimation formula so that a sample of 74 workers was obtained consisting of 65 couriers and 9 inbound workers. Furthermore, the sample taken is determined by the method of proportionate random sampling.

Data collection procedures

This study uses primary data including data related to individual characteristics (age, years of service, and level of education), training, work motivation, implementation of 5S (Sort, Set in order, Shine, Standardize, Sustain) Safety, and worker productivity. Data collection was carried out by interviews using questionnaires and direct observation. This questionnaire consisted of 67 questions divided into 3 groups of subvariables. The three groups of subvariables include training (19 questions), work motivation (23 questions), and implementation of 5S Safety (25 questions). The instruments used are instruments that have been tested for validity and reliability while the 5S Safety implementation instrument is prepared by developing questions on the 5S Safety observation sheet compiled by Kaizen. This research has gone through an ethical review process by the Health Research Ethics Commission (KEPK) Faculty of Dentistry, University of Jember with research ethics number 1924/UN25.8/KEPK/DL/2023.

Data analysis

Data were processed with univariat and bivariat analysis ~~univariately and bivariately~~ using Spearman's correlation test and presented in tabular and narrative form.

RESULTS AND DISCUSSION

Characteristics of Respondents

Respondent characteristics are factors that exist in each respondent which provides an overview of individual characteristics so that everyone has differences. In this study, the characteristics of respondents that are examined include age, education level, and working hours.

Table 1. Distribution of Respondents Based on Individual Characteristics

Variable	n	%
Age		
20-24 years	18	24,3
25-29 years	30	40,5
30-34 years	16	21,6
35-39 years	7	9,5
40-44 years	1	1,4
44-49 years	2	2,7
Level of Education		
Senior high school	69	93,2
Bachelor	5	6,8
Years of Service		
1-5 years	60	81,1
6-10 years	12	16,2
≥11 years	2	2,7
Total	74	100,0

Table 1 shows that most of the respondents who participated in this study had ages in the range of 25-29 years (40.5%). The youngest respondent in this study was 20 years old and the oldest was 48 years old. Those aged 20-29 years are included in the productive age category (Stitapajna and Aslam, 2020). Workers in the age group of 20-29 years have better physical condition and stamina. (Tarwaka and Bakri, 2014) states that individuals aged 50-60 years will experience a decrease in sensory and motor abilities by up to 60% and 25% of muscle function will also experience a decrease. At the age of 20-29 years, individuals will actively search for work and will also carry out their work optimally. The age of the worker sufficiently determines his success in doing a job, both physical and non-physical (Meutia et al., 2022). Workers who are at a productive age will have good performance, but as they get older and closer to the elderly, the performance of these workers will also decrease due to limited physical and health factors that affect them (Kumbadewi et al., 2021).

The education level of operational workers at JNE Express the majority are graduates of SMA/SMK/equivalent (93.2%). Workers with high levels of education tend to have broader knowledge to carry out work compared to workers with lower levels of education (Irkhami, 2015). A high level of education also makes it easier for workers to organize work, both in terms of time management and arranging work so that it can be completed efficiently (Xie et al., 2021). In the hiring process, education level is usually one of the requirements put forward by the company. PT. Tiki Jalur Nugraha Ekakurir stipulates that their employees have a minimum education level of SMA/SMK/equivalent. Goods receiving and shipping jobs require workers to have good reading skills to find out package information (address, consignee, and others). In addition, operational workers in goods delivery services are required to be able to use smartphones so they can report work on company-owned apps. Operational workers, especially couriers, are also required to be able to read maps to find the exact location of the delivery of goods.

Based on Table 1, it is also known that most respondents in this study had tenure in the range of 1-5 years (81.1%). The working period is related to the time when you start working, so the longer the working period, the better the skills at work (Septiani, 2018). Tenure of work can have a positive or negative impact on workers. Work experience is one of the positive effects of working life. However, repetitive work over a long period can also cause workers to feel bored. This is a negative impact of tenure (Kusgiyanto, et al., 2017).

Training and Work Motivation

Labor factors are factors that affect worker performance which will also determine the level of worker productivity. In this study, labor factors are training and work motivation variables. Training is an activity carried out by JNE Express to improve the knowledge and skills of its workers to achieve effective and productive performance. Work motivation is a thing or condition that moves workers to work with full purpose and achieve JNE Express goals.

Table 2. Distribution of Respondents Based on Labor Factors

Variable	n	%
Training		
Not enough	4	5,4
Enough	38	51,4
Good	32	43,2

Work Motivation		
Not enough	3	4,1
Enough	42	56,8
Good	29	39,2
Total	74	100,0

Based on Table 2, the results of research on 74 operational workers at JNE Express regarding training show that most workers have training results that fall into the good training category (51.4%). The training they take provides knowledge and skills that help workers to improve their performance in the workplace (Khasmir, 2017). Apart from that, after attending training, workers feel more responsible for their work and feel confident in their abilities. This condition has a positive impact on workers where they get appreciation from their colleagues or superiors so that their performance becomes better. The factor that causes operational workers to be less satisfied with the training provided by the company is that the training provided is considered less effective. This is because the training material provided is not appropriate to the worker's field of work. Apart from that, workers also felt that the speaker's delivery method was sometimes not appropriate to the material being presented. This is in accordance with (Sofyandi, 2013) where he stated that the dimensions of effective training can be seen through materials, methods, trainer (speaker) skills, length of training time and training facilities. However, there are some workers who are satisfied with the training they receive (43,2%).

Table 2 also shows that most of the respondents in this study had enough level of work motivation (56.8%). Based on the research results, it is known that one of the factors that causes the level of work motivation of operational workers at JNE Express to be quite good is the existence of harmonious social relations between fellow workers and superiors. Needs, drives, and goals are three elements that are owned by motivation. Goal-oriented encouragement is the essence of motivation (Nursalam, 2014). These conditions help workers complete their work by sorting incoming goods or arranging them and sending the goods to the delivery address. Apart from that, workers will feel comfortable carrying out their work, can discuss and appreciate each other's work results and will rarely be involved in conflicts or disputes with colleagues or superiors. The second factor is the non-material incentives provided by the company, such as health insurance. All workers at JNE Express are guaranteed health and safety by management by being registered with BPJS Employment. Therefore, all workers feel safe and protected so they can work professionally and well. The third factor is that workers feel that the work they do has an important role in achieving company goals. This feeling will encourage workers to work harder and achieve a good level of productivity.

Even though the majority of JNE Express operational workers have an enough level of work motivation, there are still three workers (4.1%) who have a relatively low level of work motivation. From the research results, it is known that there are workers who feel they receive less appreciation and appreciation from their superiors in carrying out or completing their work. This causes workers not to be optimal in completing their work.

Implementation of 5S Safety

Implementation of 5SSafety is an activity carried out by workers that includes sort or brief, set in order or neat, shine or clean, standardize or treat, sustain or diligent, and safety or safety to create a productive work environment.

Table 3. Distribution of Respondents Based on Implementation of 5S Safety

Implementation of 5S Safety	n	%
Low	3	4,1
Enough	7	9,5
Good	64	86,5
Total	74	100,0

Table 3 shows that most respondents have a good level of 5S Safety implementation (86.5%). The good implementation of the 5S Safety concept by the majority of JNE Express operational workers is demonstrated by the good application of sort (concise), set in order (neat) and safety (safe) indicators. Examples of good sorting include workers separating packages that are damaged and unfit to be sent from packages that are worth sending. The courier also places the package in a safe position so that the package is safe and does not interfere with the driving process as a form of maintaining order (neat). Good implementation of 5S Safety will have an impact on effectiveness, efficiency, productivity and safety at work (Jahja, 2009:4).

Therefore, the research results show that most workers have implemented 5S Safety well, but there are still workers who have not implemented the 5S Safety concept optimally. They have not applied sustain (diligent) and shine indicators with discipline. Therefore, the diligent indicator has not been implemented properly. Diligence can be demonstrated by the existence of personal habits in workers without having to be ordered and supervised, which is described as the ability to maintain and improve what has been achieved in the workplace (Kusumadewi, 2022). According to Pandiangan (2018:238), diligent workers will do what must be done and not do what should not be done.

Apart from the application of sustainability indicators which is not yet optimal, the shine indicator has also not been implemented properly. Cleanliness can be done by cleaning, checking and evaluating the workplace or warehouse (Kusumadewi, 2022). However, based on research results at JNE Express, there are still many workers who do not clean the warehouse environment of dirt and dust and do not carry out or propose repairs if it turns out that work equipment is damaged. Apart from that, there are also couriers who do not regularly wash the vehicles used to send goods.

The final indicator in this concept is safety. The form of implementing safety indicators carried out by JNE Express operational workers includes couriers who routinely check vehicles before work. These checks include petrol, mirrors, lights, tires and so on. However, there are still many JNE Express operational workers who do not know the location of the gathering points and safety signs in the JNE Express warehouse area.

Courier is a type of job that requires most of the working time to travel. Every day couriers are busy mobilizing in a short time. Therefore, it is necessary to implement safe riding. Safety riding is a step that can be taken to minimize danger and maximize safety when driving so that carrying out the work of couriers or workers remains safe and does not endanger other road users (Izmi, 2022). In this research, safety riding is also one of the aspects assessed in safety indicators.

Respondents has implemented safety riding quite well, namely by using Personal Protective Equipment (PPE) when driving. The PPE includes helmets, shoes, gloves and jackets. Apart from that, the courier also carries a driver's license, vehicle registration certificate and obeys traffic signs when driving to deliver the package to the destination address.

Work productivity

Work productivity is the ability of workers to carry out work effectively and efficiently and succeed in achieving work that meets targets, both in terms of quality and quantity.

Table 4. Distribution of Respondents Based on Work Productivity

Work Productivity	n	%
Enough	34	45,9
Good	40	54,1
Total	74	100,0

Based on Table 4 it is known that most of the respondents have a good level of work productivity (54.1%). Work productivity assessment is obtained from work results which are calculated according to the work section. The productivity level of inbound workers is calculated by comparing the number of packages successfully sorted per worker with the average package successfully sorted by all workers per day. Meanwhile, for couriers, the productivity level is calculated by comparing the number of packages successfully delivered per courier with the average packages successfully delivered by all couriers per day. Average courier packages are calculated based on each delivery zone. The JNE Express package delivery zone is divided into two, namely zone A for deliveries within the city (Kaliwates and Sumbersari Districts) and zone C for deliveries outside the city.

Productivity is a form of belief that everyone can do better work every day compared to the work of the previous day. Tuhardi in Sutrisno (2011: 100) states that productivity is a mental attitude that encourages us to always try to perfect what already exists by looking for improvements. Based on the research results, it was found that almost most operational workers at JNE Express have a good level of productivity. There are several factors that can influence the level of worker productivity, including: training, mental attitude and physical abilities of employees as well as the relationship between superiors and subordinates (Simanjuntak in Sutrisno, 2011: 103).

Even though the majority of JNE Express operational workers have a good level of productivity, there are still many workers with enough level of work productivity. Workers with a enough level of productivity because they have performance achievements below the average for all workers in their section. This may be caused by various factors, both external factors such as terrain and weather when making deliveries or internal factors, namely workers not being disciplined about working hours. According to (Swandono, 2016), low worker productivity is also caused by low work morale. Where workers use working time for other purposes outside of work so that their performance goals or targets cannot be achieved, and their performance achievements are also below the average of other workers.

Relationship of Respondent Characteristics with Work Productivity

The results of the analysis of the relationship between individual characteristics and work productivity for 74 operational workers at JNE Express, Jember district are as follows:

Table 5. Relationship of Respondent Characteristics with Work Productivity

Variable	Productivity				Total		P-Value
	Good		Enough		n	%	
	n	%	n	%			
Age							
20-24 years	9	50,0	9	50,0	18	100,0	0,731
25-29 years	16	53,3	14	46,7	30	100,0	
30-34 years	10	62,5	6	37,5	16	100,0	
35-39 years	4	57,2	3	4,1	42,8	100,0	
40-44 years	1	100,0	0	0,00	1	100,0	
44-49 years	0	0,00	2	100,0	2	100,0	
Level of Education							
Senior high school	37	53,6	32	46,4	69	100,0	0,786
Bachelor	3	60,0	2	40,0	5	100,0	
Years of Service							
1-5 years	31	51,7	29	48,3	60	100,0	0,487
6-10 years	9	75,0	3	25,0	12	100,0	
≥11 years	0	0	2	100,0	2	100,0	
Total	40	54,1	34	45,9	74	100,0	

Based on the results of the correlation Spearman test, the known p-value of 0.731 which means $p\text{-value} > 0.05$ so that age is not related to the level of worker productivity. This research is in line with research conducted by (Aprilyanti, 2017). One of the important things that form the basis of the service production process in a freight forwarding service company is the timeliness and safe condition of the goods. Workers in the operational section of a freight forwarding company certainly have a big responsibility for these two things. Therefore, in the process of sorting and sending packages, management has set performance targets that must be achieved by workers according to their part of the work. With the existence of predetermined performance targets, in this study age as an individual factor did not much affect the achievement or performance results of operational workers.

Based on the results of correlation analysis using the Spearman test earned a p-value of 0.786 which means $p\text{-value} > 0.05$, so that the education level of the respondents in this study has no relationship with the level of productivity. In this study, all respondents met the minimum educational requirements set by the company, namely Senior High School/equivalent. The existence of a division of zones and clear job descriptions provides equal opportunities for all operational workers both inbound and courier to complete the job optimally. The results of this study are also in line with research conducted by (Mandik and Sandow, 2019).

The results of the correlation analysis with the test spearman get a p-value of 0.487 so it can be concluded that the respondent's tenure has no relationship with the level of work productivity. (Kumbadewi, et al., 2021), states that the more years of service, the higher the experience and skills that will support workers in carrying out work so that they can increase work productivity. Work skills can help workers produce quality work. In this study, the level of worker productivity is only measured by comparing the performance results of each worker with the entire workforce. Therefore, the productivity level results obtained are productive in terms of quantity and do not involve quality performance.

Relationship between Training and Work Motivation with Work Productivity

The results of the analysis of the relationship between training and work motivation with work productivity for 74 operational workers at JNE Express, Jember district are as follows:

Table 6. Relationship between Training and Work Motivation with Work Productivity

Variable	Productivity				Total		P-Value
	Good		Enough		n	%	
	n	%	n	%			
Training							
Not enough	1	25,0	3	75,0	4	100,0	0,799
Enough	23	60,6	15	39,4	38	100,0	
Good	16	50,0	16	50,0	32	100,0	
Work Motivation							
Not enough	0	0,0	3	50,0	3	100,0	0,244
Enough	28	66,7	14	33,3	42	100,0	
Good	12	41,3	17	58,7	29	100,0	
Total	40	54,1	34	45,9	74	100,0	

Based on the results of the correlation spearman test value is obtained as a p-value of 0.799 which means $p\text{-value} > 0.05$, training in this study has no relationship with the level of productivity. This research is in line with research conducted by (Firdiyanti, 2017), but also not in line with the research conducted by (Nathiqah and Pancasasti, 2022). JNE Express management has provided training related to the field or work specialization for new workers who will do their first job at JNE Express. Based on the research results, it is known that there are workers who state that the training received is not included in the optimal training category. Where workers feel the training, they get is unsatisfactory because the training material they attend is not in accordance with their field of work. In addition, workers also considered that the way the speakers delivered during the training was sometimes not in accordance with the material presented. (Mangkunegara, 2011), states that optimal training indicators are training methods, delivery of training instructors or speakers and training facilities. Therefore, in this study, training did not trigger an increase or decrease in the level of productivity of operational workers at JNE Express.

The results of correlation analysis using the Spearman test get a p-value of 0.244 which means $p\text{-value} > 0.05$ so work motivation is not related to the level of work productivity. This research is in line with research conducted by (Menutomo, et al., 2022), that the work motivation variable does not affect the work productivity variable. This is because the respondents in the study did not experience motivation directly in carrying out the work. Direct motivation is motivation that is given directly to workers to fulfill their satisfaction needs, such as praise, awards, allowances, bonuses, and others. Based on the results of the study, some operational workers feel underappreciated and rarely receive appreciation from superiors when carrying out their work. Therefore, work motivation possessed by operational workers cannot be the main trigger for increasing work productivity following the theory used.

Relationship between 5S Safety Implementation and Work Productivity

The results of the analysis of the relationship between 5S Safety Implementation with work productivity for 74 operational workers at JNE Express, Jember district are as follows:

Table 7. Relationship between 5S Safety Implementation and Work Productivity

	Productivity	Total	P-Value
--	--------------	-------	---------

Variable	Good		Enough			
	n	%	n	%	n	%
5S Safety Implementation						
Low	0	0	3	100,0	3	100,0
Enough	4	57,1	3	42,9	7	100,0
Good	36	56,2	28	43,8	64	100,0
Total	40	54,1	34	45,9	74	100,0

0,292

Based on the results of correlation analysis using the Spearman test earned a p-value of 0.292 which means $p\text{-value} > 0.05$ so the application of 5S Safety is not related to the level of worker productivity. The results of this study are not in line with research conducted by (Supardi, 2023), which that the 5S variable has a positive and significant effect on work productivity. In that study, the 5S variable was dominated by the routine implementation of 5S by the workers. Based on the results of research that has been conducted on JNE Express operational workers note that the indicator sort and set in order has been implemented properly, but in the application of these two indicators, workers do not do it in a disciplined or routine manner.

The 5S concept applied through an educational process or application in the work environment is not a trend, but a continuous and simultaneous process (Maitimue and Ralahalu, 2018). (Yudhanto and Purwanto, 2020), also state that the simultaneous application of 5S has a significant effect on worker productivity with a proportion of 46% while the other 54% is caused by other factors. One part of the work in the operations department is courier. In this study most of the the respondents' work is courier. Courier is a type of job with high mobility and spends more time driving on the road than sorting goods in a warehouse or warehouse. Therefore, the productivity level of couriers is also heavily influenced by other factors, both internal and external, besides the implementation of 5S Safety. External factors that can affect courier productivity include the weather and conditions on the road when the courier makes deliveries. In addition, package recipients who respond slowly to courier confirmation regarding package receipt also become an obstacle to package delivery by couriers. These two things cause the delivery time to sometimes not match the predetermined time so that the result of the courier's productivity level is less than optimal.

CONCLUSION AND SUGGESTION

This study concludes that there is no relationship between individual characteristics (age, education level, and years of service), training, work motivation, and 5S Safety implementation with work productivity in JNE Express operational workers in Jember Regency. Based on the research results, the management of JNE Express Jember needs to monitor and evaluate the implementation of 5S Safety, improve the training provided, and provide motivation and appreciation to employees who have worked well. Operational workers are also expected to be responsible for implementing 5S Safety diligently and applying the skills and knowledge gained from the training they attend when carrying out work. Researchers can then measure the level of productivity in terms of quantity and quality, add workload variables, and conduct research not only on one expedition service company.

ACKNOWLEDGEMENT

The authors are grateful to the Faculty of Public Health, University of Jember which has supported and facilitated this research, and to the management and operational workers of JNE Express, Jember District who have given permission and facilitated this research.

CONFLICT OF INTEREST

The authors state that there is no conflict of interest with the parties involved in this research.

REFERENCES

- Aisyah, A.A. and Sukarno, I. (2022) 'Evaluating the Effectiveness of 5S Implementation At Pt Tridi Oasis Group', *Journal of Industrial Engineering and Operation Management (JIEOM)*, 05(01), pp. 69–83.
- Aisiyiah, N., Hartoyo, H. and Krisnatuti, D. (2019) 'Analisis Perilaku Komplain Konsumen Online Shopping', *Jurnal Ilmu Keluarga dan Konsumen*, 12(3), pp. 248–259. Available at: <https://doi.org/10.24156/jikk.2019.12.3.248>.
- APJII. 2018. Survei Asosiasi Penyelenggara Jasa Internet Indonesia. <https://apjii.or.id/>
- APJII (2022) *Profil Internet Indonesia 2022*, apjii.or.id.
- Aprilyanti, S. (2017) 'Pengaruh Usia dan Masa Kerja Terhadap Produktivitas Kerja (Studi Kasus : PT . OASIS Water International Cabang Palembang)', 1(2), pp. 68–72.
- Firdiyanti, E. (2017) 'Pengaruh Pelatihan dan Motivasi Terhadap Produktivitas Kerja Karyawan', *Jurnal Ilmu Manajemen (JIM)*, 5(4), pp. 1–7.
- Irkhami, F.L. (2015) 'Faktor Yang Berhubungan Dengan Stres Kerja Pada Penyelam Di Pt. X', *The Indonesian Journal of Occupational Safety and Health*, 4(1), p. 54. Available at: <https://doi.org/10.20473/ijosh.v4i1.2015.54-63>.
- Ishijima, H., Eliakimu, E. and Mshana, J.M.H. (2016) 'The “5S” approach to improve a working environment can reduce waiting time: Findings from hospitals in Northern Tanzania', *TQM Journal*, 28(4), pp. 664–680. Available at: <https://doi.org/10.1108/TQM-11-2014-0099>.
- Izmi, S. and Rusmiati, D. (2022) 'Faktor-Faktor Yang Berhubungan Dengan Perilaku Safety Riding', *Jurnal Ilmiah Kesehatan*, 14(2), pp. 237–244. Available at: <https://doi.org/10.37012/jik.v14i2.1248>.
- Jahja, K. (2009). *Seri Budaya Unggulan 5R (Ringkas, Rapi, Resik, Rawat, Rajin)*. Edisi 3. Jakarta: Productivity and Quality Management Consultant.
- Khasmir (2017) *Manajemen Sumber Daya Manusia (Teori dan Praktik)*. Depok: PT Raja Grafindo Persada.
- Kumbadewi, L.S., Suwendra, I.W. and Susila, G.P.A.J. (2021) 'Pengaruh umur, pengalaman kerja, upah, teknologi dan lingkungan kerja terhadap perilaku caring perawat', *e-Journal Universitas Pendidikan Ganesha*, 9, pp. 1–9. Available at: <https://ejournal.undiksha.ac.id/index.php/JMI/article/view/6729>.
- Kurniawati, N.P. (2019) 'Analisis Penerapan Metode 5S Pada Warehouse Fast Moving Pt.Indonesia Power Ubp Mrica Kabupaten Banjarnegara', *Performa: Media Ilmiah Teknik Industri*, 18(1), pp. 28–33. Available at: <https://doi.org/10.20961/performa.18.1.19078>.
- Kusgiyanto, W., Suroto, S. and Ekawati, E. (2017) 'Analisis Hubungan Beban Kerja Fisik, Masa Kerja, Usia, dan Jenis Kelamin terhadap Tingkat Kelelahan Kerja pada Pekerja Bagian Pembuatan Kulit Lumpia di Kelurahan Kranggan Kecamatan Semarang Tengah.', *Jurnal Kesehatan Masyarakat*, 5(5), pp. 413–423.
- Kusumadewi, M.F. (2022) 'Penerapan Budaya 5R (Ringkas, Rapi, Resik, Rawat, Rajin) Dalam Menunjang Kinerja Gudang', *Jurnal Bisnis, Logistik, dan Supply Chain*, 2(2), pp. 58–63.
- Maitimue, N.E. and Ralahalu, H.Y.P. (2018) 'Perancangan Penerapan Metode 5S Di Pabrik

- Sarinda Bakery', *Arika*, 12(1), pp. 1–10. Available at: <https://doi.org/10.30598/arika.2018.12.1.1>.
- Mandik, G.N. and Sendow, G.M. (2019) 'Pengaruh Pendidikan, Penempatan dan Kepuasan Kerja Terhadap Produktivitas Karyawan Pada PT. PLN (Persero) Rayon paniki Manado', *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 7(3), pp. 4367–4376.
- Mangkunegara (2011) *Manajemen Sumber Daya Perusahaan*. Bandung: PT. Remaja Rosdakarya.
- Menutomo, D., Mukti, A.H. and Adiwaty, S. (2022) 'Pengaruh Masa Kerja, Pelatihan, Motivasi, Penilaian Kinerja, Kompensasi dan Kinerja Pegawait terhadap Produktivitas Kerja (Studi Kasus pada PT. Brantas Abipraya (Persero))', *Jurnal Ilmiah Bisnis, Pasar Modal, dan UMKM*, 5(1), pp. 42–52.
- Meutia, K.I. et al. (2022) 'Pengaruh Usia Karyawan Dan Absensi Karyawan Terhadap Kinerja Karyawan', *Jurnal Ekonomi ...*, 3(6), pp. 674–681. Available at: <https://dinastirev.org/JEMSI/article/view/1110%0Ahttps://dinastirev.org/JEMSI/article/download/1110/673>.
- Nathiqah and Pancasasti, R. (2022) 'Influence of Work Competency, Workload, and Job Training on the Work Activity of Lazada Logistics Courier', *Management Science Research Journal*, 1(3), pp. 23–42. Available at: <https://doi.org/10.56548/msr.v1i3.19>.
- Nursalam (2014) *Manajemen Keperawatan Aplikasi dalam Praktik Keperawatan Profesional*. Jakarta: Salemba Media.
- Pandiangan, S. 2018. *Operasional Manajemen Pergudangan*. Jakarta: Mitra Wacana Media.
- Prasmono, A.V., Nuryono, A. and Nuryamin (2021) 'Usulan Klasifikasi ABC dan Penerapan 5R terhadap Efisiensi Waktu Kerja Pada Gudang Arsip di PT. XYZ', *Journal of Industrial and Engineering System (JIES)*, 2(2), pp. 75–87.
- Sartono, D. and Abduh, M. (2019) 'Pengaruh Program 5R (Ringkas, Rapi, Resik, Rawat, Rajin) terhadap Produktivitas Kerja Karyawan pada Produksi Pemintalan Benang di PT. XYZ', pp. 1–13.
- Septiani, N. (2018) 'Beberapa Faktor Yang Berhubungan Dengan Perilaku Pekerja Dalam Penerapan Safe Behavior Di Pt. Hanil Jaya Steel', *The Indonesian Journal of Occupational Safety and Health*, 6(2), p. 257. Available at: <https://doi.org/10.20473/ijosh.v6i2.2017.257-267>.
- Siska, M. and Sari, L.F. (2016) 'Analisis Prinsip Kerja 5S dan Motivasi Karyawan di PT. Jasa Barutama Perkaasa Pekanbaru Riau', *Jurnal Sains, Teknologi Industri*, 14(1), pp. 57–65.
- Sofyandi, H. (2013) *Manajemen Sumber Daya Manusia*. 1st edn. Yogyakarta: Graha Ilmu.
- Stitapajna, A. and Aslam, M. (2020) 'Hubungan Status Gizi dan Asupan Energi dengan Produktivitas Kerja pada Pekerja PT. Propack Kreasi Mandiri Cikarang', *Nutrisia*, 22(2), pp. 86–93. Available at: <https://doi.org/10.29238/jnutri.v22i2.190>.
- Supardi (2023) 'Penerapan Pendidikan Budaya 5S (Seiri, Seiton, Seiso, Seiketsu dan Shitsuke) untuk Meningkatkan Produktivitas Karyawan di PT PAL Indonesia', *Jurnal Pendidikan Edutama*, 10(1), pp. 77–83.
- Suryawan, M.P. (2019) *Pengaruh Budaya 5S dan Disiplin Kerja terhadap Produktivitas Kerja Karyawan (Studi pada Karyawan bagian Kapasitor Cap4 Cm2 PT. Indonesia Chemi-Con Cikarang)*. Jakarta.

- Sutrisno, E. 2011. *Manajemen Sumber Daya Manusia*. Jakarta: Kencana.
- Swandono, S. (2016) 'Pengaruh Lingkungan Kerja terhadap Produktivitas Kerja Karyawan (Bagian Produksi Minyak Kelapa Sawit PT. Mitra Unggul Pusaka Segati Pelalawan Riau)', *Jurnal Jom Fisip*, 3(2), pp. 1–13.
- Tarwaka and Bakri, S.H.A. (2014) *Ergonomi untuk Keselamatan, Kesehatan Kerja dan Produktivitas*.
- Tjiptoheriyanto, P. and Nagib, L. (2008) *Pengembangan Sumber Daya Manusia: di antara Peluang dan Tantangan*. Jakarta: LIPI Press.
- Xie, Y. et al. (2021) 'The Impact of Work Stress on Job Satisfaction and Sleep Quality for Couriers in China: The Role of Psychological Capital', *Frontiers in Psychology*, 12(December), pp. 1–8. Available at: <https://doi.org/10.3389/fpsyg.2021.730147>.
- Yudhanto, A.D. and Purwanto, P. (2020) 'Analisa Pengaruh Penerapan Budaya 5S Terhadap Produktivitas Karyawan Di Pt Samsung Electronics Indonesia, Bekasi', *Jurnal Muara Ilmu Ekonomi dan Bisnis*, 4(2), p. 205. Available at: <https://doi.org/10.24912/jmieb.v4i2.7609>.