

ANALYSIS OF THE LEVEL OF WORKER COMPLIANCE IN THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) AT THE LOCOMOTIVE DEPO AND TRAIN DEPO PT. KAI MEDAN

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Abstract

Occupational safety and health is an effort to prevent or reduce work accidents through stopping/minimizing risks or hazard factors in order to achieve work targets or creation. Based on data from the International Labor Organization (ILO), every year 2.78 million workers die due to accidents and diseases at work. Based on this number, around 2.4 million (86.3 percent) die from occupational diseases, while more than 380,000 (13.7 percent) from work accidents. Therefore, Personal Protective Equipment (PPE) is a crucial aspect in reducing the level of hazard risk to workers. This study aims to understand the level of compliance of workers wearing PPE at the work site. This research is qualitative research and case study research design. Based on the results of interviews and observations carried out, it is understood that the level of compliance of informants wearing PPE is still fairly moderate, this matter is evident from the informant's statement that there are still many incomplete use of PPE required when working.

Keywords: Kereta Api Indonesia, Personal Protective Equipment, Occupational Safety and Health

Introduction

Occupational Safety and Health (K3) is a step to protect workers to stay safe and healthy while working in the work environment, so that work procedures can run effectively and efficiently. Because workers play a crucial role in an organization, protecting them is highly recommended so that work activities can run smoothly.

Therefore, to conduct business safely, the implementation of worker protection programs through the occupational safety and health management system (SMK3) needs to be implemented consistently. This matter is in line with Law No. 1 of 1970 concerning Occupational Safety and Law No. 13 of 2003 concerning Manpower, which regulates the obligation to protect workers from hazardous opportunities in their presence. (Eni Mahawati, et al 2021).

OHS is one of the maintenance programs that organizations implement. This is in accordance with Law Number 13 concerning Manpower, article 86 paragraph 1 "Workers have the right to be protected for Occupational Safety and Health." In addition, article 86 paragraph 2 "Occupational Safety and Health efforts are carried out to protect workers in order to achieve optimized productivity."

Occupational safety and health aims to avoid or minimize work accidents by eliminating risks in order to achieve production targets. Work accidents are caused by two factors, namely human factors related to unsafe acts, such as not complying with organizational SOPs and environmental factors usually involving lighting, air, and mental stress. Based on recent ILO observations, 2.78 million workers die per year due to work-related accidents and diseases. Approximately 2.4 million (86.3

percent) are from occupational diseases, while more than 380,000 (13.7 percent) are due to work-related accidents.

Each year, the number of non-fatal workplace accidents is almost a thousand times higher than fatal ones. An estimated 374 million workers face non-fatal accidents each year, and many of these incidents have a serious impact on workers' ability to earn income. (International Labor Organization, 2018).

Based on the search results, the Basic Health Research Riskesdas 2018 in (Singal et al, 2020) appears to be a national health survey conducted by the Ministry of Health in Indonesia. It contains information on health status and the factors that influence it, including various factors related to health services, environment, behavior, and characteristics.

The data collected from Riskesdas 2018 can be used for the development of the Community Health Development Index (CHI) and the formulation of health development policies in Indonesia. The survey is conducted through interviews, measuring, examining, and the data is reported by the Health Research and Development Agency and BPS. This survey is different from previous Riskesdas surveys because it is integrated by Susenas run by BPS.

The 2018 Riskesdas data can be used to observe and assess health development programs at the national, provincial and district levels. However, the search results did not provide specific information on workplace-related risk data in Riskesdas 2018. Work stress is an adaptive response affected by personal differences and psychological reactions that arise from external activities that overload a person (Hidayat, 2019) . However, work stress is also a person's unbalanced state where emotional instability arises from the work environment and outside the work environment.

The work environment in organizations is very crucial for management to pay attention to. Although the work environment is not directly involved in the production process, it has a direct impact on the workers who run the production. The work environment is the situation in which workers carry out their daily activities. A conducive environment creates a sense of security and workers can work optimally. When workers feel comfortable with their work environment, they will feel at home in the workplace and carry out their duties well, so that working time is used more efficiently. Conversely, a poor work environment can reduce worker performance. (Nabawi, 2019).

PT Kereta Api Indonesia Persero is an organization in Indonesia that focuses on land transportation services, with operations focusing on two main sectors, namely rail transportation for shipping goods and general rail transportation. Then to realize the safety policy, all members of the Board of Directors of PT Kreta Api Indonesia Persero are committed to making safety a culture in all business processes of the company in an effort to prevent train operational accidents and occupational diseases.

Then prevent the occurrence of a polluted environment and mitigate climate change adaptation by ensuring the use of sustainable resources. Then ensure that all work partners apply aspects of occupational safety and health and also pay attention to the preservation of environmental functions. After that, carry out continuous improvement of the implementation of the Management System in the aspects of rail safety in four continuous stages, namely planning implementation evaluation and corrective action. And the last is to comply with laws and regulations and other requirements related to the implementation of railroad safety and occupational health.

As well as preserving the environment by building a safe working environment and competent human resources so that all PT Kereta Api Indonesia Persero Agencies actively participate in aspects of railway safety and occupational health as well as protecting the environment throughout the PT Kereta Api Indonesia Persero business line. This policy is communicated to all workers, contractor guests, supplier service users and other stakeholders to be understood and implemented and will be reviewed periodically for continuous improvement. (Heri Nugrah, 2019).

Methods

This research is qualitative research and a case study design, which is an approach to explore problems with clear boundaries, using comprehensive data collection, and involving various data sources. (Ufie, 2014).

This research is limited in time, location, and cases are examined through interviews and direct observation. A qualitative approach was used with the aim of extracting data through various sources to obtain facts about compliance in the use of PPE.

Results

1. Workers' Level of Knowledge about Occupational Hazards and PPE

Typically, informants' basic knowledge of the types and uses of PPE is quite good. This can be seen from the informants' ability to recognize PPE that must be worn every day, such as boots, helmets, glasses and gloves. The results of interviews with all informants regarding the meaning, types and uses of PPE show that they have adequate knowledge.

All informants stated that PPE is equipment used for personal protection when working, so that accidents can be avoided. Also, informants can suggest various types of PPE used. Below are some excerpts of informants' statements:

"PPE is a personal protective equipment that must be used on workers to protect themselves like me to avoid work accidents such as helmets, shoes, masks, and gloves" (informant 2, worker, 29 years old). *"PPE is personal protective equipment worn on body parts to protect themselves so that unwanted things do not happen"* (Informant 3, worker, 33 years old). *"PPE has a lot of benefits and must be used when working, not only do we use supervision but we also use it during work. PPE here are shoes, helmets, gloves."* (Informant 6, worker, 27 years old) (informant 6, worker, 27 years old). *"PPE is a tool used to protect oneself from accidents even though it does not protect perfectly, but to prevent something from happening."* (Informant 9, worker, 27 years old). (Informant 9, worker, 31 years old). *"PPE is personal protective equipment that must be worn."*

Based on the results of interviews with all informants regarding insights into the risks of work accidents, it was found that all informants understood the risks that might arise when using work tools such as: Pinching, physical injury, electric shock, falling, muscle injury, falling, exposure to chemicals, and hearing loss. The informants' statements appear in some of the following quotations:

"The risks of work accidents that occur here are most often electric shock, burns, respiratory problems due to dust exposure, exposure to hazardous chemicals in the spraying process." (Informant 11, worker 28 years old)"

"The occupational risks that exist at the work site are most like long-term noise, reduced hearing, pinched. Prevention is the use of apd in certain conditions and then for apd, helmets, wearpacks, safety shoes are required." (Informant 9, worker, 39 years old) "

"The most frequent risk of work accidents here is getting hurt or scratched on the hands, during the body welding process, the caulking process" (informant 6, worker, 27 years old).

"For work risks that can occur in this depot, according to my brother, there are electric shocks and injuries such as scratches on the hands, slipping can also occur because after washing the train wheels there is still a lot of puddle water left around the work area". (informant 7, worker, 29 years old).

"Oh, there are a lot of work risks here, you can fall because there is no barrier or you can say a barrier for disposal and maintenance under the machine with the road, workers or guests may not see the machine's drain hole, then you can get shocked, slip, get pinched" (informant 1, supervisor, 30 years old).

"The risks of work accidents that often occur in the lower frame are: hit by welding sparks, pinched, injured" (Informant 8, worker, 29 years old).

Based on interviews conducted with all informants regarding these variables, researchers found that in general, informants' insights about PPE were optimal. However, it is still necessary to improve insights related to specific PPE data, such as the function of wearing helmets and glasses, so that workers understand better and avoid work accidents. This is evidenced by the observation that workers only wear some of the PPE, not the complete PPE.

2. Workers' Attitudes Toward the Use of PPE

Based on the results of interviews related to the willingness to wear Personal Protective Equipment (PPE), it was found that informants wanted to wear PPE because they were aware of the dangers related to their occupational safety and health. PPE is used according to the needs of workers and because it is a guideline from the company to use PPE according to the SOP. However, some informants complained about the PPE used, because sometimes they felt that PPE made it difficult when working.

Informants also stated that damage to Personal Protective Equipment (PPE) prevented them from using it completely. They tend to wear PPE when it feels comfortable and does not interfere with carrying out their duties. The informants' statements can be seen in the following quotations:

"It's not that we don't want to use PPE such as aer plugs because when we use aer plugs we can't hear our coworkers' instructions, fearing that there will be mistakes when we carry out work activities" (informant 2, worker, 29 years old).

"I also did not wear a mask and gloves when washing the train wheels because I found it difficult to breathe and my movements were not free but I wore a helmet and other PPE". (informant 3, worker, 33 years old).

The frequency of PPE use by informants depends on the level of need for its use. Safety shoes and helmets are the types of PPE that workers often wear. Meanwhile, informants rarely wear other PPE, in special circumstances only.

Based on the interview results, the factors that make informants rarely wear Personal Protective Equipment (PPE) are time efficiency and inconvenience. Often, workers experience difficulties when wearing PPE, so they choose not to wear it.

Discussion

1. Definition of Compliance

According to the KBBI, obedience comes from "obey," meaning to be happy to follow directions, obey rules, and be disciplined. Compliance refers to the attitude of obeying, obeying, and submitting to teachings and regulations. (KBBI Online, 2016).

Compliance is an action carried out by someone, especially workers, in response to stimuli in the form of regulations, directions, requests, or coercion, encouraging individuals to act in accordance with the stimulus. (Rizkiani, 2011). Compliance can also be affected by various factors, namely:

- Worker characteristics, including education level, age, and length of service
- Predispositions include insights, beliefs, work attitudes, values
- Enablers include facilities as well as the physical environment
- Reinforcers include HSE encouragement and coworkers (Ardian, 2019).

2. Factors Affecting Compliance

- a. Standard operating procedures (SOPs) and regulations

It is the documentation of written rules on activities carried out routinely and in organizations. SOPs serve as a guide for workers to carry out their duties. Thus, an operation can take place according

to the process set out in the SOP.

Each organization must ensure that its operations take place according to the processes set out in the SOPs. In addition, it is also required to have clear regulations regarding the implementation of occupational safety and health (Rizkiani, 2011). Typically, management obligations under this rule are:

- Must have regulations to ensure occupational safety and health at the work site.
- Need to ensure workers understand the rules.
- Need to ensure rules are implemented consistently and objectively.

b. Worker Training on the Use of Personal Protective Equipment

Train workers who wear PPE to understand various insights about PPE when working, such as:

- When to wear PPE
- What PPE is required
- How to use, remove, and adjust PPE methods
- PPE Limitations
- PPE maintenance, service life and allowance

It must be ensured that the organization of all workers understands the optimal method of wearing PPE according to the interests of workers (Agustine, 2015).

c. Availability of Protective Equipment

Companies are obliged to provide Personal Protective Equipment (PPE) to workers and ensure that each worker wears it. In its use, some matters that need to be considered are sorting and determining the type of personal protective equipment, standards, training on methods of use and maintenance of PPE, effectiveness of use, observation of use, and maintenance and handling if damaged. (Agustine, 2015).

d. Surveillance

It is an activity that ensures work is carried out in accordance with specified processes and work instructions. Its purpose is to ensure that work is carried out safely and follows processes. Such supervision includes the desired outcome standard, measurable on-site findings, as well as those compared by the outcome standard to identify any deviations. (Rizkiani, 2011).

The supervisor's job is to observe the performance of each worker, which is an important aspect for the success of the company's program. Supervisors are responsible for monitoring the performance of the workforce, especially KAI workers, as this is crucial to the success of the program. (Rizkiani, 2011).

3. Personal Protective Equipment

It is a set of safety equipment designed for the protection of workers from hazards at the work site, either to protect the whole body or certain parts, in order to prevent accidents and occupational diseases. (Tarkawa, 2008). PPE is equipment designed for protection and safety precautions while working, serving to prevent workers from hazards in the work environment. (Barizqi, 2015).

a. Legislation on Personal Protective Equipment

The rules for wearing PPE are in Permenakertrans No. 1 of 1981 article 5 paragraph 2 "Workers need to use PPE, mandatory for the prevention of occupational diseases" means:

- Protection of workers from occupational hazards such as processes, machinery, and chemicals.
- Maintenance and improvement of occupational safety and health, especially the use of PPE to develop productivity.
- It creates a feeling of safety and security, which can motivate you to achieve more.

The use of PPE is listed in Law No. 1 Year 1970. Article 3 paragraph (1) point f is that the law stipulates various requirements for the provision of PPE. Article 9 paragraph (1) point c is that

management is obliged to show and explain PPE to every new worker. Meanwhile, Article 12 point b regulates the obligations and rights of workers to use PPE. (Indonesia, 2003).

b. Types and functions of Personal Protective Equipment Based on PER.08/MEN/VII/2010 regarding PPE, namely:

- Headgear is a device designed for protection from impact. It also protects against exposure to heat radiation. Includes safety helmets, head hoods, hair coverings.
- Face and eye protective equipment are devices designed for protection from exposure to hazardous chemicals. Includes safety glasses and face shields.
- Ear protection devices are devices designed for protection from noise, including ear plugs and earmuffs.
- Respiratory protective equipment and supplies are devices designed for protection through providing clean air.
- Hand protection is a device designed for protection from various exposures. They include leather, metal, canvas, coated, rubber, and chemical-resistant gloves.
- Foot protection equipment serves to protect against the risk of being crushed. Namely safety shoes used in metal casting, smelting work, industry, building construction.
- Protective clothing serves as protection from extreme temperature hazards. Includes those specifically designed for protection from a variety of hazards.
- Personal fall protection equipment is designed to restrict movement from entering areas with fall opportunities. Includes safety belts, connection ropes, carabiners, rope clamping devices, safety harnesses, mobile fall arrest devices, lowering devices.

Conclusion

Based on the results and discussion of related variables regarding compliance with the use of PPE, the conclusion is that the level of compliance of informants using PPE is still fairly moderate. This matter is evident from the results of observations and interviews, which show that all informants do not fully use PPE.

Improving and refining through various aspects, such as insight factors, temperament, PPE availability, and observation, should be implemented to ensure that compliance in PPE use can be optimized.

1. Insights contribute to shaping actions in wearing PPE. Most informants had a good understanding of PPE, and the negative consequences of not wearing PPE encouraged a positive attitude towards its use. Informants gained knowledge about PPE through socialization and briefings conducted at work.
2. Workers' attitudes towards the use of PPE are quite good, but some workers have not been fully accustomed to wearing PPE and are uncomfortable when using it in the workplace, so they rarely wear it. Actions to use PPE still need improvement, which is reflected in the lack of awareness of the risk of work accidents.
3. Supervision carried out by OHS experts and foremen has not been optimal. Informants revealed that they did not understand that the supervision schedule was not routine, nor was the determination of sanctions firm, so workers felt free not to wear PPE. Nevertheless, the results showed that supervisors would reprimand workers directly if they wore PPE.
4. Adequate PPE availability is required. The organization has provided what is needed as required. In addition, techniques for obtaining new PPE are not difficult to access.

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