

A Qualitative Study of Personal Protection Equipment Compliance among Palm Oil Workers in Asahan District, The Province of North Sumatra, Indonesia

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Abstract. Compliance of personal protection equipment has still occupational health problem. Even though the function of personal protection equipment could reduce work accident between palm oil workers and lack of compliance using personal protection equipment due to personal preference might lead to unsafe condition. Many studies reported compliance of using personal protection equipment caused work accident among workers but there is limited study reported these issues in qualitative methods. This research aims to explore the reasoning of lack of compliance using personal protection equipment among palm oil workers. A qualitative study was conducted in this research and six informants had been interviewed about availability, reward and punishment, supervision and frequency using personal protection equipment. Thematic analysis was used to analyze the data. Low of compliance to used personal protection equipment among palm oil workers was reported in this study. Lack of knowledge and limited personal protection equipment might be the reason of palm oil worker that haven't wear personal protection equipment. The informant stated that supervision could improve their compliance using personal protection equipment. Additional reward and punishment might improve palm oil worker compliance to using personal protection equipment. Increasing palm oil worker on personal protection equipment training would decline work accident prevalence and would reduce risk of unsafe behavior.

Keywords: *safety training experience, Fisherman, Work accident*

INTRODUCTION

The use of personal protective equipment (PPE) is an alternative to personal safety measures that are routinely carried out by companies. According to OSHA (*Occupational Health And Safety Association*), companies

must provide PPE and ensure workers use it in conditions where technical and administrative hazard control cannot be done to minimize hazards. Personal protective equipment (PPE) is a piece of equipment that must be used at work so that workers avoid risk factors for work accidents and occupational diseases (Tho, 2019). The use of PPE must be in accordance with the type of work and the needs of each work so that accidents and occupational diseases do not occur ⁴.

Labor compliance with the use of PPE can reduce the risk of work accidents or occupational diseases, namely by complying with all the rules that have been agreed by the company in reducing the incidence of work accidents. Non-compliance with the use of personal protective equipment (PPE) greatly affects the incidence of work accidents and occupational diseases that will cause losses, including damage, organizational chaos, complaints and grief, abnormalities and disabilities, and death.

Many factors cause workers to not comply with using PPE even though the company has provided PPE and implemented regulations that require workers to use PPE. As for some of these factors, including the lack of policies from company supervision and aspects of the workers themselves. Based on a survey conducted by Agustine (2015) shows that the reason workers do not use PPE is due to discomfort when used, workers who feel they do not need PPE at work because they have been working for a long time, and the PPE used is not in good condition to use, the reason another is due to time efficiency, namely workers do not have enough time to use PPE ⁶.

Based on research conducted by Yenni (2017), it shows that there is a significant relationship between knowledge, attitudes and training on worker behavior in the use of PPE. the results of the study indicate that the workers' lack of self-awareness in the use of PPE. Workers who have a bad attitude towards the use of PPE and consider PPE as a barrier to work ⁷. In accordance with Lawrence Green's theory, there are 3 components that can influence a person's behavior in compliance with the use of PPE, namely internal factors (predisposing factors) in the form of knowledge and attitudes, enabling factors (enabling factors) including the availability of PPE, and reinforcing factors including regulations regarding K3 and mandatory use of PPE.

This study uses a qualitative research method with a case study design. Qualitative methods allow researchers to better understand society or individuals personally. In this study, the approach was used to conduct interviews and direct observations regarding the behavior of using PPE in oil palm harvesting workers. ⁹ The reason for using a case study is because it requires a natural study, the actual situation and this study will examine in depth the behavior of workers who do not comply in the use of PPE. . In this study, researchers will explore the factors that cause workers not to use PPE completely at work to be used as research objects.

Human or worker factors are the most common causes of work accidents. In 2019, there were 10.49% (9 cases) of work accidents caused by non-compliance and negligence of workers while working at PTPN III Kebun Ambalutu (RKK Kebun Ambalutu, 2019). This can be seen from the majority of workers who have not worked safely by not using PPE when carrying out their activities at work. This study aims to explore the behavior of non-compliance with the use of personal protective equipment in oil palm harvesters at PTPN III Ambalutu Plantation.

METHOD, DATA, AND ANALYSIS

PT. Perkebunan Nusantara III (Persero) which is engaged in oil palm and rubber plantations with an area of 161,638.68 hectares spread over the province of North Sumatra. In managing the organization, it is divided into 16 sections, 8 District Managers, 34 Garden units, 11 PKS units and 5 Hospital units and is supported by 28,469 employees themselves. PTPN III (Persero) manages two types of plantation commodities in the form of oil palm and rubber which are equipped with processing facilities and downstream palm oil industry. Ambalutu garden is a unit of PT. PERKEBUNAN NUSANTARA III (PERSERO) Medan North Sumatra, which is engaged in the plantation business with Rubber and Oil Palm Cultivation, where Latex production is processed into RSS at PPK Sei Silau and Cup Lumps are processed into SIR at PPK Mambang Muda, while the production of Fresh Fruit Bunches (FFB)) Palm oil is processed at the Sei Silau Palm Oil Mill into CPO and Inti. This study uses a qualitative research method with a case study design. Qualitative methods allow researchers to better understand society or individuals personally. In this study, the approach was used to conduct interviews and direct observations regarding the behavior of using PPE in oil palm harvesting workers.

Research participants were 6 people. The criteria for selecting participants in this study were participants selected based on occupations in accordance with the research objectives. The number of informants was 6 people, namely 1 head of K3 (key informant), 1 harvest foreman (supporting informant), and 4 harvesters (main informant). In this study, researchers used the triangulation technique. Triangulation is a technique of checking the validity of data that uses something else. Outside the data for checking purposes or as a comparison against the data. The triangulation used in this research

is source triangulation and method triangulation. Source triangulation is comparing and checking back the degree of trustworthiness of information obtained through different times and tools in qualitative research. Source triangulation is done by: *Cross-checking* data with facts from other sources, Comparing and contrasting data, using groups of very different informants as much as possible. While the triangulation method is done by comparing information or data in different ways. In this study, researchers used the method of interviews, direct observation, and documents. This study uses a qualitative approach to analyze the data that has been collected. Analysis of the data used is in-depth interviews with informants and direct observation.

RESULTS AND DISCUSSION

In general, workers' basic knowledge of the types and benefits of PPE is quite good, indicated by workers who know the types of PPE that must be used daily, such as helmets, boots, gloves, and glasses.

"PPE is personal protective equipment to protect ourselves so we don't get exposed to dangers that can harm us. the tools include helmets, shoes, gloves, that's all" (informant 3, worker, 41 years old)

Based on the interview results from the definition of personal protective equipment, types and benefits of personal protective equipment, it was found that all workers had good knowledge. They said that personal protective equipment is equipment that can be used to protect themselves from dangers while working so that accidents do not occur. In addition, workers can mention the personal protective equipment used such as helmets, boots, gloves, and goggles.

"PPE is personal protective equipment, the benefits of which are to protect from work accidents, so its function is to be safe at work" (Informant 4, worker , 29 years old)

Knowledge is a person's level of understanding about various things. Most of human knowledge is obtained through the eyes and ears, namely through the process of experience and learning processes in education, both formal and informal. So knowledge is not created by itself, but through various processes and depends on many factors, such as the level of a person's intellectual ability, willingness to seek sources of knowledge , support from the surrounding environment and so on. The results of the study on knowledge about the risk of work accidents showed that all informants

knew the risks of work accidents that would be obtained at work such as being crushed by palm midrib, crushed by palm fruit, falling slipping, hit by palm thorns, hit by an ax, etc.

"The risk of work accidents here is especially if the thorns, the work tools, or the fronds or the fruit are crushed." (informant 3, worker, 41 years old)

Knowledge of the risk of work accidents and PPE, namely all kinds of information that is known by the informant. The results show that workers have good knowledge about the risk of work accidents and PPE. At the time of the interview, all informants were able to mention and explain the benefits of the PPE. However, this good knowledge is still not enough to make workers behave safely using PPE at work.

"Then the risk of working is overburdened with fruit, why do you want this to be loose, want to get hooked, need an ax, so be careful when you work." (informant 5, worker, 24 years old)

This research is in line with research conducted by Ardian (2019), namely the results of measuring closed responses (attitudes and knowledge) are mostly in the good knowledge category. And there is a relationship between knowledge and attitudes of workers with compliance with the use of PPE in the 1 shift production section of PT.KTI Probolinggo City. To increase workers' knowledge about PPE, companies need to make OSH promotions in the form of posters containing information related to PPE and posted on information boards so that workers can read them ¹⁰.

Based on the results of research on the willingness to use PPE, it was found that the informants were willing to use PPE because of their self-awareness about the dangers to the safety and health of the informants. PPE used in accordance with the needs of workers.

"Ooh it's very important for workers, why ? In order to maintain our health, we also have to take care of eee what is it called to reduce work accidents at work because we are in the production sector, we must maintain health and safety so that we can get the reward for the company" (informant 1, K3 expert, 36 years old)

However, some of the informants have complaints about the PPE used, the informants sometimes feel that the PPE is difficult for the informant to use while working. The informant also said that there was damage to the PPE so that they did not use the complete PPE. Informants will use PPE when they feel comfortable and are not disturbed in doing their work.

" It's important for work safety, to protect myself, but I'm not always complete, at least I wear shoes and a helmet, because if I wear gloves, I'm not comfortable holding the fiber" (informant 4, worker, 29 years old)

Factors that cause informants do not always use PPE are time efficiency and inconvenience . Often workers find it difficult to use PPE so that workers do not use it.

" The factor of rushing when you go to work, forgetting or that was in a hurry" (informant 3, worker, 41 years old)

The results of the study regarding the attitude of workers to be carried out if there are co-workers who do not use PPE , most of the informants said that they would remind and reprimand each other when someone did not use PPE, not only between workers but the harvest foreman would also reprimand workers when caught. there are workers who do not bring or use PPE when working.

" Yes , a l w a y s r e m e m b e r t o remind" (informant 4, worker, 29 years old)

" If I don't use PPE, I'll tell you to go home to pick up PPE that day" (informant 2, harvest foreman, 51 years old)

In line with Budiono's (2003) statement which states that feelings of discomfort (uneasy, hot, heavy, disturbed) that arise when using PPE will result in nurses' reluctance to use it and they give different responses. The use of PPE can be uncomfortable, especially when worn for long periods of time, because the wearer feels closed and isolated. Therefore someone tends to let go to relieve discomfort.

Length of work and work experience play a role in how workers perceive work and the risks of harvesting oil palm where workers who have worked in this field for a long time rely more on experience to avoid work accidents, while harvesters who have not worked for a long time seem more unresponsive to the risks of their work. So that in the results of observations it can be seen that harvesters who work more than 5 years are better at using PPE. Based on the results of interviews with informants, it was found that the availability of PPE was well available and according to the needs of workers. Starting from helmets, shoes, gloves, and goggles. The amount of PPE currently available is also quite good and the size is adjusted according to the needs of workers. Here is an excerpt of his statement:

" Yes , that's enough, because it is distributed individually, the PPE is for harvesters, harvest foreman, basically for workers who work in the field. according to the standard , the size is also appropriate" (informant 4, worker, 29 years old)

The results of the interview regarding the ease of obtaining PPE, which the informant felt were also not too difficult, the mechanism for obtaining new PPE was adjusted to the company's mechanism. Workers are required to report to the harvest foreman if there is damage to PPE or requires new PPE.

"And for the mechanism to get new PPE from the bottom first, right, the K3 expert checks down first, is it true that we are the ones who were given the first request or not? Then, the harvester reports to the foreman, then reports to the clerk 1 and then the clerk makes an internal report on the request for PPE , whether the PPE is appropriate or not. But if it is still suitable for use, it must be used, then from the afdeling office it is handed over to the garden office and then from the garden office to the head office." (informant 1, KOH expert 3.36 years)

Based on the results of interviews regarding the frequency of monitoring the use of PPE, it was found that most of the informants said that the supervision of the use of PPE carried out by the harvest foreman and K3 officers was not routinely carried out. Supervision was carried out but the informants did not know the exact schedule and routinely K3 officers carried out supervision.

"There is , sometimes the foreman on duty. Go around the foreman, if someone doesn't make a reprimand, sometimes every day but sometimes yes, sometimes not" (informant 4, worker, 29 years old)

Based on the results of interviews regarding the supervisor's response when workers do not use PPE, it is known that supervisors reprimand workers who do not use PPE when working.

"Of course there is, if for supervision because this company has 4 affiliates, the supervision follows a predetermined program. In that year there is a program. Usually socialization also coincides with supervision. But there is such a thing as an inspection, so we don't tell you beforehand if we want to carry out surveillance. Then if we find someone who is not using PPE, we immediately order them to go home to collect their PPE" (informant 1, K3 expert , 36 years old)

The level of knowledge possessed by most of the informants regarding the definition of personal protective equipment, the benefits and types of personal protective equipment is good. It is proven by informants who are able to explain the definition, types and benefits of personal protective equipment used at work. This is in accordance with what was stated by K3 experts who played an important role in terms of workers' knowledge about the use of

worker PPE. However, based on the results of observations, the level of knowledge of most of the informants was only at the understanding stage, the results of observations showed that workers did not use PPE completely at work.

Most of the informants have a good attitude towards the use of PPE. Workers who have a good attitude are influenced by knowledge. Knowledge affects the attitude of the workers themselves because it is one of the operational forms of human behavior. However, there are still workers who are not good at using PPE. Unfavorable attitudes such as not using PPE when working are caused by habits, time efficiency, and the condition of PPE that is not suitable for use due to damage. This is evident from the results of observations which show that there is a non-compliant attitude in using PPE at work. The availability of PPE at PTPN III Kebun Ambalutu shows good results, namely PPE is available and in accordance with the needs of all workers. And the mechanism to get new protective equipment is not difficult, just report directly to the harvest foreman and then follow the existing procedures. This was also stated by the K3 expert who is responsible for managing personal protective equipment for workers. Observations also show that the PPE provided has met the needs of each worker.

The attitude and behavior of using PPE is also related to the availability of PPE by the company. the availability of PPE at PTPN III Kebun Ambalutu, showed good results, namely in the study obtained results where company management stated the availability of PPE provided by the company. And there were no problems with the number of PPE as well as the suitability of the size and quality of the PPE provided. The results of this study are in accordance with Lawrence Green's theory which states that behavior is formed from 3 factors, one of which is the availability of health facilities or facilities. The availability of PPE in this case is a form of behavioral supporting factors, where a behavior has not been directly manifested in an action if there are no supporting facilities ¹².

In general, the role of field supervisors is to identify potential hazards in the field and ensure that all workers use appropriate and appropriate PPE and train workers to use appropriate PPE. There is supervision carried out by K3 officers and harvest foreman. However, most of the informants said that they did not know the exact schedule for routine supervision of PPE. In general, the role of a supervisor is to identify potential hazards in the field and ensure the use of appropriate and appropriate personal protective equipment and also train or provide information on the proper use of PPE to workers in the field. Based on the results of

interviews with OHS experts, supervision is carried out during *briefings* and every 6 months as well as socialization to workers.

CONCLUSION

Most of the informants have good knowledge about PPE. Starting from the understanding, types, and benefits of PPE and the risks that will be experienced if you don't use PPE when working. In the knowledge variable about PPE, it is better for the company to emphasize more complete information about the function of each PPE, so that workers can use the appropriate PPE according to its function. The attitude of workers is good in responding to the use of PPE, only because workers are not fully accustomed to using PPE and are uncomfortable using PPE at work so that workers do not always use it.

IMPLICATION/LIMITATION AND SUGGESTIONS

The supervision carried out by K3 experts and harvest foreman has not been running well enough, as evidenced by informants who do not know the certainty of non-routine schedules and the determination of sanctions that have not been firmly given makes workers more free to not use PPE. Special supervision for PPE needs to be implemented so that more focus can be overcome if there are workers who do not use PPE. The supervision schedule that has been made routinely should be socialized to all workers and the form of sanctions also needs to be further emphasized, not just warnings for workers who do not use PPE. Compliance with the use of PPE is also supported by the availability of good PPE. The company has provided PPE needed by workers according to the needs of workers. And the mechanism for obtaining new PPE is also not difficult for workers to obtain.

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