



THE RELATIONSHIP BETWEEN EMPLOYEE PERCEPTION ABOUT IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY WITH THE USE OF PERSONAL PROTECTION EQUIPMENT

Binarti Dwi Wahyuningsih¹, Lutfi Wahyuni²

Stikes Bina Sehat PPNI Mojokerto Regency East Java Indonesia

Email correspondence: ltf.hidayat@gmail.com

ABSTRACT	Keywords
<p>The use of Personal Protection Equipment (PPE) is the last choice of the method of controlling accident and occupational diseases. Nevertheless, the use of PPE discipline will be critically important for companies and employees to reduce the risk of accidents and occupational diseases. The purpose of this research is to know the relation of employee perception about the implementation of Occupational Health and Safety (OHS) with the use of personal protection equipment (PPE). The design of this research is analytic correlational with cross-sectional approach 21-27 May 2017. The population of this research was employee's production unit in UPT. Balai Yasa Surabaya Gubeng. Sample was taken by total sampling technique as much as 33 respondents. The data were collected with observation for the use of PPE and questionnaires for employee perception about the implementation of occupation, then tested with a statistical distribution (Crosstab) Chi-Square and are presented in tabular form. The result of the research shown of 33 respondents were 17 respondents (51,5%) who has a positive perception mostly has the use of PPE on the good level, and nine respondents (27,3%) has the use of PPE in the sufficient level. Based on this research gotten a statistical result with a value of the p value = 23,209 with $p = 0,000$ or $\alpha < 0,05$ with this it can be concluded that there is a significant relationship between employee perception about the implementation Occupational Health and Safety with the use of PPE. Based on this research are expected employees to improve discipline in the use of PPE (Personal Protection Equipment) in complete especially the use of mask and gloves</p>	<p><i>Perception, Occupational Health and Safety (OHS), Personal Protection Equipment (PPE)</i></p>

INTRODUCTION

Occupational health and safety is one aspect of labor protection by applying technology controlling all aspects that potentially endanger the workers. Also, occupational health and safety can be expected to create high comfort work safety (Waluyo, Huda, Soetjipto, Sumiati, & Handoyo, 2016).

Each employee has a different perception of the OSH implementation. When an individual sees a target and tries to interpret what he sees, then that interpretation is strongly influenced by the personal characteristics of the individual perceptual maker. According to (Sanghi, 2009) personal features that affect perceptions include attitudes, personality, motives, interests, past experiences, and expectations (Luque-Fernandez et al., 2013).

In the “*permenakertrans*” of 2010 on personal protective equipment Article 2 (1) described that the board or employers should provide PPD free of charge to workers and others who enter the workplace. If the obligations of the employer/management of the company are not met is a violation of the law. Under article 6 (1) workers/laborers and others entering the workplace shall use or use PPE by potential hazards and risks.

Based on ILO data (2015) there are more than 250 million workplace accidents and over 160 million workers becoming ill from workplace hazards. Moreover, 1.2 million workers die from accidents and illness at work. With an average case of 87% or 45,234 minor accident cases, 2% or 1,049 deaths, 1% or 317 cases of total disability, and 2% or 5,400 partial defects due to workplace accidents (ILO, 1998). According to Jamsostek data, 2014 shows that the number of occupational accidents that occurred in Indonesia reached 103,074 cases with an average of 382 cases of work accidents as many as 91.21% of casualties recovered, 3.8% experienced functional deficiency, 2.61% experienced partial defects and the rest died (2,419) and suffered total permanent disability (37 cases) (Oldfield, 2014).

Based on a preliminary study conducted at UPT. Balai Yasa Surabaya Gubeng through interviews conducted with 10 respondents that work accidents are often the hands hit by a hammer, falling iron and fingers are pinned wood at the time of the accident work occurs due to employees do not use PPE correctly and adequately as for 6 (60%) said that they did not use a complete APD which consisted of 3 employees said they did not use masks, gloves, and 3 employees said they did not wear hats, costumes, and gloves, while 4 (40%) said that using complete APD can be concluded that inside the implementation of occupational safety and health programs conducted by the company still has not run optimally.

According to Neal and Griffin describes the application of safety as a worker's perception of the value of salvation within an organization. According to Mearns et al. in (Guide, 2016), the safety climate consists of 3 dimensions. The first is commitment management, i.e., commitment in the use of self-protection tools, implementation and agreement on the application of occupation health and safety. The second is the priority of safety, which is to obey and instill OHS issues. And the third is pressure for production (weight of work), namely the force in work that includes speed and workload (Manuel Martinez Fidalgo & Álvarez-Santullano, 2014).

The process of implementing occupation health and safety (OHS) should start from top management within the company. As the first step is to choose the type of health and safety that will be applied. They can create a circular/banner that will be socialized to all personnel in the company (Tetrack, Perrewé, & Griffin, 2017). The implementation of workplace occupational health and safety (OHS) in the organization aims to improve OHS performance by implementing OSH efforts efficiently and effectively so that the risk of accidents and occupational diseases can be prevented (Cervi, Da Silva, & Sant'Anna, 2015).

METHOD

This research uses analytic correlation survey method with a cross-sectional approach. The number of samples in this study was 33 people with a total sampling technique. Independent variable in this research is employee perception about applying of OHS by using NOSACQ-50 questionnaire and dependent variable in this research use personal protective equipment a. Balai Yasa Surabaya Gubeng using observation sheet of the Healthy, Safety work in field checklist.

RESULTS

General Data

a. Age

Table 1 Employee Frequency Distribution at Tehnical Implementation Unit. Balai Yasa Surabaya Gubeng on 21-27 May 2017

Age	Frequency	%
24 – 29 years old	23	69,7
30 – 36 years old	10	30,3
Total	33	100

Primary Data: 2017

Table 1 Employee Frequency Distribution at UPT Production Unit. Balai Yasa Surabaya Gubeng on 21-27 May 2017

b. Year of working

Table 2 Frequency Distribution of Employee Period in UPT Production Unit. Balai Yasa Surabaya Gubeng on 21-27 May 2017

Working	Frequency	%
2 – 6 years old	25	75,8
7 – 11 years old	8	24,2
Total	33	100

Primary data: 2017

Based on table 2 shows that 25 respondents (75.8%) have a working period of 2 - 6 years.

c. Education

Table 3 Distribution of Frequency of Employee Education in Technic Imp;ementasion Production Unit. Balai Yasa Surabaya Gubeng on 21-27 May 2017

Education	Frequency	%
SMA	17	51,5
S1	16	48,5
Total	33	100

Primary data: 2017

According to table 3, it was found that as many as 17 respondents (51.5%) had a high school education.

Specific Data

a. Employee perceptions about OSH implementation

Table 4 Frequency Distribution of Employee Perceptions About the Implementation of occupation health and safety in Implementation tehcnical unit (UPT) production unit. Balai Yasa Surabaya Gubeng Date 21-27 May 2017

Perception category	Frequency	%
Positif	26	78,8
Negatif	7	21,2
Total	33	100

Primary data: 2017

According to table 4, it was found that 26 respondents (78.8%) had positive perceptions.

b. Use of employee APD (Personal Protectif egiptmen)

Table 5 Distribution of Employee Frequency With Use of PPE in Technic Implementation Production Units. Balai Yasa Surabaya Gubeng on 21-27 May 2017

Category of use APD	Frequency	%
high	17	51,5
medium	11	33,3
low	5	15,2
Total	33	100

Primary data: 2017

According to table 4.5 above found that the use of PPE in 17 respondents (51.5%) have a reasonable level of use of PPE.

- c. The relationship between employee perceptions of the implementation of OHS and the use of PPE

Table 6 Employee Perceptions Relationship on the Application of OHS and Use of PPE in Tehnic Implementation Production Unit. Balai Yasa Surabaya Gubeng on 21-27 May 2017

Percepti on response	Use APD						Total 1	
	High		medi um		low			
	F	%	F	%	F	%	F	%
Positive	17	51,5	9	27,3	0	0	26	78,8
Negative	0	0	2	6,1	5	15,2	7	21,2
Total	17	51,5	11	33,3	5	15,2	33	100

Primer data: 2017

Based on the cross tabulation, it can be concluded that employees who have positive perceptions about the application of OHS, the use of PPE for the employee are also good. Conversely, employees who have a negative perception of the use of PPE on the employees are also less.

DISCUSSION

1. Employee perceptions about the implementation of Occupation Health and Safety.

The results of the measurement of employee perceptions obtained data that as many as 17 respondents (51.5%) had a positive perception of the application of occupation health and safety . A positive majority employee perception indicates that employees understand and understand about Occupations heaith and safety implementation. This is because management always gives guidance to employees regarding the implementation of OHS in the company such as how to work safely, how to use PPE that is good and right before employees start working.

(Cervi et al., 2015) states that the factors that influence perception are two internal and external factors such as experience such as working period and external factors such as work environment in UPT. Balai Yasa.

But there are still some employees in the production section who still have perceptions in the negative category about the implementation of occupations Healt with the use of PPD is lacking although the management itself has given direction to employees. Worker experience and employee thinking can also be one of the factors that make their perceptions negative. Lack of awareness of employees can lead to work accidents. This can not be separated from the behavior of the employees themselves who are lazy in applying occupation health and safety (OHS) both in the work environment and apply occupations health and safety on themselves, and this can make employee perceptions of the application of occupations health and safety becomes negative.

Employees' perceptions may be influenced by many factors as expressed by (Ulutasdemir, Kilic, Zeki, & Begendi, 2015) factors in perception (attitude, experience, and motives), 2) factors in the situation (time, circumstances/place of work, and circumstances social). because these factors

cause employee perceptions in the production section of the occupation health and safety (OHS) to be implemented in the company to be negative.

As explained above, it can be concluded that employees perceive the application of occupations health and safety, which means that employees assume that management cares about their workplace safety and health. So that employees have a positive perception of the application of OHS in the company with the existence of positive perception is expected to minimize the number of workplace accidents in the future.

2. Use of PPE on employees

The results of this study were 17 respondents (51.5%) had a good level of use of PPE, and 11 respondents (33.3%) had a sufficient level of use of PPE. The use of PPE for employees who majority have a good level of use of PPE and enough. This shows that employees care about their safety, the direction of management also contribute to affecting employee behavior in the use of PPE So that can change the behavior of employees in the use of PPE. Availability of PPE in UPT. Balai Yasa is quite complete as there are hats, shoes, glasses, earplug and so on this is because the company provides PPE for free. Use of PPE alone at UPT. Balai Yasa is highly recommended given the unfavorable working environment conditions for employees.

But in this case, there are still some employees who do not use PPE completely, especially in the use of masks and gloves. This can not be separated from the behavior and compliance in the use of PPE employees themselves, employees who are not compliant in the use of PPE can be caused by the habits of the employees themselves who are used to not using PPE.

According to Handoko (2012) in Khoirul (2014) states that people's perceptions are very influential on his behavior. Someone who has a positive perception generally has positive behavior. Employees who use PPE well, where the subject has behaved new in

accordance with the knowledge, awareness, and attitude towards the stimulus (the application of OHS). While knowledge is everything that can be proven empirically, there are also those which mention knowledge includes everything we know about an object (Notoadmojo, 2012) in (Meilany, 2014).

The more obedient employees in the use of APD the better the behavior of these employees. Management in UPT. Balai Yasa also always advises employees to always use PPE completely. The use of good PPE will certainly be very beneficial for the employee when in the work environment, given the work environment in the UPT. Balai Yasa then the use of PPE for employees is felt necessary in order to reduce the number of workplace accidents thus it can be concluded that compliance in the use of PPE to employees can at least minimize the risk of workplace accidents that will occur in the company environment.

3. Perception of employees are about the application of Occupations health and safety with the use of PPE.

Based on the result of the table of 6 employees perception about the implementation of K3 found that 26 respondents (78,8%) have positive perception, and 7 respondents (21,2%) have negative perception while for level of personal protectif equiptmen usage on employees in good category as many as 17 respondents 51.5%), only 11 respondents (33.3%) and less category 5 respondents (15.2%). Thus it can be concluded that the use of PPE in employees can be categorized as good as well as employees' perceptions of the application of OSH which can also be categorized as good. This result is in accordance with the research conducted which showed that as many as 26 respondents (78.8%) had a positive perception about the application of OHS while for the use of PPE as many as 17 respondents (51.5%) in the good category and 9 respondents (27.3%) in enough categories.

According to the results of statistical test analysis obtained p value = 23.209 with the value $p = 0,000$ where the real level $< \alpha = 0.05$ which is where the number shows that the correlation between employee perceptions about the application of occupation health and safety (OHS) with the use of PPE showed a positive relationship between perception employees about the implementation of OHS with the use of PPE which means that employees who have a positive perception about the application of OHS then the use of PPE on the employees are also good.

According to (Pedro, Le, & Park, 2016), Different perceptions of each employee make them also behave differently. As the opinion expressed by (Health and Safety Executive, 2011) is that individual behavior is influenced by three variables: psychological, physiological, and environment. Psychological variables include perception, attitude, personality, learning, and motivation. While physical variables include physical and mental abilities. And environmental variables include family, culture and social class.

The results of this study are in line with previous research conducted by (Muslim, 2013) which shows that there is a positive relationship between employee perceptions of the implementation of K3 with the use of PPE on line 3 and 4 PT. Wijaya Karya Beton Boyolali Tbk with correlation value 0,429 and value of p is 0,018 ($p < 0,05$). This does not necessitate the possibility that the employee's behavior will depend on the conditions of a less conducive working environment that will result in the employee's safety or work experience experienced by the employee.

From the above explanation can be concluded that each employee has a different perception of the application of occupation health and safety (OHS) as well as the level of compliance of employees in the use of PPE. Employees who use APD well mean that the employee has understood that the application of occupation health and safety is very important for her safety. The use of

PPE on employees also depends on the awareness of each employee of the importance of using PPE. This can not be separated from the management role that determines how the employee behaves.

CONCLUSION

Based on the results of research on employee perceptions of the application of OHS in the UPT. Balai Yasa Surabaya Gubeng is included in the good category at 78.8%.

Based on the results of the study it is known that the employee's PPE usage level in the company is included in the good category, which is 51.5% in the good and sufficient categories by 33.3%.

Based on the results of research that has been conducted shows that there is a positive relationship between employee perceptions of the application of occupations health and safety with the use of PPE, which means that employees who have positive perceptions, the level of PPE use for employees is also good and vice versa employees who have negative perceptions then the level of use APD will also be less or enough

SUGGESTION

1. For employees
It is hoped that it can improve discipline in the use of PPE in a complete manner, especially the use of masks and gloves when working and the importance of applying OHS to yourself.
2. For the company
It is expected to pay more attention to the use of employee PPE, especially in the use of masks and gloves and provide clear information about OHS to employees and provide strict sanctions against employees who violate the rules.
3. For the next researcher
It is expected to add other variables that have not been included in this study that may have an effect on the use of PPE.

REFERENCES

- Cervi, R., Da Silva, E. H. D. R., & Sant'Anna, Â. M. O. (2015). Work healthy and safety at work management system in the construction industry as a logistic support. In *IIE Annual Conference and Expo 2015*.
- Guide, I. (2016). ISO 45001 Occupational health and safety - briefing note. *Occupational Health and Safety*. Retrieved from http://www.iso.org/iso/iso_45001_briefing_note.pdf
- Health and Safety Executive. (2011). Seating at work HSG57. *Health and Safety at Work Etc Act 1974*, 57, 1–22. Retrieved from <http://www.hse.gov.uk/pUbns/priced/hsg57.pdf>
- ILO. (1998). *Safety and health in forestry work. The Annals of the American Academy of Political and Social Science* (Vol. 108). <https://doi.org/10.1177/000271622310800139>
- Luque-Fernandez, M. A., Van Cutsem, G., Goemaere, E., Hilderbrand, K., Schomaker, M., Mantangana, N., ... Boulle, A. (2013). Effectiveness of Patient Adherence Groups as a Model of Care for Stable Patients on Antiretroviral Therapy in Khayelitsha, Cape Town, South Africa. *PLoS ONE*, 8(2), 1–8. Retrieved from <http://10.0.5.91/journal.pone.0056088>
- Manuel Martinez Fidalgo, & Álvarez-Santullano, L. (2014). Current status of water infusion as a system of dust control in Spanish, French and German mines. *Health and Safety Report EUR 15695 EN*.
- Muslim, K. (2013). *Traditional Posterior Load Carriage: Ergonomic Assessment and Intervention Efficacy. ProQuest Dissertations and Theses*. Retrieved from <http://search.proquest.com/docview/1513240630?accountid=37552>
- Oldfield, Y. (2014). Safe and Healthy Work: a Human Right. *New Zealand Journal of Employment Relations*, 39(2), 73–105. Retrieved from <http://ezproxy.massey.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=anh&AN=101173796&site=eds-live&scope=site>
- Pedro, A., Le, Q. T., & Park, C. S. (2016). Framework for Integrating Safety into Construction Methods Education through Interactive Virtual Reality. *Journal of Professional Issues in Engineering Education and Practice*, 142(2). [https://doi.org/10.1061/\(ASCE\)EI.1943-5541.0000261](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000261)
- Sanghi, R. J. (2009). *Organizational Behavior. Source* (Vol. 40). <https://doi.org/10.1016/B978-0-12-375000-6.00263-9>
- Tetrick, L. E., Perrewé, P. L., & Griffin, M. (2017). Employee work-related health, stress, and safety. In *Handbook of Employee Selection, Second Edition* (pp. 530–553). <https://doi.org/10.4324/9781315690193>
- Ulutasdemir, N., Kilic, M., Zeki, O., & Begendi, F. (2015). Effects of Occupational Health and Safety on Healthy Lifestyle Behaviors of Workers Employed in a Private Company in Turkey. *Annals of Global Health*, 81(4), 503–511.

<https://doi.org/https://dx.doi.org/10.1016/j.aogh.2015.08.018>

Waluyo, M., Huda, S., Soetjipto, N., Sumiati, & Handoyo. (2016). Analysis of Balance Scorecards Model Performance and Perspective Strategy Synergized by SEM. *MATEC Web of Conferences*, 58, 2003. <https://doi.org/10.1051/mateconf/20165802003>