UNSAFE BEHAVIOR ON DOCKWORKERS AT LEWOLEBA SEA PORT

Maria M.Ure Wukak[1)], Noorce C. Berek[2)], Mustakim Sahdan[3)], Diana J. Nabuasa[4)]

Faculty of Public Health, Universitas Nusa Cendana

ABSTRACT

Background: Dockworkers are the individuals responsible for loading and unloading ships in busy harbors. In addition to loading and unloading cargo, often in perilous weather conditions, dockworkers have to maintain the piers, docks and shipping terminals of the ports where they work; they're also employed by shipyards to build and maintain ships. These activities come with their own risks, including falls from piers, injuries from construction equipment, and any of the other, sundry hazards encountered by the average factory worker or user of heavy machinery. This study aimed to investigate factors leading to unsafe behavior in stevedores at Lewoleba Sea Port.

Subject and Method: This study was conducted at Lewoleba Seaport in August-September 2019. This type of research is an analytic survey with a cross-sectional design. The population in this study was the entire dockworkers in Lewoleba Sea Port, with as many as 116 workers. A sample of 53 workers was selected using a simple random sampling method. The data were collected with questionnaires and analyzed using simple linear regression with $\alpha = 0.05$.

Results: Good knowledge (b= -0.92; 95% CI= 0.53 to 2.38; p<0.001), positive attitude (b= -0.56; 95% CI= 1.44 to 2.56; p= 0.002), and good supervision reduced unsafe behavior (b= -0.86; 95% CI= 1.07 to 2.80; p< 0.001).

Conclusion: Good knowledge, positive attitude, and good supervision reduce unsafe behavior.

Keywords: knowledge, attitude, supervision, unsafe behavior

Correspondence:
Noorce Christiani Berek. Faculty of Public Health, Universitas Nusa Cendana. Jl. Adi Sucipto Penfui, Kupang, East Nusa Tenggara. Email: noorce.berek@staf.undana.ac.id Mobile: 081228521127.

BACKGROUND

Occupational Helath and Safety (OHS) is an effort to protect workers so that workers are always safe and healthy while doing work in the workplace as well as for other people who enter the workplace as well as sources and production processes can occur safely and efficiently in their use (Indonesian Ministry of Manpower, 2015).

The International Labor Organization (ILO) estimates that 2.78 million workers die every year due to work accidents and occupational diseases. Around 2.4 million (86.3%) of these deaths were due to occupational diseases, while more than 380,000 (13.7%) were due to occupational accidents (ILO, 2018).

Based on BPJS Employment data, the number of work accidents in 2019 was 77,295 cases (BPJS Employment of the Republic of Indonesia, 2019). Work accidents are still one of the public health issues in the Province

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of East Nusa Tenggara (NTT). Data from BPJS Employment for the Province of NTT reported that cases of work accidents in 2017 increased by 4 times compared to the previous year. Work accidents in 2016 were found to be 19 cases. This number increased significantly in 2017 to 76 cases. In 2018, work accident cases fell to 71 cases(BPJS Employment of NTT Province, 2019).

Accidents are generally caused by human actions that do not meet safety (unsafe human action)unsafesuch as not wearing personal protective equipment (PPE), working not according to procedures, working while joking, putting goods or work tools incorrectly, work attitudes, working near moving or rotating tools, fatigue, boredom, and others (Suma'mur, 2013). According to Suma'mur (2013), 80-95% of all work accidents that occur are caused by unsafe behavior. Meanwhile, the National Safety Council (NSC) stated that 88% of work accidents were caused by unsafe behavior (National Safety Council, 2011). Based on this, it can be concluded that human behavior is one of the elements that cause work accidents. Work accidents can be minimized by maximizing the realization of safe behavior during work.

Dockworkers is one part of the workers who need attention because the work process they do contains a lot of risks to accidents and health (Setiyowati and Siti, 2016). Dockworkers are the individuals responsible for loading and unloading ships in busy harbors. In addition to loading and unloading cargo, often in perilous weather conditions, dockworkers have to maintain the piers, docks and shipping terminals of the ports where they work; they're also employed by shipyards to build and maintain ships. These activities come with their own risks, including falls from piers, injuries from construction equipment, and any of the other, sundry hazards encountered by the average factory worker or user of heavy machinery. Dockworkers an inseparable part of Human Resources at ports because their functions and roles at ports are more specific in the field of loading and unloading goods, so they are called dockworkers (Sugiyono, 2012).

Lembata is one of the islands in NTT and has 2 ports, namely the Lewoleba Seaport and the Waijarang Ferry Port which are only devoted to ferries, while at the Lewoleba Seaport various ships enter and leave both PELNI ships and commercial ships, so loading and unloading activities at the Lewoleba Seaport is higher than at the Waijarang Ferry Port. Dockworkers activities at the Lewoleba Seaport include unloading goods on board, lifting and transporting goods from and to cargo ships and passenger ships. This activity is always supervised by supervisors, namely EB 2 or field foreman, Interpreter Teli 1, and Interpreter Teli 2 with details of working hours per day starting in the morning at 08.00-11.00, at 12.00 break time and continued at 13.00-16.00 in the afternoon.

The results of the initial survey based on the Annual Final Report of the Lewoleba Sea Port Dockworkers Cooperative, data on work accidents in the previous three years, namely in 2014-2016 amounted to 27 people with

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details of 2 people dying of illness due to cement dust that was inhaled while working unloading cement, 4 people were crushed by cement, 2 people fell from a car, 2 people were crushed by electric poles and 17 of them got sick because they got zinc scratches on their hands, iron scrapes on their feet and inhaled cement dust. Whereas in 2017 and 2018 the number of accident cases for workers was 6 people, with details of 4 people having accidents because they were crushed by a drum containing TER and pressed by cement, 2 people got sick from cement dust and were stabbed by iron in their feet and hands while unloading goods from ships (TKBM Cooperative, 2019).

The results of an interview with one of the dockworkers, work accidents that often occur are caused by unsafe behavior of workers, namely when unloading and transporting cement, electricity poles, TER drums they do it in a hurry, carry excessively and impose their abilities, punctured by iron, zinc, and fell out of the car due to careless, and hasty work. In addition to unsafe behavior, the dockworkers also do not wear PPE (Personal Protective Equipment) when carrying out activities to unload and lift goods from the ship and to the ship such as shoes, hats, gloves, masks so that they are often exposed to cement dust and there are even some of them who don't use sandals because they think the stairs are very slippery and some work in shorts. Unsafe behavior dockworkers often occurs even though there is supervision, but they think they are used to this kind of thing but if it continues it will cause accidents, work-related diseases, and even death every year. Causes Unsafe behavior that often occurs is an error due to lack of motivation so that they often work in a hurry because they want to finish quickly, take shortcuts, want to feel comfortable, and are lazy to wear PPE.

Dockworkers at Lewoleba Seaport have work procedures but regarding Personal Protective Equipment there is no procedure, if there is an incoming cargo ship or fleet, all workers must come before 08.00 am and start working right at 08.00. Dockworkers is divided into 2 groups or teams, namely team A and team B, dockworkers activities occur at 2 locations, namely at the port and in the warehouse, the work system of these two teams is carried out alternately, for example, there are cargo ships that enter team A at the port and the team B was in the warehouse, from team A, they were divided into 2 groups, one group unloaded the goods on the ship while the rest were in the truck or outside the ship, the goods were unloaded by the first group hooked to a crane, to move this tool there was one person on the top of the ship. to move and control the cran, another group is on the truck to release goods from the crane and arrange them into the truck, while team B is also divided into 2 groups, one group following the truck to the warehouse and unloading goods from the truck into the warehouse while the other group lift it from the truck and arrange it in the warehouse.

The behavior of the dockworkers observed during the initial survey, they work in shorts, they use sandals and clothes or cloth to cover their nose and mouth from cement dust when unloading cement, as well in a truck they sit

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on a load that will be brought to the warehouse. The dockworkers activities they carry out on passenger ships, each worker looks for passengers who need their energy to lift goods from port to ship and from ship to port, these goods transport activities are carried out quickly and in a hurry so that they can get passengers. These behaviors can jeopardize the health and safety of the dockworkers. Working in a hurry and not using PPE can cause work accidents while working without wearing a mask causes frequent exposure to harmful dust and can cause respiratory disorders, so to overcome this problem it is necessary to take preventive measures at the dockworkers, but before taking precautions, it must be done. first, find out what factors influence the behavior of thedockworkers.

The formulation of the problem in this study is the analysis of factors that influence unsafe behavior indockworkers at the Lewoleba Seaport? This study aims to analyze the factors that influence the dockworkers at the Lewoleba Seaport. Research hypothesis: there is an effect of knowledge, attitude, and supervision on unsafe behavior on dockworkers at Lewoleba Seaport.

SUBJECTS AND METHOD

1. Study Design

This type of research is an analytic survey with a cross-sectional design. This research was conducted at Lewoleba Seaport in August–September 2019.

2. Population and Sample

The population in this study were all dockworkers at Lewoleba Seaport as many as 116 workers. A sample of 53 workers was selected using the simple random sampling method.

3. Study Variables

The dependent variable of the study is unsafe behavior, while the independent variables of the study are knowledge, attitudes, and supervision.

4. Operational Definition of Variables

Unsafe behavior is a failure (human failure) in following the correct work requirements and procedures, causing work accidents. Knowledge is the respondent's ability to think and know several things about hazards and risks in the workplace and their control. Attitude is the tendency or reaction response of workers to take actions that are by safety. Supervision is the perception of workers against what is done by their superiors.

5. Study Instruments

The instrument for using the data used is a questionnaire sheet about factors related to unsafe behavior in dockworkers.

6. Data Analysis

This study uses simple regression analysis with= 0.05. Before performing a simple regression analysis of the data, the classical assumption test was carried out first. to determine the feasibility of a regression model. In this study, the classical assumption tests used are: the normality test aims to determine whether the data distribution is normally distributed or not. To find out the linearity assumption, it can be seen from the Anova table (overal F test), if the results are significant (p-value <0.05) then the assumption of linearity fulfilled, and the multicollinearity test aims to determine whether the independent

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variables are strongly correlated. After the data is analyzed the data is presented in the form of tables and narratives.

7. Research Ethics

This study was ethically approved by Health Faculty Ethics Review Team Community, Nusa Cendana University with Ethical Approval Number: 2019042-KEPK.

RESULTS

Table 1 shows the analysis of the effect starting with the assumption test, which consists of tests for normality, linearity, and multicollinearity. The test results show that the data in this study have met the requirements and can be continued in hypothesis testing with linear regression testing.

Table 1. Descriptive Statistics

Variables	Mean	SD	Min.	Max.
1. Knowledge	8.28	1.31	8.28	10
2. Attitude	13.77	1.65	13.77	18
3. Supervision	16.11	1.22	16.11	18
4. Unsafe Behavior	16.32	2.05	16.32	20

Table 2. Results of the Regression Linear Regression

Model	b	SE	β	p
(Constant)	8.90	1.49		0.001
Sciences	-0.92	0.21	0.52	0.001
(Constant)	16.13	2.33		0.001
attitude	-0.56	0.17	0.42	0.002
(Constant)	9.95	3.55		0.007
Monitoring	-0.86	0.22	0.48	0.001

Table 2 shows that after a simple linear regression test, the results obtained are that knowledge has a significant and significant effect on unsafe behavior with a value of B=-0.922 and a value of P=0.001, meaning that if the knowledge value increases by 1, the unsafe behavior of dockworkers in Lewoleba Seaport decreases of -0.922 or the value of knowledge increases, it will decrease the value of unsafe behavior. Attitude has a significant influence on unsafe behavior with a value of B=-0.562 and a value of P=0.002, meaning that if the attitude value increases by 1 then the unsafe behavior of dockworkers in Lewoleba Seaport decreases by -0.562 or the attitude value increases it will decrease the value of unsafe behavior. safe. Supervision has an influence on the unsafe behavior of dockworkers at Lewoleba Seaport with a value of B=-0.864 and a value of P=0.001, meaning that if the supervision value increases by 1, the unsafe behavior of dockworkers at Lewoleba Seaport decreases by -0.864, or the value of supervision increases. the monitoring value will decrease.

DISCUSSION

The Effect of Knowledge on Unsafe Behavior

Knowledge of a worker affects a person's mindset in dealing with the work entrusted to him, including how to prevent accidents and avoid work accidents when doing his job. Knowledge of cognition is a very important

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dominant in shaping one's actions (Geller, 2001). The knowledge referred to in this study is knowledge about Occupational Health and Safety in the process of dockworkers at the Lewoleba Seaport which includes the introduction of risks/hazards in the work environment, the use of PPE, regarding accident prevention measures, and others.

The results of the simple regression test show that there is a significant effect between knowledge and unsafe behavior on dockworkers at the Lewoleba Seaport. This is in line with the opinion Notoatmodjo (2003), where behavior based on knowledge, awareness, and a positive attitude will last a long time. On the other hand, if the behavior is not based on knowledge and awareness, it will not last long.

A person's knowledge can be influenced by the level of education, where the higher a person's education the better his knowledge. The education level of the respondents in this study was elementary, junior high, and high school/vocational school. Looking at the level of education of the respondents, it can be said that the respondents do not have good thinking power so that their knowledge of the importance of using PPE, concentration at work, and behaviors that risk the occurrence of work accidents are still not maximized. The results of the interviews revealed that so far the respondents had only attended OHS counseling once and had not participated in job training. The education obtained greatly influences the behavior of workers, in addition to formal education, non-formal education such as counseling and training also affects the behavior of workers at work.

Knowledge of dockworkers at Lewoleba Seaport is also influenced by age. With increasing age, a person will be able to show rational thinking patterns, be more able to control emotions and other traits that show intellectual and psychological maturity (Suma'mur, 1996). Based on the results of interviews, it is known that most of the dockworkers at the Lewoleba Seaport are between the ages of 21-35 years, which is still a young age. Workers at a young age tend to have unstable emotions and underestimate the dangers and risks that exist in the workplace so that they can make workers less careful at work.

This study is in line with Bancin (2016), which found that there was an influence between knowledge and unsafe acts. Research Pratiwi (2012) also found that workers' knowledge had a significant relationship with unsafe behavior. Increased knowledge does not always lead to changes in behavior. Knowledge is something that is necessary but not a strong enough factor so that a person acts according to his knowledge. Lack of knowledge of Occupational Health and Safety (OHS) in the work environment makes it difficult for a person to know the potential hazards around him, making it difficult to determine actions to control these potential hazards. Therefore a person will become less aware of the risks that can arise from his behavior during work (Halimah, 2010).

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Influence of Attitudes on Unsafe Behavior

Attitude is a complex matter, which can be expressed as an evaluative statement, either pleasant or unpleasant. In addition, attitudes can also be in the form of judgments about objects, people, and events related to safe behavior (Robbins at al., 2001). Attitude is an important determinant of work safety (Winarsunu, 2008).

The results of this study indicate that there is a significant influence of attitudes towards unsafe behavior. The existence of this significant effect is because the dockworkers at the Lewoleba Seaport often drink before work or after their lunch break. Judging from the number of respondents who answered the question "I will not work drunk" as many as 47 people or 90%, this is because the dock workers in Lewoleba admit that they will be more enthusiastic at work if they are drunk even though there has been a warning from the foreman but they don't follow it.

The results of this study are in line with Agiviana (2015), which found that there was a positive and significant influence between attitude towards safety behavior. Attitude affects behavior if a person believes that he is doing it then he will know the results. Attitudes can also be seen from the impact of these behaviors, both positive and negative impacts on the workforce (Ajzen, 2005).

The Effect of Supervision on Unsafe Behavior

Supervisors are key in influencing the knowledge and attitudes of workers who are in their responsibilities. Supervisors are very important to give warnings to workers who do unsafe acts or give praise when workers follow work procedures well (Halimah, 2010).

The results of the simple regression test show that there is a significant effect between supervision and unsafe behavior. The better the level of supervision, the less chance for unsafe behavior to occur. Supervision can be said to be successful if the manager or supervisor conducts inspections, checks, controls inspections, and regulates and prevents possible events that may occur (Sarwono, 1997). The results of the study found that supervision was carried out by the foreman according to the implementation schedule, namely every working hour if there was a fleet. Based on the results of observations and interviews with the foreman, it is known that workers have often been given warnings if they work drunk, but they say that they will be more enthusiastic and faster when working when they are drunk. The PPE owned by the workers is still limited, they only use masks when unloading cement, while apart from dusty items such as cement they do not use PPE, such as shoes, gloves, hats, etc. They also don't have their work uniforms, only the clothes that are used when there is a passenger ship so that passengers can recognize them.

The results of the interview with the head of the dockworkers at Lewoleba Sea Port, uniforms, and other PPE are planned for next year at the latest. So the presence or absence of a foreman or supervisor supervising

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them does not guarantee them to behave safely. However, this does not mean that supervision is not needed to change the behavior of workers, on the contrary, the implementation of routine supervision will encourage workers' motivation to behave safely.

This study is in line with Suryanto (2017), which found that the lower the supervision, the greater the risk ofunsafe actionand vice versa, the better the supervision, the risk of unsafe actionsmaller. According to Bird and Germain (1990), supervisors have a key position in influencing the knowledge, attitude, skill, and habit of each worker's safety. The role of the supervisor is very important to notify or give a warning to workers who do unsafe acts and praise workers who follow work procedures.

The unsafe behavior of dockworkers at Lewoleba Seaport is influenced by factors of knowledge, attitude, and supervision. Good knowledge, a positive attitude, and good supervision will reduce unsafe behavior in dockworkersin the workplace. The dockworkers cooperative as an organization that accommodates dockworkers needs to provide assistance, supervision, and provision of OHS facilities. The availability of the facilities in question is personal protective equipment such as work glasses, masks, and gloves. The availability of OHS facilities is one of the supporting factors in forming safe behavior at work.

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CONFLICT OF INTEREST

There is no conflict of interest in this study.

REFERENCES

Bancin AB (2016) Factors affecting unsafe actions on workers at pt. kharisma cakranusa rubber industry in 2016. University of Northern Sumatra.

Ajzen I (2005) Attitudes, personality, and behavior. 2nd Editio. New York: Open University Press/ McGraw-Hill.

Agiviana AP, Indi D (2015). Analysis of the effect of perception, attitude, knowledge and workplace on employee safety. Diponegoro J Manage. 4(3): 1–9. https://-ejournal3.undip.ac.id/index.php/djom/article/view/13185.

Pratiwi AD (2012) Analysis of factors affecting action unsafe (unsafe act) on workers to workers at pt.x in 2011. Faculty Public Health University of Indonesia.

Bird Jr FE, Germain GL (1990) Practical loss control leadership. Revised Ed. USA: Division Of International Loss Control Institute Loganville, Georgia.

BPJS Employment of NTT Province (2019) Number of work accidents in ntt province year 2018.

https://doi.org/10.26911/ICPHpromotion.FP.08.2021.22

BPJS Employment of the Republic of Indonesia (2019) Work Accident Data. Jakarta.

Suryanto DID, Noeroel W (2017). Relationship between individual characteristics and k3 supervision with unsafe action for loading and unloading workers. Indones J Public Health. 12(1): 51–63. http://dx.doi.org/10.20473/ijph.v12i1.2017.51-63.

Geller ES (2001) The pshychology of safety handbook. USA: Boca Raton, Fla. : Lewis Publishers.

Halimah (2010) Factors that affecting safe behavior employees at pt. sim plant fat. Jakarta.

ILO (2018) Improving the safety and health of young workers. 1st Editio. Jakarta: International Labour Organization. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_625223.pdf.

Indonesian Ministry of Manpower (2015). Decree of the minister of manpower of the republic of Indonesia number 370 of 2015 concerning stipulation of indonesian national work competency standards.

National Safety Council (2011) Injury facts. 2011 Editi. Itasca: IL:Author.

Notoatmodjo S (2003) Health education and behavior. Jakarta: PT. Rineka Cipta.

Robbins, Stephen P, Iskandarsyah, Triyana P, Hadyana (2001) Behavior organization: concept, controversy, application. Eighth edi. Jakarta: Prenhallindo. Available at: https://lib.ui.ac.id/detail.jsp?id=120938.

Sarwono SW (1997) Social psychology; group psychology and applied psychology. Jakarta: Balai Pustaka.

Setiyowati, Siti (2016) Implementation of the use of personal protective equipment as an effort to protect workers at pt bayer indonesia-bayer cropsceince. Surakarta: Eleven March University.

Sugiyono (2012) Loading and unloading manpower and human resources at the port. Jakarta.

Suma'mur PK (1996) Ergonomics for work productivity. Jakarta: CV Haji Masagung.

Suma'mur PK (2013) Corporate hygiene and occupational health. Jakarta: Sagung Seto.

TKBM Cooperative (2019) Lewoleba seaport tkbm cooperative annual final report.

Winarsunu T (2008) Psychology work safety. Cet. 1. Malang: UP University Publishing Muhammadiyah Malang.

https://doi.org/10.26911/ICPHpromotion.FP.08.2021.22