

Correlation implementation of housekeeping and individual factors with accident prevention efforts in IBT Co. Ltd Kotabaru

Qomariyatus Sholihah^{1*}, Tjip to Soewandi²

¹*OHAS Departement, Public Health Department, Medical Faculty, Lambung Mangkurat University, Jl. A. Yani Km. 36.3 Banjarbaru, 70714, South Kalimantan, Indonesia*

²*Public Health Faculty, Airlangga University, Surabaya, East Java, Indonesia*

Abstract: Occupational health and safety (OHAS) problems in general in Indonesia is often overlooked. This is demonstrated by the high number of work accidents. Accidents of course makes a big problem for the survival of a company. This study examines the effect of applying the reaction housekeeping, age, and years of service with the efforts to reduce work accidents in IBT Co. Ltd. Kotabaru. The methods used to collect data in the field is the observation, interviews, questionnaires implementation of housekeeping, age, education level and years of service with the efforts to reduce work accidents in IBT Co.Ltd Kotabaru. SHE employee population numbered 70 people. Samples taken were 30 people with a minimum amount of formula. The results showed no relationship housekeeping implementation towards the prevention of occupational accidents ($p = 0.02$), no association of age on the prevention of occupational accidents ($p = 0.000$) and there was a past relationship working towards the prevention of occupational accidents ($p = 0.011$). It can be concluded that there is correlation implementation of housekeeping towards the prevention of occupational accidents, no relation of age to the prevention of occupational accidents and no relation to the prevention of future work accidents. This research is expected to be input for companies to conduct monitoring and evaluation on a regular basis to maintain the implementation of good housekeeping among employees.

Key words: *Housekeeping; Individual factors; Accident prevention, IBT*

1. Introduction

According to Law No. 1 of 1970 on Occupational Safety, article 2, paragraph (1) explains that, safety is regulated safety in all workplaces, whether on land, in the soil, in surface water, in the water and in the air, which is within the jurisdiction of the Republic of Indonesia (Chusari, 2013). Health Law of the Republic of Indonesia No. 36 of 2009 on Health in Occupational Health CHAPTER XII Article 164, paragraph 1 states that efforts aimed at protecting the health of workers in order to live a healthy and free from health problems, as well as the adverse effects caused by work (Muliyanto and Syahri, 2013). In 2011, 96314 cases of accidents occur with the victim as much as 2,144 people died and as many as 42 people have disabilities. The government emphasizes the importance of occupational health and safety in the corporate world because of work accidents can cause death (Malinasari and Azzuhri, 2013).

Occupational health and safety (OHAS) problems generally in Indonesia is often overlooked. This is demonstrated by the high number of work accidents (Kani, 2013). Accident makes a big problem for the survival of a company. Losses suffered not only a loss of material large enough, but more than that is

the emergence of casualties who are not few in number (Hernawati, 2008). Implementation occupational health and safety (OHAS) is one of the efforts to create a workplace that is safe, comfortable, healthy and free of environmental pollution is prevention of accidents.

According Fristiyan (2010), there are several factors that cause work accidents include year of service (Dauly, 2010). Employees with long year of service i.e. ≥ 2 years work more have experience and skills so that the risk of work accidents are becoming smaller because it has a better ability to prevent accidents. Further Eva (2008) explains, a person with the age group ≥ 35 years old are more likely to experience an accident due to the reaction and agility work that has been reduced. In addition, a person's level of education affects one's mindset in the face of the work. Someone with a primary school education have a mindset to work using physical thus more at risk of occupational accidents (Hernawati, 2008). Based on data from the department of labor and employment accident rate in Indonesia is still relatively high, although it tends to come down to the year 2000 there was 98 902 cases, 104 774 cases occurred in 2001, 103 804 cases in 2002 occurred. Judging from the source of the biggest causes of accidents are machinery, transport planes and hand tools work. While based on the type of accident that is most impacted, contact

* Corresponding Au thor.

with sharp objects resulting in scratches, cuts and so on and hit punctured from falling.

IBT Co. Ltd states that the safety, health and environment are a major cornerstone in its operations. IBT Co. Ltd consider it important to ensure the implementation of OHAS management system and. IBT Co. Ltd makes OHAS management policy that is one of implementation is housekeeping activities that any bias according to plan and SOP (Standard Operating Procedure) which is expected can increase productivity and minimize the risk of accidents. These policies apply to all employees in both the new and old employees.

Incident reports IBT Co. Ltd. in 2011 there was 1 case of lost time injuries or lost work due to accidents, 1 case of medical treatment of the injury or injuries that require medical treatment, 8 cases of first aid injury or minor injury, 85 report near misses, 54 cases of property or equipment damage. This means that housekeeping is not maximized conducted on each employee. Housekeeping is a measure of the image of the company in terms of cleanliness and management of household in the company. Implementation of the first housekeeping is done by personal hygiene and working environment. The success of this implementation can be seen from performance and achievement of zero accident. So that an increase in productivity can be achieved and employee's years of service and knowledge increase. Through this study is expected can be obtained accurate data on the implementation of housekeeping at a company. If good housekeeping applied employee knowledge will be increased so personal hygiene carried out without punishment but with the realization in the implementing housekeeping on the individual and the workplace, the risk of accidents and in long working period then expected to be realized zero accident and productivity increased. In the future can be used as research literature and conduct research continuation on the implementation of the housekeeping in community so people to live healthy and happy.

Based on the above background, the research needs to be done to clarify the relationship individual factor housekeeping implementation towards the prevention of occupational accidents in the IBT Co. Ltd. Kotabaru.

2. Methods

The research design used in this study is quantitatively using observational analytic. This study used a cross-sectional study design because in this study the independent and dependent variables were observed in the same time. Subjects used in this study are mine field workers who work in IBT Co. Ltd Kotabaru. The data were obtained using questionnaires and scales according to the variables used are:

1. The entry to find out the characteristics of the respondents.

2. The implementation of the questionnaire to identify housekeeping, age, and years of service and work accidents.

The variable in this study is the independent variable in this study is a variable that affects the dependent variable. In this study, the independent variable is the implementation of housekeeping, age and employees years of service. The dependent variable in this study is a variable that is affected by the independent variable. In this study, the dependent variable is an effort to reduce accidents.

The procedure consisted of some stages:

1. The preparation phase

a. Conducted a preliminary survey to IBT Co. Ltd to perform licensing and determination of research subjects.

b. Preparation of research instruments

c. Spreadsheet and questionnaire reproduced to aid the process of data retrieval.

2. The implementation stage

Data collected using the sheet and questionnaire. Spread sheet to determine the characteristics of the respondents. Questionnaire to measure the implementation of housekeeping, age, year of service, work accidents with statements that have been prepared.

3. Phase reporting

After the implementation phase is done, then do the processing of data from the research and preparation of reports.

Data Collection and Processing Techniques

1. Primary data

Data taken from the spread sheet, questionnaires and observation sheets about identity of respondent (age and year of service).

2. Secondary data

Data obtained from IBT Co. Ltd. Kotabaru about the profile and the number of workers as well as the data of occupational accidents in 2013.

2.1. How to analyze data

Data analysis was performed using statistical computer programs and data analysis in this study can be described as follows:

1. Univariate Analysis

Data is collected, processed and analyzed by descriptive data for the variables are presented in the form of a frequency distribution table.

2. Bivariate Analysis

The statistical methods used in this study is the Chi Square test with a significance level $\alpha = 0.05$, to determine the effect of a significant implementation of housekeeping, age and years of service on the performance and accidents.

3. Result and discussion

3.1. Univariate analysis

In this study, the focus of the research is the implementation of Housekeeping, age, years of

service and the prevention of accidents. Overview of the implementation of Housekeeping, age and years of service and the prevention of occupational accidents as follows:

3.1.1. Implementation of Housekeeping

Based on the results of 64 respondents, the frequency distribution obtained by the implementation of Housekeeping employees can be seen in Table 1.

Table 1: Frequency Distribution of Respondents by implementation of SOP

No.	Housekeeping implementation	Frequency	Percent
1.	less	0	0%
2.	moderate	10	15,6%
3.	good	54	84,4%
Total		64	100%

Based on Table 1 shows that the number of survey respondents to the implementation of Housekeeping was totaled 10 respondents (15.6%)

Table 2: Frequency Distribution of Respondents by Age

No.	Age	Frequency	Percent
1.	Youth (< 35 years)	40	62,5%
2.	Old (≥ 35 tahun)	24	37,5%
Total		64	100%

Based on Table 2 shows the number of research respondents with younger age were 40 respondents (62.5%) and old age totaling 24 respondents (37.5%). Age has a significant effect on the incidence of work-related accidents. Older age group (35-50 years) have a higher tendency to experience work-related accidents compared to younger age groups due to the young age and the reaction has a higher

and the implementation of good housekeeping around 54 respondents (84.4%). Implementation Housekeeping is one way to prevent accidents. Based on research data and direct observation, the majority of employees have applied with good housekeeping. According to some research work accidents can occur if the carrying out of a work is not carried out in accordance with the Housekeeping job. Work done not in accordance housekeeping can lead to accidents, because Housekeeping contains information about instruction in the works to minimize accidents. In addition, the implementation of housekeeping can improve effectiveness and efficiency, thereby increasing the performance of employees and increase company profits.

3.1.2. Age

Based on the results of 64 respondents, the obtained frequency distribution of the age of the employee can be seen in Table 2.

agility and in this study most respondents that the study had a younger age (62.5 %).

3.1.3. Year of service

Based on the results of 64 respondents, the obtained frequency distribution of the period of employment can be seen in Table 3.

Table 3: Frequency Distribution of Respondents by year of service

No.	Year of service	Frequency	Percent
1.	Short (≤ 2 years)	14	21,88%
2.	Long (> 2 Years)	50	78,12%
Total		64	100%

Based on Table 3 shows that the number of survey respondents with a short working period amounted to 14 respondents (21.88%) and a long working period amounted to 50 respondents (78.12%). The period of employment is one way to prevent accidents. Year of service can be defined as a period of a person's work, calculated from the start to work until now he still works. Work experience is a factor that may influence the occurrence of occupational accidents. Based on various studies with a higher experience and skills will be accompanied by a decrease in the number of occupational accidents. Most study respondent has a relatively long working i.e. (78.12%).

3.1.4. Accidents prevention efforts

Based on the results of 64 respondents, the obtained frequency distribution of employee accident prevention efforts can be seen in Table 4.

Table 4: Frequency Distribution of Respondents by Work Accident Prevention

No.	Work Accident preventing effort	Frequency	Percent
1.	Less	10	15,6%
2.	Good	54	84,4%
Total		64	100%

Based on Table 4 shows the number of research respondents with less prevention of work accidents effort totaled approximately 10 respondents (15.6%) and in good prevention of work accidents good around 54 respondents (84.4%). Accidents do not happen by chance, but there is. Therefore, the causes of the accident must be investigated and

discovered, so that preventive action can be found, and then the accident could have been prevented and was not repeated. Accidents that often occur due to several factors, including the factors of the workers themselves, namely the lack of knowledge and skills of workers, the worker's age, education level, year of service, gender, work motivation, implementation of SOPs on workers (Dauliy, 2010). In addition, work accidents can be caused by occupational factors i.e. poor standards of work, shift work, work unit, or type of work and work hours (Hernawati, 2008; Nurvita, 2009).

Based on the above data, the majority of research respondents have good work accident prevention efforts. This is due to the majority of respondents had a younger age. Age has a significant effect on the incidence of work-related accident. Young age have a lower risk of accidents than older age because it has a reaction and agility higher than old age in avoiding of work accidents (Hernawati, 2008; Nasir, 2008).

3.2. Bivariate analysis

Housekeeping implementation relationship to the prevention of work accidents

Analysis performed bivariate analysis was chi square test to determine the relationship between the implementation of Housekeeping (independent variable) on the prevention of work accidents to employees (dependent variable). Test used was chi square test. The results of the chi square test between the housekeeping implementation towards the prevention of work accidents can be seen in Table 5.

Table 5: Correlations the Chi Square test implementation of housekeeping with Work Accident Prevention

Variable	p-value	Description
Housekeeping implementation relationship to the prevention of work accidents	0.02	There implementation Housekeeping relationship with the prevention of work accidents

Results of chi-square test with 95% confidence level, to see the connection with the implementation of Housekeeping prevention of work accidents to employees, with $p = 0.02$. From the p-value in the statistical result obtained decision H_0 is rejected ($p < 0.05$), which means there is a significant relationship between the implementation of occupational accidents Housekeeping employees.

Accidents are undesirable events and expected. Accidents often occur due to various causes. The cause of the accident is the most common job duties without a clear work instructions and SOPs are not implemented properly (Praise and Hariyono, 2008).

Implementation of housekeeping is the way to do to minimize the risk of work accidents. By applying housekeeping materials that could cause a hazard can be arranged so as not to endanger workers by doing 5S principles such as preparation, cleanup, setup, maintenance, sorting (Musoffan, 2007).

3.2.1. The relationship of age to the prevention of work accidents

Bivariate analyzes were used were chi-square test to determine the relationship between age (independent variable) with the prevention of work accidents to employees (dependent variable). Results of chi square test between age and the occurrence of accident prevention efforts can be seen in Table 6.

Table 6: Correlations with the Chi Square Relationship between Age Accident Prevention

Variable	p-value	Description
The relationship between age and the prevention of work accidents	0.000	There is a relationship between age and the prevention of work accidents

Results of chi-square test with 95% confidence level, to see the relationship of age to the prevention of work accidents on employees found that the value of $p = 0.000$. From the p-value in the statistical result obtained decision H_0 is rejected ($p < 0.05$), which means there is a significant relationship between age and the prevention of work accidents to employees.

Research in the United States revealed that younger workers more likely to accident than older workers. Younger workers are usually less experienced in their work. Many cases accident at a young age is due to the tendency to behave in a reckless, inexperienced, likes to experiment and lead to unsafe behavior and or create unsafe working conditions.

In addition, according to research Setiawan (2010) showed that the age variable has a positive and significant impact on the long time looking for work. These results provide empirical evidence that the older the age will be increasingly difficult to find work. Such conditions are generally associated with better productivity levels than the younger age groups than older age groups. In this case the employer will consider work productivity will be given by the job seekers. This leads to employees who have the older age groups will strive to take steps to prevent of work accidents as possible as a step to achieve good performance in order not to lose their jobs (Setiawan, 2010).

3.2.2. The relationship between years of service and the prevention of work accidents

Bivariate analyzes were used were Chi Square test to determine the relationship between the years of service (independent variable) with the prevention of work accidents to employees (dependent variable). Test used was chi square test. The results of the chi square test between years of service and the prevention of work accidents can be seen in Table 7.

Results of chi-square test with 95% confidence level, to see the relationship years of service to the

prevention of work accidents to employees, with $p = 0.011$. From the p -value in the statistical result obtained decision H_0 is rejected ($p < 0.05$), which means there is a significant relationship between years of service to the prevention of work accidents to employees.

Table 7: Correlations between the Chi Square Test Period Work With Work Accident Prevention

Variabel	p-value	Keterangan
The relationship between age and the prevention of work accidents	0.011	There is a relationship between age and the prevention of work accidents

Attention of workers who are not accustomed to the work environment will be dispersed by the many new impressions and this together with the lack of experience may explain the relatively high frequency of accidents among the newcomers (Hernawati, 2008).

Work experience is a factor that may influence the occurrence of work accident. Based on various studies with a higher experience and skills will be accompanied by a decrease in the number of work accident Awareness of work accident improved in line with age and duration of employment at the workplace concerned (Hernawati, 2008).

4. Conclusion

- There is a significant relationship between the implementation of housekeeping towards the prevention of work accidents in the employee Hauling with $p = 0.02 (< 0.05)$.
- There is a significant effect of age on the prevention of work accidents to employees with a value of $p = 0.000 (< 0.05)$.
- There is a significant relationship between years of service towards the prevention of work accidents to employees, with $p = 0.011 (< 0.05)$.

5. Recommendations

- The company is expected to conduct regular monitoring and evaluation related to the implementation by the employee to retain Housekeeping already excellent implementation.
- It is expected that the activities of training and regular training to maintain accident prevention efforts work well to achieve zero accident
- Future studies are expected to examine in more depth about the implementation Housekeeping that affecting to work accidents the employees of IBT Co. Ltd Kotabaru.

References

Chusari, Fahrul, (2013). Corporate Responsibility to the Workers / Workers Who Have Accidents

(Study on PT. SIMS, Grogot, East Kalimantan). Malang: Faculty of Law. UB.

Daulay FA (2010). Factors Associated With Work Accident At Construction Workers at PT. PP (Persero) Tiffani Project Apartment Kemang, South Jakarta in 2010. The Jakarta: Faculty of Medicine and Health Sciences. Syarif Hidayatullah State Islamic University

Hernawati, Eva (2008). Factors Associated With Genesis Accident Based Worker Characteristics and Work Unit Area Mining, Antam Ltd. Co UBPE Pongkor Year 2006-2007 Bogor, West Java. Jakarta: Faculty of Medicine and Health Sciences. Syarif Hidayatullah State Islamic University.

Kani, Bobby Rocky.(2013). Occupational Health and Safety in Construction Project Execution (Case Study: Project PT. Trakindo Main). Journal of Civil Static. Faculty of Engineering. Sam Ratulangi University, Vol. 1 6.

Malinasari, Nia and Azzuhri Misbahuddin (2013). Effect of Safety Program, Occupational Health and the Social Security against Employee Productivity (Studies in PT PJB UP Brantas Karangates - Kab. Malang). Malang: Faculty of Economics and Business. UB.

Muliyanto, Lopez, HS, Syahri, IM (2013). Occupational Health Program Implementation Efforts In UKK Post Work Area Health Center in Kampong Bugis Riau Islands Tanjung Pinang. Medan: Faculty of Public Health. University of North Sumatra.

Musoffan W (2007). Analysis of safety and health aspects of work in an effort to identify potential hazards in units of plastic injection of PT Astra Honda Motor. Thesis. London: Industrial Technology Faculty, University of Gunadarma.

Nasir N (2008). Analysis of Effect of the level of wages, years of age on labor productivity. Thesis. Malang: Brawijaya University

Nurvita DP (2009). The description of the mechanism of the accident investigation and reporting of accident by the Sub Directorate of Operations Safety of Mineral, Coal and Geothermal Engineering and Environment Directorate of Mineral, Coal and Geothermal Jakarta in 2009. Internship reports. Jakarta: Faculty of Medicine and Health Sciences Syarif Hidayatullah State Islamic University.

Praise WR, Hariyono W (2008). Implementation of occupational health and safety management (MK3) in the emergency department of PKU Muhammadiyah Hospital of Yogyakarta. Journal of Public Health 2011; 5 (1): 1-67, Princess PHS. The relationship between work stress with the risk of work accidents to employees. Thesis. London: Faculty of Psychology and Social Sciences Cultural Islamic University of Indonesia.

Puti, Nurhidayati (2008). Description Genesis of Accident, Prevention, and Abatement in the PT. TIFICO, Tbk Year 2008. London: Faculty of Medicine and Health Sciences. Syarif Hidayatullah State Islamic University.

Qomariyatus S (2011). Good Housekeeping. Malang: Brawijaya University Press.

Setiawan SA (2010). The influence of age, education, income, work experience and gender of the long looking for employment for educated labor in Semarang. Thesis. Semarang: Faculty of Economics, University of Diponegoro.

Sutanto, Hadi (2010). Analysis of Factors Causes Accidents On Construction of Office Building and Lecture Phase III Wijaya Kusuma University of Surabaya. New York: Journal of Civil Engineering. Civil Engineering and Planning Faculty of Surabaya Technology Institute.

Wulandari S (2011). Hazard identification, valuation and risk management areas of production Line 3 for prevention of occupational accidents in the PT. Coca-Cola Amatil Indonesia Central Java. Special Report. Surakarta: Faculty of Medicine March University