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Factors Related To The Compliance In The Use Of Personal Protective Equipment At Production Employees At Pt Indofood Cbp Sukses Makmur Noodle Division, Pekanbaru

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ABSTRACT

The use of PPE is one of the problems in the world of work. This can increase the level of risk of loss, both material and non-material. In general, companies have implemented an OHS management system, in which there are also provisions for the use of Personal Protective Equipment (PPE). However, in reality PPE is not always worn when working, many workers are found who do not use PPE. Compliance with the use of personal protective equipment is a person's attitude in following the rules set by the organization to protect part or all of the body from the dangers of work-related accidents and diseases. Based on the initial survey, it was found that there were 17 employees who did not comply with using personal protective equipment. The purpose of this study was to analyze factors related to Compliance with the Use of Personal Protective Equipment for employees in the production section at PT Indofood CBP Sukses Makmur TBK Noodle Division Pekanbaru. The method in this study used a quantitative approach with a Case Control research design with a total a sample of 34 people. The research was conducted from August to September 2021. Data collection was carried out using a questionnaire using the Google form. Data analysis was carried out using univariate, bivariate and multivariate. The analysis technique used is multiple logistic regression using the SPSS program. Based on the results of the study there is a significant relationship between attitude variables, availability of personal protective equipment, supervision, age and years of service with adherence to the use of personal protective equipment. The most dominant factor in this research is attitude. Suggestions for PT Indofood CBC Sukses Makmur are to form regulations, carry out strict inspections and sanctions for employees who are not disciplined in using personal protective equipment, and provide rewards for employees who comply in using personal protective equipment (PPE).

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INTRODUCTION

The ILO estimates that around 2.3 million women and men worldwide die from occupational accidents or diseases [1],[2]. Worldwide, there are approximately 340 million work accidents and 160 million victims of work-related diseases each year [3]. The ILO updates these estimates regularly, and the updates show an increase in accidents and ill health. In Indonesia, on average per year there are 99,000 cases of work accidents[4]. The total amount, about 70 percent is fatal, namely death and lifelong disability. A survey shows the number of work accidents in the world reached 250 million cases in 2017 with a total death of 2.78 million cases [5]. World Health Organization, 2022 records that there are 685,000 cases of work accidents every day. This figure indicates that every 8 minutes a work accident occurs in 475 industrial workers. work accident cases in Indonesia have increased by 24% in the last 10 years[5]. A total of 98,712 work accident cases in 2010 increased to 130,932 cases in 2019. The escalation of these cases is associated with a lack of effectiveness of occupational health services in the industrial sphere. The highest number of accidents occurred due to traffic, namely 1,243 workers, followed by accidents caused by materials, namely 863 workers[6]. The low effectiveness of the implementation of occupational health and safety (K3) by occupational health nurses triggers a high number of work accidents, especially in the industrial sphere. Occupational safety and health must be managed as with other aspects of the company such as operations, production, logistics, human resources, finance and marketing. K3 aspects will not be able to run as it is without intervention from management in the form of planned efforts to manage it [7]. Riau Province as a developing partner in the industrial sector also has serious problems regarding work safety. Based on the results of an initial survey conducted by researchers on production employees at PT Indofood CBP Sukses Makmur TBK Noodle Division Pekanbaru Branch where from the observations it was found that there were still 17 employees who did not use protective helmets and did not use helmets, gloves and masks. As for one of the possible causes of employee non-compliance can be influenced by several factors such as low education level, bad attitude, availability of personal protective equipment and lack of supervision from PT. Indofood CBP Sukses Makmur itself. A survey shows that the reason why workers are reluctant to use personal protective equipment (PPE) is because they feel uncomfortable when using it. The second reason is that workers feel they do not need the PPE while working, because according to them they have worked for many years but have never had a work accident. The third reason is that they don't have enough time to use PPE or they don't know that PPE must be used. Another reason is that PPE adds stress to the body and causes discomfort and difficulties at work (Marlina, 2020). In order for the objectives of the occupational safety and health policy to be achieved properly, workers must be able to comply with existing K3 policies, especially in terms of using PPE, even though PPE has not been considered to truly protect workers but PPE is one of the most recent potential hazard controls in hazard control. in the workplace and compliance with the use of PPE can reduce or reduce the risk of developing Occupational Diseases (PAK), researchers are interested in examining factors related to adherence to the use of Personal Protective Equipment (PPE) in production employees at PT Indofood CBP Success Makmur TBK Noodles Division Pekanbaru Branch.

RESEARCH METHOD

The research design used in this study was a case control survey, which is an analytic survey research that explains how risk factors are studied using a retrospective approach. The population of cases in this study were production employees at PT Indofood CBP Sukses Makmur TBK Noodle Division, Pekanbaru Branch. The subjects in this study were production employees and for case subjects, namely employees who at the time of the initial survey did not use personal protective equipment Safety Goggles, Masks, and Gloves and control subjects, namely production employees who used personal protective equipment Safety Goggles, Masks, and Gloves. The

number of samples is 17 cases and 17 controls. This research was conducted in August - September 2021. The case sampling technique used total sampling, while the control group used systematic random sampling. The process of analyzing the research data was carried out using the SPSS application. data analysis using univariate, bivariate and multivariate analysis.

RESULTS AND DISCUSSIONS

Based on the results of the study, the results of the univariate analysis were obtained as follows:

Table 1. Frequency Distribution of Compliance Analysis of PPE Use in Production Section Employees at PT Indofood CBP Noodle Division Pekanbaru

No	Variable	Frequency	Percentage (%)
1.	PPE Use Compliance		
	Safety Googles	17	50
	Face mask	34	100
	Gloves	16	47,1
	Not obey	17	50
	obey	17	50
	Total	34	100
2.	Education		
	Low	3	8,8
	Tall	31	91,2
	Total	34	100
3.	Attitude		
	Negative	12	35,3
	Positive	22	64,7
	Total	34	100
4.	Availability of PPE		
	There isn't any	10	29,4
	Exist	24	70,6
	Total	34	100
5.	Supervision		
	There isn't any	9	26,5
	Exist	25	73,5
6	Total	34	100
	Age		
	Not Product	19	55,9
	Productive	15	44,1
	Total	34	100
7	Years of service		
	New	21	61,8
	Long	13	38,2
	Total	34	100

Based on the table above, it can be seen that the number of employees who are not compliant in using PPE is 17 people (50%), low education is 3 people (8.8%), negative attitudes are 12 people (35.3%), PPE is not available, namely 10 people (29.4%), 9 people (26.5%) unsupervised, 19 people (55.9%) of unproductive age, and 21 people (61.8%) have just worked. The results of a bivariate analysis of factors related to adherence to the use of personal protective equipment among employees in the production division of PT Indofood are as follows;

Table 2. Independent Variable Relationship with Compliance with PPE Us

No	Variable	PPE compliance		Total	P Value	POR
		Not obey	obey			
1	Education	3 (100%)	0 (0.0%)	3 (100%)	0.227	2,214
	Low Tall	14 (45.2%)	17 (54.8%)	31 (100%)		
2	Attitude	12 (100%)	0 (0.0%)	12 (100%)	0.000	4,400
	Negative Positive	5 (22.7%)	17 (77.3%)	22 (100%)		
3	Have PPE ready	10 (100%)	0 (0.0%)	10 (100%)	0.001	3,429
	There isn't any Exist	7 (29.2%)	17 (70.8%)	24 (100%)		
4	Supervision	9 (100%)	0 (0%)	9 (100%)	0.002	3.125
	There isn't any Exist	8 (32%)	17 (68.0%)	25 (100%)		
5	Age	6 (31.6%)	13 (68.4%)	19 (100%)	0.038	0.168
	Not productive Productive	11 (73.3%)	4 (26.7%)	15 (100%)		
6	Years of service	14 (66.7%)	7 (33.3%)	21 (100%)	0.034	6,667
	New Long	3 (23.1%)	10 (76.9%)	13 (100%)		

From the table above it can be seen the bivariate results of adherence to the use of personal protective equipment with independent variables in production workers at PT. Indofood TBK Sukses Makmur CBP Nodles Division Pekanbaru Branch, namely, there is no significant relationship between education and adherence to the use of personal protective equipment and there is a significant relationship between attitude, availability of personal protective equipment, supervision, age, years of service and compliance with the use of personal protective equipment.

The purpose of bivariate selection is to find out which variables can be included in the bivariate modeling. The bivariate selection is as follows: vision, age, years of service and compliance with the use of personal protective equipment.

Table 3. Bivariate Selection Results

No	Variable	P Value	Information
1	Education	0.035	Candidate
2	Attitude	0.000	Candidate
3	Availability of PPE	0.000	Candidate
4	Supervision	0.000	Candidate
5	Age	0.014	Candidate
6	Years of service	0.012	Candidate

Based on the table above, it can be seen that from the 6 independent variables, 6 variables were obtained that had a p value <0.25, namely the variables of education, attitude, availability of PPE, supervision, age, years of service that could be used as candidates so that all variables were included in the multivariate modeling. The next steps are as follows:

Table 4. Phase I Multivariate Modeling

No	Variable	P Value	POR	(95%CI)	
				Lower	Upper
1	Attitude	1,000	0,000	0,000	-
2	PPE availability	1,000	1,000	0,000	-

3	Supervision	1,000	1,000	0,000	-
4	Age	0,857	0,792	0,064	9,887
5	Years of service	0,930	1,097	0,136	8,837
6	Education	1,000	1,163	0,000	-

Variables with $p > 0.05$ were excluded from the multivariate modeling. The first variable excluded from the multivariate modeling is the variable that has the largest p-value, namely the attitude variable.

Table 5.Final Modeling

No	Variable	P Value	POR	(95%CI)	
				Lower	Upper
1	Attitude	.998	.000	.000	0.000
Omnibus Test: 0.000		Nagelkerke R Square: 0.666			

Based on the results above, it was found that the attitude variable had a p value > 0.05 . From the results of the multivariate analysis, it was found that the most dominant variable was the attitude variable, the POR value = 0.000. It can be concluded that the attitude variable is a protective factor. used, there is a confounding variable in this study, namely the attitude variable, the Nagelkerke Square value is = 0.666, meaning that the attitude variable can explain the independent variable (compliance with the use of personal protective equipment) of 66.6% and the rest is explained by other variables not examined.

Discussion

Based on the results of the study there was no significant relationship between education and compliance with the use of personal protective equipment, p value 0.227 and OR = 2.214 (95% CI = 1.502-3.264). Someone with low education does not mean absolutely low knowledge, because increased knowledge can be obtained in non-formal education [8]. These results are supported by other studies which state that in their research the level of education has no effect on the use of PPE in workers [9], [10]. Based on the research, there is a significant relationship between attitude and adherence to the use of personal protective equipment with a p value of 0.000. Respondents with a negative attitude were 4.4 times at risk of not complying with using personal protective equipment compared to respondents who had a positive attitude. OR = 4.400 (95% CI = 2.036-9.508). Behavioral determinants are factors that differentiate responses to different stimuli. This research is in line with research which states that there is a significant relationship between attitude and compliance with the use of earplugs and gloves at PT KAI DOP VI Yogyakarta [11]. According to the researcher's assumption, this is because in theory workers understand related to the attitude of using PPE, but in practice workers do not apply this compliance attitude because they are uncomfortable or do not move freely when carrying out their activities and workers consider slowing down their time to work so that workers often take off their personal protective equipment if there is no supervisor at work. There is a significant relationship between the availability of personal protective equipment and adherence to the use of personal protective equipment with a p value of 0.001. Respondents who felt that they were not provided had a 3.4 times risk of not complying with using personal protective equipment compared to respondents who felt that personal protective equipment was provided. OR value = 3.429 (95% CI = 1.838-6.396). By law, employers are responsible for providing appropriate Personal Protective Equipment for employees to ensure protection for employees at work [12]. According to the results of the study, there is an influence between the independent variables, namely the availability of PPE and the dependent variable, namely compliance with using PPE for workers in the Coating unit of PT. Barutama Kudus Temple. According to the researcher's assumption, the availability of personal protective equipment does not guarantee that workers will use it. Without self-awareness from workers, the personal protective equipment provided will remain in place [13]. Based on the research results,

there is a significant relationship between supervision and adherence to the use of personal protective equipment with a p value of 0.002. Respondents who feel they are not under supervision are at risk 3, 1 times disobedient using personal protective equipment compared to respondents who received supervision. OR value = 3.125 (95% CI = 1.765-5.534) This study is in line with research which states that there is a significant relationship between supervision and adherence to the use of personal protective equipment for employees in the Production division of PT. ISM Bogasari Flour Mills Tbk Tanjung Priok North Jakarta in 2009 [14]. Someone who is more mature has a tendency to be more trusted than someone who is not mature enough. This is as a result of the experience of maturity of the soul. Based on the research results, there is a significant relationship between years of service and adherence to the use of personal protective equipment with a p value of 0.034. Respondents who have a new working period are at risk of 6, 6 times disobedient using personal protective equipment compared to respondents who have a long working period. OR = 6.667 (95% CI = 1.377-32.278). Respondents with new tenure and old tenure have different levels of knowledge ranging from low to high levels [15]. The longer a person's working period will cause several declines or functional disorders in the body and the longer a person's working period, the more problems will arise. So that if a person's work activities are carried out periodically over a period of years, of course it will result in disturbances in the body, because working time is the accumulated time of one's work activities.

CONCLUSION

There is a significant relationship between attitude, availability of personal protective equipment, supervision, age, and years of service with adherence to the use of PPE among production employees at PT Indofood CBP Sukses Makmur TBK Noodle Division, Pekanbaru Branch. The most dominant factor in this study is the attitude variable. The need for the participation of PT Indofood CBP Sukses Makmur TBK Noodle Division Pekanbaru Branch in terms of improving the occupational health and safety management system which in this case certainly involves the role of all parties. The implementation of the occupational health and safety management system at PT Indofood CBP Sukses Makmur TBK Noodle Division Pekanbaru Branch is currently good enough, so that it can be maintained in the future so that it remains consistent

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