

## **ANALYSIS OF WORKERS' COMPLIANCE WITH THE USE OF PERSONAL PROTECTIVE EQUIPMENT AT PT SAKO INDAH GEMILANG PALEMBANG**

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DOI : <https://doi.org/10.52060/hmaps.v2i1.2223>

### **ABSTRAK**

Angka kecelakaan kerja di Indonesia mengalami peningkatan sejak tahun 2020 – 2022. Hal ini sejalan dengan masih terdapatnya 3 kasus kecelakaan kerja kategori ringan di PT. Sako Indah Gemilang (SIG) sejak 2019-2022. Penelitian ini bertujuan untuk mengetahui hubungan pengetahuan, sikap, masa kerja, dan ketersediaan Alat Pelindung Diri dengan kepatuhan pekerja terhadap penggunaan Alat Pelindung Diri pada pekerja bagian produksi finger joint dan moulding di PT. Sako Indah Gemilang Palembang Tahun 2023. Hasil penelitian menunjukkan bahwa terdapat hubungan antara pengetahuan dengan kepatuhan penggunaan Alat Pelindung Diri dengan hasil P value = 0,001 dan terdapat hubungan antara sikap dengan kepatuhan penggunaan APD. Alat Pelindung Diri dengan hasil P value = 0,003. Disarankan kepada para pekerja untuk dapat menaati peraturan keselamatan kerja mengenai penggunaan Alat Pelindung Diri di tempat kerja dan secara konsisten dan benar dalam menggunakan Alat Pelindung Diri dan perusahaan juga secara konsisten mengadakan pembicaraan keselamatan tentang penggunaan Alat Pelindung Diri bagi para pekerja.

**Kata Kunci:** Pengetahuan, Sikap, Masa Kerja, Ketersediaan, Kepatuhan, APD

### **ABSTRACT**

The number of work accidents in Indonesia has increased from 2020 - 2022. This is in line with the discovery of 3 cases of light category work accidents at PT. Sako Indah Gemilang (SIG) from 2019-2022. This study aims to determine the relationship between knowledge, attitudes, length of service, and availability of Personal Protective Equipment with worker compliance with the use of Personal Protective Equipment for workers in the finger joint and molding production section at PT. Sako Indah Gemilang Palembang in 2023. The results of this research show that there is a relationship between knowledge and compliance with the use of Personal Protective Equipment with a P value = 0.001 and there is a relationship between attitude and compliance with the use of Personal Protective Equipment with a P value = 0.003. It is recommended that workers comply with work safety regulations regarding the use of Personal Protective Equipment when working and consistently and correctly use Personal Protective Equipment, and companies also consistently hold safety talks regarding the use of Personal Protective Equipment for workers.

**Keywords:** Knowledge, Attitude, Years of Service, Availability, Compliance, PPE

## BACKGROUND

PT. Sako Indah Gemilang is a company engaged in the Log Industry (*log*), Then with the government policy that prohibits the export of logs (*log*) The company shifted its business to sawn wood (*SAW Timber*). Thus with the issuance of a new policy by the government towards the semi-finished wood processing industry (*saw timber*), So the company diversified its business by starting to produce processed wood that is more downstream, namely *Laminating Wood* (Profil PT. Sako Indah Gemilang, 2022).

Based on BPJS employment data, the number of work accidents in Indonesia reached 221,740 cases in 2020, the number rose to 234,370 cases in 2021 and 265,334 cases until November 2022. Based on this data, it is an indication that the implementation of K3 must increasingly become a concern and a priority for the world of work in Indonesia. An effective and effective measure to improve the health and safety of workers is to provide Personal Protective Equipment (PPE) to workers who carry out work activities with potentially threatening hazards, but Personal Protective Equipment (PPE) is often the last alternative when the previous control measures that have been carried out are considered less effective. Personal Protective Equipment (PPE) is a set of tools used by workers to protect all or part of their body against danger, from potential accident hazards or it can also be called fittings that must be used when working according to the danger of work risks to maintain the safety of the worker himself and the people around him. (Hasibuan, et al., 2020)(Poetra, 2021)

Based on an initial survey conducted by researchers at PT. Sako Indah Gemilang (SIG) Palembang obtained data on the number of workers, namely the number of workers processed in production as many as 161 people divided into several units. The number of workers working in the chopstick unit is 35 people, the frame unit is 20 people, *the finger joint* unit (connected wood) is 30 people, the *molding unit* is 33 people, the painting unit is 21 people, and *the dowels/broom handles* are 22 people. In addition, the researcher also observed workers and interviewed the K3 related to compliance with the use of Personal Protective Equipment (PPE), there are still several workers who do not comply with Personal Protective Equipment (PPE) which comes from human factors that result in unsafe actions such as: pinching, cutting, slipping while working. With the number of work accident data starting from 2019-2022 of 3 cases in the mild category, this is caused by poor knowledge and attitude about K3, long working periods, and incomplete PPE availability in the Company. Based on the above background, the author is interested in conducting a research entitled "Analysis of Worker Compliance with the Use of Personal Protective Equipment (PPE) in Workers in the Production of *Finger Joint* and *Molding* at PT. Sako Indah Gemilang (SIG) Palembang in 2023.

## METHOD

### 1. Research Design

This study is quantitative by analyzing the relationship between independent variables (knowledge, working period, attitude and availability of PPE) and dependent variables including the use of PPE.

### 2. Population and Sample

The population in this study is all workers in the *Finger joint* and *Molding* production section at PT Sako Indah Gemilang Palembang which totals 63 workers. Meanwhile, the sample in this study is the total number of workers in the *Finger joint* and *Molding* production section at PT Sako Indah Gemilang Palembang which amounted to 63 workers

### 3. Research Variables

The dependent variable in this study is compliance with the use of personal protective equipment and the independent variable in this study are knowledge, attitude, working period, availability of personal protective equipment.

### 4. Operational Definition

- **Knowledge** is the level of information that a workforce has about Personal Protective Equipment.
- **Attitude** is the way workers respond to company regulations and policies in the use of Personal Protective Equipment.
- **Employment** period is the length of time an employee works for a company
- **PPE availability** is the completeness of PPE provided by the company
- **Compliance with the use of PPE** is the compliance of workers in the use of PPE

## RESULTS

### A. Result

From the results of the bivariate analysis regarding the characteristics of the respondents, it is known that:

- 1) Relationship of Knowledge to Compliance with PPE Use

**Table 1. Knowledge Relationship to Compliance with the Use of Personal Protective Equipment (PPE)**

It	Knowledge	PPE Usage Compliance				Total		P value	PR
		Obedient		Non-Compliance					
		N	%	N	%	N	%		
1	Good	40	93	3	7	43	100	0,001	10,90
2	Bad	11	55	9	45	20	100		
<b>Total</b>		51	81	12	19	63	100		

Based on table 1, the results were obtained from 43 respondents who had knowledge with a good category, 40 of them (93%) complied with using Personal Protective Equipment (PPE)

while doing work and the other 3 respondents (7%) did not comply with using Personal Protective Equipment (PPE) while working. When viewed from 20 respondents who have knowledge in the category of not good, 11 respondents (55%) are compliant in using PPE at work and 9 other respondents (45%) are not compliant in using PPE at work. The results of the *chi-square* test show that the probability value of knowledge is  $p\text{ value} = 0.001$  or  $<$  the  $\text{value of sig } \alpha = 0.05$ . These results prove that knowledge has a relationship with the use of Personal Protective Equipment (PPE) on workers in the *finger joint* and *molding* production section of PT. Sako Indah Gemilang in 2023. In addition, the PR value from the results of the study was 10.909, which can be concluded that respondents with a good knowledge category have a tendency of 10.909 times to be obedient in using Personal Protective Equipment (PPE) while doing work compared to respondents with a bad knowledge category.

## 2) Relationship of Attitude to Compliance with PPE Use

**Table 2. The Relationship of Attitudes to Compliance with the Use of PPE**

It	Attitude	PPE Usage Compliance				Total		P value	PR
		Obedient		Non-Compliance		N	%		
		N	%	N	%				
1	Support	44	89,8	5	10,2	49	100	0,003	8,80
2	Not Supported	7	50	7	50	14	100		
<b>Total</b>		51	81	12	19	63	100		

Based on table 2, the results were obtained from 49 respondents who had attitudes with a supportive category, 44 of them (89.8%) complied with using Personal Protective Equipment (PPE) while doing work and 5 other respondents (10.2%) did not comply with using Personal Protective Equipment (PPE) while working. Meanwhile, of the 14 respondents who had an attitude with a bad category, 7 respondents (50%) were compliant in using Personal Protective Equipment (PPE) while working and 7 other respondents (50%) were not compliant in using Personal Protective Equipment (PPE) while working. The results of the *chi-square* test showed that the probability value of knowledge was  $p\text{ value} = 0.003$  or  $<$  the  $\text{a value of sig} = 0.05$ . This result proves that attitudes have a relationship with the use of Personal Protective Equipment (PPE) in workers in the *finger joint* and *molding production section* of PT. Sako Indah Gemilang in 2023. From the results of the bivariate analysis, a PR value of 8,800 was also obtained, which can be interpreted that respondents with a supportive attitude category have a tendency to be 8,800 times more obedient in using Personal Protective Equipment (PPE) while doing work compared to respondents with a non-supportive attitude category.

### 3) The Relationship Between Working Period and Compliance with the Use of Personal Protective Equipment (PPE)

**Table 3. The Relationship Between Working Period and Compliance with the Use of Personal Protective Equipment (PPE)**

It	Working Period	PPE Usage Compliance				Total		P value	PR
		Obedient		Non-Compliance					
		N	%	N	%	N	%		
1	Old	50	83,3	10	16,7	60	100	0,090	10,00
2	New	1	33,3	2	66,7	3	100		
<b>Total</b>		51	81	12	19	63	100		

Based on table 3, the results were obtained from 60 respondents with a long working period or > 5 years, 50 of them (83.3%) complied with using Personal Protective Equipment (PPE) while doing work and another 10 respondents (16.7%) did not comply with using Personal Protective Equipment (PPE) while working. From the results of the table above, it also shows that of the 3 respondents who have a service period with a new category or ≤ 5 years, as many as 1 respondent (33.3%) is compliant in the use of Personal Protective Equipment (PPE) while working and the other 2 respondents (66.7%) are not compliant in the use of PPE when doing work.

The results of the *chi-square* test showed that the probability value of knowledge was *p value* = 0.090 or >  $\alpha$  value of *sig* = 0.05. These results show that the working period has no relationship with the use of Personal Protective Equipment (PPE) on workers in the *finger joint* and *molding production section* of PT. Sako Indah Gemilang in 2023. Although the variable of working period has no relationship in compliance with the use of Personal Protective Equipment (PPE), the results of this bivariate analysis show a PR value of 10,000 which can be interpreted that respondents with a long working period or > 5 years have a tendency to be 10,000 times more likely to comply in using Personal Protective Equipment (PPE) while doing work compared to respondents with a new working period or ≤ 5 years.

### 4) The Relationship between PPE Availability and Compliance with PPE Use

**Table 4. The Relationship between PPE Availability and Compliance with PPE Use**

It	PPE Availability	PPE Usage Compliance				Total	
		Obedient		Non-Compliance			
		N	%	N	%	N	%
1	Available	51	81	12	19	63	100
2	Not Available	0	0	0	0	0	100
<b>Total</b>		51	81	12	19	63	100

Based on table 4 above, it is known that every worker at PT. Sako Indah Gemilang Palembang has been given Personal Protective Equipment (PPE) facilities by the company. The table above also shows that even though each respondent already has Personal Protective Equipment (PPE), there are still respondents who do not comply in using Personal Protective Equipment (PPE), namely as many as 12 respondents (19%) do not comply in the use of Personal Protective Equipment (PPE). Meanwhile, another 51 respondents (81%) were compliant in using Personal Protective Equipment (PPE).

## **B. Discussion**

### **1) The Relationship between Knowledge and Compliance in the Use of Personal Protective Equipment (PPE)**

Based on the results of the study between the relationship between knowledge and compliance with the use of Personal Protective Equipment (PPE), it can be seen that respondents with good knowledge are more compliant in using Personal Protective Equipment (PPE), namely 40 respondents (93%) in doing their work compared to respondents with poor knowledge, namely 11 respondents (55%). This is because workers feel uncomfortable when working using Personal Protective Equipment (PPE) and workers think that using Personal Protective Equipment (PPE) at work will only waste time because they have to leave time to wear all equipment, and wear all Personal Protective Equipment (PPE).

This research is in line with the research conducted by Kurusi, *et al.*, , there is a relationship between knowledge and compliance with the use of Personal Protective Equipment (PPE) in street sweepers with the result of  $p = 0.026$  or ( $p < 0.05$ ). (2020) This result is also in line with the research of Akbar, et al, who concluded that there is a relationship between knowledge and the use of personal protective equipment (PPE) and it is known that out of 20 workers who have good knowledge, there are 15 workers who have good compliance and 5 workers who have poor compliance. In addition, from the results of statistical tests (2020) *Chi Square* through SPSS, the result of  $p = 0.007$  or the value of *P value*  $< 0.005$ , so  $H_0$  was rejected and  $H_a$  was accepted, which means that there is a relationship between knowledge and compliance with the use of PPE. Likewise, the research conducted by stated that respondents who had good knowledge as many as 96 people (93.2%) were compliant in using PPE compared to respondents who had low knowledge as many as 4 people (50%), and there was a relationship between knowledge and compliance with the use of PPE because of the results of statistical tests using chi-square with a value of (Kamila, Mangindara, Samad, & Ekawaty, 2022) *p-value* 0,003.

Knowledge is fact, truth or information obtained through experience or learning called *posteriori*, or through introspection is called *a priori*. Knowledge is information that a person knows or is aware of, and a person's knowledge can be measured by seeing whether a person's knowledge is good or bad with someone who has right and wrong knowledge (Akbar & H, 2020). Without knowledge, a person has no basis to make decisions and determine actions on the problems they face. According to Notoatmodjo, knowledge is the result of (2018) knowing one's objects through one's five senses, namely the sense of hearing, sense of smell, sense of sight, and sense of touch. According to The results of the research with existing theories, the researcher argues that there is a relationship between knowledge and the use of personal protective equipment (PPE) because workers are already at the level of the cognitive evaluation domain, which is able to judge the good or bad of something with their own assessment. So that when workers are given information or instructions about the importance of using PPE at work,

workers can assess that PPE is very important and can protect the safety and health of workers from potential hazards that can harm them. So that good knowledge will influence the decision or attitude to be taken.

## **2) The Relationship between Attitude and Compliance in the Use of Personal Protective Equipment (PPE)**

Based on the results of the study between attitude and compliance with the use of Personal Protective Equipment (PPE), it is known that most of the respondents have a supportive and compliant attitude in the use of Personal Protective Equipment (PPE), namely as many as 44 respondents (89.8%). This is in line with the results found in the field that the majority of workers are compliant in the use of Personal Protective Equipment (PPE) while doing their work. This research is in line with Utami's research, *et al.*, it was found that there was a relationship between attitude and compliance with the use of Personal Protective Equipment (PPE) (2020)  $p$  value =  $0.032 < \alpha 0.05$ . The conclusion of this study is that there is a relationship between the working period and the use of Personal Protective Equipment, knowledge with the use of Personal Protective Equipment and Attitude with the use of Personal Protective Equipment (PPE).

Attitude is a person's closed response to a stimulus or object, both internal and external so that its manifestation cannot be seen immediately, but can only be interpreted in advance from the closed behavior. Attitudes in reality show that there is a suitability of responses. Attitude measurement can be done directly or indirectly, through the opinion or question of the respondent towards an object indirectly carried out with a hypothesis question, then the opinion of the respondent is stated. Allport (1924) in Notoatmodjo mentioned that attitude is a very important concept in the socio-psychological component, because it is a tendency to act, and perceive. Attitude is a person's closed response to a certain stimulus or object, which already involves the relevant opinion and emotion factors (happy–disliked, agree–disagree, good–not good, and so on). (Irwan, 2017)(2014)

According to the researcher's assumption, attitude and knowledge are very inseparable factors, because when the respondent has good knowledge, the attitude must also be able to run well. As in this study, where the majority of respondents have a supportive attitude towards the use of Personal Protective Equipment (PPE), this incident is because workers have a positive reaction to work safety activities implemented by the company, such as the use of Personal Protective Equipment (PPE).

## **3) The Relationship between Working Period and Compliance with the Use of Personal Protective Equipment (PPE)**

Based on the results of the study between the relationship between the working period and compliance with the use of Personal Protective Equipment (PPE), it is known that most of the respondents are workers with a long working period or  $> 5$  years. Respondents with a long working period who are compliant in the use of Personal Protective Equipment (PPE), namely 50 respondents (83.3%). This is in line with the results found in the field that the majority of workers are compliant in the use of Personal Protective Equipment (PPE) while doing their work. The length of a person's work can be related to the experience gained at work, the longer they work, the more proficient they are. According to Anderson's theory in Notoadmodjo (2012)

that, where he is, the longer a person's work experience, the more skilled he is, and usually the longer the easier he understands the task, so as to provide opportunities to improve achievement and adapt to one's environment, the experience obtained will be better. However, this hypothesis can be proven in this study. This study is in line with the research of Putri and Denny obtained that the result that there is no relationship between the working period and compliance with the use of Personal Protective Equipment (PPE) was obtained (2014) $p$  value =  $1 > \alpha$  (0.05). The conclusion of this study is that there is no significant relationship between the working period and compliance with the use of Personal Protective Equipment (PPE).

The results of this study are also in line with the research by Sudarmo, et al. with the results of (2017) $p$  value =  $0.054 > \alpha$  (0.05) which can then be concluded that partially the variable of working time has an insignificant effect on the compliance of surgical nurses in using Personal Protective Equipment (PPE) at IBS Ulin Banjarmasin Hospital. The researcher assumes that this is likely because the length of work is not the main thing that affects the respondents, but is also influenced by the knowledge they have and obtained from education, reading, research and others. In addition, compliance with the use of Personal Protective Equipment (PPE) is also influenced by the attitude of workers who support the use of Personal Protective Equipment (PPE) when doing work. The absence of a relationship between the working period and compliance with the use of Personal Protective Equipment (PPE) is possible for researchers due to the boring factor. Theoretically, a long working period will certainly cause boredom or boredom at work. The same is true for respondents who do the same work every day which will cause boredom.

#### **4) The Relationship between the Availability of Personal Protective Equipment (PPE) and Compliance with the Use of Personal Protective Equipment (PPE)**

Based on the results of the study between the relationship between the availability of Personal Protective Equipment (PPE) and compliance with the use of Personal Protective Equipment (PPE), it is known that PT. Sako Indah Gemilang Palembang has provided the need for Personal Protective Equipment (PPE) for its workers. However, this does not make all workers compliant in the use of Personal Protective Equipment (PPE). Most of the respondents were compliant in the use of Personal Protective Equipment (PPE), which was 51 respondents (81%). This study could not draw conclusions in proving the research hypothesis because the data was not varied, so it could not give rise to a tendency in the direction of the relationship between the availability of Personal Protective Equipment (PPE) and compliance with the use of Personal Protective Equipment (PPE).

#### **AUTHOR CONTRIBUTIONS**

Yulfia is the main researcher who plays a role in research data collection, research article formulation, discussion and data processing.

#### **CONFLICT OF INTERESTS**

There is no conflict of interest in this study.



## ACKNOWLEDGMENTS

Thank you to PT Sako Indah Gemilang Palembang

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