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ORIGINAL ARTICLE

Knowledge and Attitudes Workers Toward Compliance Use Personal Protective Equipment

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ABSTRACT

Introduction: All chemical industries in Indonesia have a potential hazards that can cause work accidents, occupational diseases, and work-related diseases. In this case, one of the protective measures that can be carried out on occupational health and safety in the PA Plant area as a chemical industry is the obligation to use PPE for the workers. Related to this matter, current project was done to assess how workers' compliance to the usage of Personal Protective Equipment (PPE) related to knowledge, attitudes, and individual characteristics (age and educational attainment). **Methods:** The methodology applied to this study was analytical observational using a cross-sectional approach, where 37 workers were involved as research samples. In addition, a questionnaire and a compliance checklist for the usage of PPE were used to gather the data, and Spearman's Rho test was used to evaluate it. **Results:** The findings indicate that most employees are in the early adulthood group, graduated from a secondary school level, have excellent attitudes toward using personal protective equipment, have good understanding, and have good compliance with the use of PPE. It was further revealed that the PPE usage compliance does not in accordance with a person's age or level of knowledge. However, there is a relationship between knowledge and attitudes and compliance with the usage of PPE. **Conclusion:** Based on the findings discovered, it is summed up that although a good level of knowledge and attitude toward the use of PPE will make employees comply with the use of PPE, a worker's degree of education does not ensure their level of compliance with the use of PPE.

Keywords: attitude, individual characteristics, knowledge, personal protective equipment

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INTRODUCTION

Every company, in carrying out its activities, always expects success in the form of production and service results. To support this, a healthy and safe workplace is needed so that no accidents or work-related diseases occur which further lead to a decrease in production and poor service to consumers (Meutia, 2021). However, in general, every production activity that involves human factors, machines, and materials that go through the process has a risk of danger with different levels that allows accidents and work-related diseases to occur. The risk of accidents and work-related diseases is caused by sources of hazard resulting from activities in the workplace.

According to Dahlan (2017), a number of circumstances or a confluence of several antecedent factors could result in an accident. Workers' injuries can be avoided or reduced in the absence of elements such as hazardous working circumstances, an unpleasant work environment, operating without work instructions or Standard Operating Procedures (SOP), operating without Personal Protective Equipment (PPE), and others.

Based on the data issued by Badan Penyelenggara Jaminan Sosial Ketenagakerjaan

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(BPJS Ketenagakerjaan) in 2019 to 2021, there was an increasing trend in work accidents and occupational diseases cases namely in 2019 reaching 210,789 cases with the number of workers who experienced fatality was 4,007 workers, to 3,410 workers experiencing fatality in 2020 with a total of 221,740 cases, increasing to 6,552 workers experiencing fatality in 2021 with a total of 234,370 cases. It is known that work accidents case increased again in 2022 reaching 265,334 cases in various companies. Most work accidents and occupational diseases cases occur in the workplace and are experienced by male workers. However, this data does not include work accident cases that are not reported by related companies (Ministry of Manpower, 2022).

Heinrich's Causation Theory claims that 88% of workplace accidents are the result of risky behavior, 10% are the result of harmful surroundings, and 2% have an unknown cause (Manuele, 2011). Based on the findings of this study, human behavior is a major factor in the development of workplace accidents. So, reducing the occurrence of work accidents and increasing safety performance can be achieved by focusing on reducing unsafe behavior, one of which is by taking a behavioral approach, namely Behavior Based Safety (BBS). Safe work behavior must be applied by workers to avoid work accidents (Noviarmi and Lanobyan, 2023).

Workers are a valuable asset to the company and play a crucial role in the production process. Therefore, it is vital to always work toward maintaining their health in the best possible state. The requirement that corporate employees and partner workers wear personal protective equipment is one of the initiatives in the framework of providing worker protection for occupational safety and health in the PA Plant region. When attempts to reduce risk through removal, substitution, engineering, and administration have been drained, PPE provision and determination of the requirement to utilize PPE for corporate employees and partner employees are the final resort. This is done because as a company engaged in the production of phosphoric acid with by-products in the form of sulfuric acid, fluosilicate acid, and purified gypsum, the Safety Health Environment (SHE) sector is aware of the high potential for hazards in the work environment area. These potential hazards include a high-temperature sulfuric acid liquid that flows in each production pipe which, if leaked, has the risk of causing burns to workers, working at height that has a risk of fatality, exposure to dust and hot steam originating from the factory work environment that has the risk of resulting in burns, respiratory tract irritation, and gas from the formation of phosphoric acid and SO_2 which has the risk of causing shortness of breath (Noviarmi and Lanobyan, 2023).

According to the results of a preliminary survey on the PA Plant area of this industry, it is known that on average the company's workers and partner workers are not all compliant in using PPE when carrying out their work eventhough the use of PPE is clearly stated in the Standart Operating Procedure (SOP) and work agreement contract for the use of PPE. PA Plant has a high risk and more work activities involving the workers directly in the field. A research project was further conducted on the parameters relating to worker compliance with the usage of PPE in light of this background, aiming to determine how parameters in the form of knowledge, attitudes, and individual characteristics (age and education level) are related to worker compliance in using PPE.

METHODS

This analytical observational research was done through cross-sectional approach at a chemical industry in Gresik, East Java on July-September 2022. The subjects in this study were workers in the PA Plant area as many as 37 samples of 43 total workers selected by random sampling. Validated questionnaires Linggasari (2008) and PPE Compliance checklist were further used to collect the data. This research also involved both independent and dependent variables. In this case, individual factors (such as age and educational attainment), knowledge, and attitudes compose the independent variables in this study, while compliance with the usage of PPE is the study's dependent variable. A survey and a compliance checklist for the usage of PPE were the tools utilized to assist the data gathering process, which were categorized into two categories of complying and not-complying.

Data Collection was carried out by providing an explanation regarding the research objectives and the purpose of the questions on the questionnaire. Workers then filled out the questionnaire independently while being accompanied. Spearman's rho test was further employed for the data analysis.

Furthermore, the ethical test certificate, with the number 27/EA/KEPK/2023, was received from the ethical committee of the Faculty of Public Health,

Universitas Airlangga, Surabaya to conduct this study further.

RESULTS

The findings of this study are displayed in the following table as a frequency distribution of the variables of age, education level, knowledge, attitude, and compliance with the usage of PPE.

Table 1 shows the distribution of workers' characteristics based on the age. In this case, most of the workers involved are in the early adulthood group, namely 26-35 years old (46.0%). Whereas the minority is in the early senior group, namely 46-55 years old (2.7%). In addition, the same table also shows the distribution of workers based on their educational level, where most of the workers graduated from a secondary educational level, by 23 workers (62.2%).

Table 1. Frequency Distribution of Workers in the PA Plant Area based on Compliance with The Use of PPE, Age, Education Level, Knowledge, and Attitudes Factors, 2022

Variable	Amount (n)	Percentage (%)
Age		
Late adolescence (17 – 25 years old)	11	29.7
Early adulthood (26 – 35 years old)	17	46.0
Late adulthood (36 – 45 years old)	6	16.2
Early senior (46 – 55 years old)	1	2.7
Late senior (56 – 65 years old)	2	5.4
Education Level		
Primary	3	8.1
Secondary	23	62.2
Tertiary	11	29.7
Knowledge		
Good	27	73.0
Poor	10	27.0
Attitudes		
Good	23	62.2
Poor	14	37.8
PPE Compliance		
Complying	24	64.9
Not complying	13	35.1

The distribution of workers according to knowledge is shown on Table 1. The findings demonstrate that 23 workers (62.2%) in this survey have positive attitudes concerning the evaluation of PPE use.

Based on Table 1, it is known how the workers' characteristics of age, education level, knowledge, and attitude are distributed based on compliance with the usage of PPE. The extent to which workers at the PA Plant Arean complied with company SOPs for utilizing various forms of PPE (safety caps, safety shoes/rubber shoes, dust/gas masks, goggles, and work clothing), is the measure of PPE compliance in this study.

Table 1 above shows the distribution of worker compliance with the use of PPE. The results show that workers in the category of complying are 24 workers (64.9%) and workers in the category of not complying are 13 workers (35.1%).

The Relationship between Individual Characteristics, Knowledge, and Attitudes with Compliance with the Use of PPE

According to Table 2, the early senior (100%) and late senior (100%) groups of employees represent the majority of those who comply with the usage of PPE. Meanwhile, workers in the late adulthood age (50%) are the majority of employees that disobey the use of PPE. However, according to the test findings obtaining p-value of 0.777 (p> 0.05), there is no correlation between a worker's age and compliance with the usage of PPE.

Furthermore, Table 2 reveals that tertiary-educated employees (81.8%) make up the bulk of those who comply with the usage of PPE. Meanwhile, employees with a secondary education (43.5%) make up the bulk of those who disobey the usage of PPE. Based on the test findings, p-value of 0.255 (p> 0.05) was obtained, indicating that there is no correlation between a worker's individual characteristics—such as education—and compliance with the usage of personal protective equipment. In addition, Table 2 also shows that the majority of employees with strong PPE knowledge used PPE by 81.5%, whereas the majority of employees with low PPE knowledge did not wear PPE, with a percentage of 80%. According to the test results, the p-value of 0.000 (p0.05) was obtained, indicating that there is a connection between knowledge and compliance with the usage of PPE.

According to Table 2, the majority of workers who have positive attitudes toward the use of PPE comply with its use, with a percentage of 87.0%, and the majority of workers who have negative attitudes toward the use of PPE, with a percentage of 71.4%, did not. The test results shows the p-value obtained of 0.000 (p 0.05), indicating that attitudes and compliance with the usage of PPE are related.

DISCUSSION

Individual Characteristics of Workers

Age

Age is one of the factors that individuals have in shaping behavior (Liswanti, 2015). According to Notoatmodjo (2012), behavior also depends on the characteristics or other factors of the worker themselves. The age factor is one of the characteristics of the worker that affects compliance behavior with PPE use. An individual's age affects their maturity and personality, in which older people typically give the issues more careful thought. Because of their maturity and awareness of the risks involved in disregarding the PPE procedures, older people tend to comply with PPE use guidelines more closely. In addition, those who are older also have more work experience than those who are younger (Handayani *et al*., 2022). According to the study's findings, which are presented in Table 1, 17 workers (46%), or the majority of workers, are in the early adulthood group (26–35 years). This finding is supported by Tadesse, Kelaye and Assefa (2016), that the majority of workers based on the age is in the range of 26-39 years old by 254 workers (38.5%).

Education

Risdianti (2022) claimed that the educational background of a person determines how much information they have. High knowledge scores are also related to high educational status. This result is consistent with a cross-sectional research on 290 health professionals conducted in Nigeria, which revealed that understanding of occupational dangers is correlated with educational degree (Aluko *et al*., 2016). Education is one of the factors that influence an individual's obedience or responsibility towards their work. Higher education entails being assigned duties and responsibilities based on an individual's aptitudes (Saputri and Paskarini, 2014a). In this regard, as the educational level increases, the negative attitude toward PPE will decrease (Gharibi

Table 2. The Relationship between Individual Characteristics, Knowledge, and Attitudes with Compliance with the Use of PPE in Workers in the PA Plant Area, 2022

Variable	Compliance with the Use of PPE				Total		p-value
	Comply		Not comply				
	n	%	n	%	N	%	
Age							
Late adolescence	7	63.6%	4	36.4%	11	100.0%	0.777
Early adulthood	11	64.7%	6	35.3%	17	100.0%	
Late adulthood	3	50.0%	3	50.0%	6	100.0%	
Early senior	1	100.0%	0	0.0%	1	100.0%	
Late senior	2	100.0%	0	0.0%	2	100.0%	
Education Level							
Primary	2	66.7%	1	33.3%	3	100.0%	0.255
Secondary	13	56.5%	10	43.5%	23	100.0%	
Tertiary	9	81.8%	2	18.2%	11	100.0%	
Knowledge							
Good	22	81.5%	5	18.5%	27	100.0%	0.000
Poor	2	20.0%	8	80.0%	8	100.0%	
Attitude							
Good	20	87.0%	3	13.0%	23	100.0%	0.000
Poor	4	28.6%	10	71.4%	14	100.0%	

et al., 2008). According to Table 1's findings from the survey, 23 workers (62.2%) are classified as having a secondary school.

Knowledge

Knowledge is the outcome of sensing, which takes place once humans become aware of a certain item (Notoatmodjo, 2010). The results of the study in Table 1 show that 81.5% of workers have a good knowledge of PPE, and they comply with the use of PPE. Knowledge is something that is needed and can determine what humans will do (Warnaningrum and Lestari, 2019). According to Acharya and Shrestha (2021), there are many employees who are ignorant of the safety features of the organization they work for, which might result in accidents. Fenelia and Herbawani (2022) further stated that knowledge can give confidence to someone to determine attitudes to act.

Attitudes

The beginning of a change in attitudes is sustainable through the knowledge and expertise gained and then thoughts emerge in the initial direction. After that, behavior is manifested which is sustainable with the stimulus and actions (Puji, Kurniawan and Jayanti, 2017). The order in which the elements of thought, feeling, and disposition to act interact to help someone comprehend, feel, and act toward an object in their environment is known as their attitude (Komalig and Tampa'i, 2019). According to Fairyo and Wahyuningsih (2018), compliance with the usage of PPE is influenced by attitudes at work. Results of the workers' negative attitudes show that awareness of utilizing PPE is still low. According to the study's findings, which are presented in Table 1, there are 14 workers (37.8%) who have negative attitudes regarding the assessment of the usage of PPE and 23 workers (62.2%) who have positive views in the PA Plant area. Workers who have negative attitudes for example, workers are used to not wearing PPE even though there are regulations or SOPs.

Compliance with the Use of PPE

Permenakertrans Number 8 of 2010 states that PPE is a device that may shield a person's entire body or a portion of it from possible workplace risks (Ministry of Manpower and Transmigration, 2010). In order to safeguard employees against potential risks in their work environment, including chemical, mechanical, biological, and physical threats, personal protective equipment (PPE) plays a crucial role (Dahyar, 2018). That way, it is hoped that workers can minimize the chance of work-related incident. This chemical industry has several potential hazards that are of concern to workers including chemical pipelines that can leak, exposure to dust and hot steam, heavy materials, rotating roll conveyors, high working environment temperatures, working at height, high voltage machines, and others. If there is poor compliance with the usage of personal protective equipment (PPE), given the possible threats, the PPE will not protect employees as well as it could. This can be interpreted that the control carried out will be useless (Prabawati, 2018). To reduce the risks associated with the work in terms of quantity and quality, each company's provision of personal protective equipment facilities must be in line with the needs of its employees, if the number is not enough then there are some workers who do not use PPE, as well as punishment and reward workers to motivate workers to use PPE, if workers do not use PPE then they can be given sanctions and workers who use PPE while working can be given awards (Liambo, Yasnani and Munandar, 2017). The types of PPE that must be used by workers in the PA Plant area are safety hats, safety shoes/rubber shoes, dust/gas masks, goggles, and work clothes. Table 1's findings from the study demonstrate that, in the PA Plant area, 24 workers (64.9%) abide by the usage of PPE, compared to 13 workers (35.1%), who do not.

Relationship between Individual Characteristics of Workers with Compliance with the Use of PPE

Relationship between Age with Compliance with the use of PPE

According to Table 2, in each age category, it is known that the majority of workers comply with the use of PPE. Furthermore, it is known that there is no correlation between compliance with the usage of PPE and age thanks to the Spearman statistical test. Table 2, where the p-value is $0.777 > 0.05$, provides its proof. These findings are supported by Nizar, Tuna and Sumaningrum (2016) who obtained a p-value of $0.075 > 0.05$ in their research, indicating that no relationship was found between age with compliance with the use of PPE in workers. In addition, Putri *et al*. (2014) also supported this result

through their project findings, showing that age and compliance with the use of PPE in workers do not have a significant relationship.

In contrast to research conducted by Handayani *et al*., (2022), results were obtained that there was a significant relationship between age and compliance with PPE use. In his research, respondents with an age of < 35 years (young) had a 11.5 times greater risk of non-compliance with the use of PPE compared to respondents aged ≤ 35 years (old), this is because given that older respondents have more work experience, which influences their understanding of the significance of wearing personal protective equipment (PPE) at work, older individuals will exhibit higher levels of compliance with PPE use. Additionally, older individuals tend to possess more strength and ability, as well as a more mature soul (Handayani *et al*., 2022). An individual's level of knowledge and intelligence tends to increase with age. The likelihood of accidents can be decreased if they are able to regulate their psychic emotions. Generally speaking, as one ages, they will become more logical, better at managing their emotions, and more accepting of negative attitudes and actions (Saragih, 2018).

Relationship between Education with Compliance with the use of PPE

In this study, the individual characteristics of workers in the form of education are divided into three levels, including primary, secondary, and tertiary. Table 2 presents that every level of education it is known that the majority of workers comply with the use of PPE. Additionally, it is known that the p-value for the Spearman statistical test is 0.255 > 0.05, indicating that there is no correlation between education and compliance with the usage of PPE. The results of this study are supported by the previous research carried out by Ambarita, Suryoputro and Setyaningsih (2022) and Rahmawati, Romdhona, and Fauziah (2022) that education and PPE compliance do not significantly correlate.

This is in contrast to the research conducted by R. Rahmawati & Pratama, (2019) on 85 respondents with a POR of 4.796, which means that respondents with a low level of education have a risk of 4.796 times to be non-compliant in the use of PPE compared to respondents with higher education. It is suspected respondents in the high education level group are not compliant with the use of PPE because they believe that long experience in the job is the reason, whereas respondents in the low education level group are compliant with the use of PPE because they follow current regulations and are aware of a small risk if they do not use PPE. Other research that is in line, namely research conducted by Putri, Widjanarko and Shaluhiyah (2020) on 62 respondents, obtained a p-value of 0.021 <0.05 where most of the respondents who were not compliant with the use of PPE were in the diploma education level group and the undergraduate education level group. This is because workers understand the dangers that exist in the workplace and how to overcome them by using PPE, but in practice there are still many workers who are not compliant in using PPE for reasons of disturbing comfort. Formal education is not the only way to acquire education, informal education can also be acquired through reading printed media, seeking K3 counseling, or exchanging ideas with more seasoned coworkers (Saputri and Paskarini, 2014).

Relationship between Knowledge with Compliance with the use of PPE

In this study, the predisposing factors in the form of knowledge were divided into two categories, including good and poor. Table 2 shows that most of the workers who have good PPE knowledge comply with the use of PPE, with a percentage of 81.5%. Vice versa, the majority of workers who have poor PPE knowledge do not comply with the use of PPE, with a percentage of 80%. Furthermore, based on the results obtained from the Spearman statistical test, no relationship was found between knowledge with compliance with the use of PPE. This is shown in Table 2, where the p-value is 0.000 < 0.05. Hardiyono, Yuliana and Subaktiar (2021) conducted a study and supported this study with a p-value of 0.039 < 0.05, indicating that a significant relationship was discovered between knowledge with compliance with the use of PPE in fabrication workers.

In addition, this statement was also supported by Hakim and Febriyanto (2020) who also found a correlation between knowledge about PPE with compliance with the use of PPE. In this case, knowledge about the use of PPE is important to minimize the potential for work accidents, but workers will only comply with the usage of PPE if they are highly motivated to put their knowledge into practice. (Apriluana, Khairiyati and Setyaningrum, 2016). In research conducted by Rahmawati, Romdhona, and Fauziah (2022) a p-value of 0.001

<0.05 and an OR value = 6.210 were obtained, which means that workers with good knowledge have a 6.210 times greater chance of obeying using PPE than workers with poor knowledge. A person's behavior is shaped in large part by their level of knowledge. Other research that supports this is research conducted by Azizah *et al*. (2021) on project workers found a significant relationship between the variable level of knowledge and the compliance behavior of using PPE. The better and higher a person's level of knowledge, the more positive the resulting behavior will be. This can happen because employees with a good degree of knowledge typically exhibit greater awareness and vigilance than employees with a low level of knowledge, as their knowledge serves as the foundation for all subsequent behavior. So that workers who have a high level of knowledge can decide on attitudes and behaviors to comply with the use of PPE (Yenni, 2020).

When working to establish a safety culture, employees who are knowledgeable about personal protective equipment will generally have a high level of awareness and will be obedient in applying the use of PPE while carrying out their work, this is because they will undoubtedly be aware of the risks associated with workplace hazards (Puspaningrum, 2016). Workers in the PA Plant area workers had previously received information about the use of PPE during safety induction by the company. However, based on the results of field observations, there are still workers who do not comply with the use of PPE. This is supported by the opinion stated by Notoatmodjo, that workers in the PA Plant area who do not use PPE are in the domain of knowing or understanding but are not yet applying it. This theory is also supported by Mukhtar, Yusof and Isa (2020) that employees' safety practices are influenced by their knowledge of safety. Utilizing PPE will increase as the knowledge increases. In summary, a number of factors, including a lack of knowledge about health and safety, significantly contribute to subpar workplace safety procedures (Izudi, Ninsiima and Alege, 2017). This is also in line with the study done by Asgedom, Bråtveit and Moen (2019) showing that although many workers (87%) have knowledge about hazards in the workplace, their practice/implementation is still poor due to negative attitudes toward PPE.

The company's next step is to increase worker knowledge, especially about the importance of the use of PPE in the workplace, namely by holding short training, simulations, and workshops based on training needs analysis. This is intended so that workers are able to apply the obligation to use PPE when working or in the work environment. Specifically, compliance is the result of an individual adopting behaviors that, given their level of understanding and knowledge, can reduce the risk of accidents at work and foster a safe attitude. These practices will ultimately create a safety culture at work (Ayu, Rhomadhoni and Sunaryo, 2018). Workers who are given training will have a higher possibility to comply with the use of PPE compared to workers who are not (Zegeorgous *et al*., 2020). This is in line with the research conducted by Rahmawati and Pratama (2019) which found a relationship between training and compliance with the use of PPE with the results of a p-value of 0.000 <0.05 and a statistical result of POR = 9.583 which means that respondents who have never attended training are at risk 9.5 times to be non-compliant in using PPE compared to respondents who attend training. A person's behavior can be influenced by training because it involves altering ingrained behavioral patterns, which will ultimately result in behavioral changes.

Relationship between Attitudes with Compliance with the use of ppe

In this study, the predisposing factors in the form of attitudes were divided into two categories, including good and poor. Attitude is an assessment (can be in the form of an opinion) of a worker regarding the use of PPE.

According to Table 2, the majority of workers who have positive attitudes toward the use of PPE comply with its use, with a percentage of 87.0%, and the majority of workers who have negative attitudes toward the use of PPE do not comply with its use, with a percentage of 71.4%. Additionally, it is recognized that attitudes and compliance with the usage of PPE have a link, thanks to the Spearman statistical test. Table 2, where the p-value is 0.000<0.05, provides proof of this. Previous study Astuti, Wahyuni and Jayanti (2019) also discovered a correlation between attitudes with compliance with the use of PPE with a p-value of 0.003 < 0.05. In addition, another study carried out by Darmawati, Angkasa and Isrofah (2015) also found the same results, where attitudes can influence an individual use of personal protective equipment because an individual’s attitude is the initial formation of behaviour (Dewi, Adawiyah and Rujito, 2020).

Therefore, workers with positive views are more likely to wear PPE as directed, whereas workers with negative attitudes are more likely to disobey and disregard PPE use. This is supported by research conducted by Rahmawati and Pratama (2019) where the results of the analysis obtained an OR value of 13.393, which means that workers who have a positive attitude have a 13.393 times greater chance of complying with the use of PPE compared to workers who have a negative attitude.

According to Wirama and Wibowo (2023), attitude affects behavior because of its relationships to perception, motivation, and personality. An individual's attitude refers to how they assess or respond to feelings of approval or disapproval towards a stimulus when they are faced with it. It also refers to being ready to respond in a specific manner (Kurusi, Akili and Punuh, 2020). Enabling elements, such as PPE that is pleasant to wear, are necessary to achieve positive attitudes regarding the usage of PPE in employees. Field observations on workers were carried out in the PA Plant area and revealed that the reason why workers did not use PPE was that these workers were used to not using PPE, the management of partners did not provide PPE, and most of the PPE available was uncomfortable to use. Therefore, programs ranging from campaigns and dissemination of work safety to disclosing work accident data can be carried out by the company. This aims to change attitudes and understanding of workers and management partners for the better. Besides, providing supportive motivation can also be carried out, for example, the company will provide rewards to workers or partners who consistently use PPE properly and appropriately, and punishment in the form of verbal or fines if workers or partners are found to be violating the PPE regulation or not using PPE at work (Saragih, 2018). The claim that the system of violation points and incentives can also enhance the usage of PPE is backed by Wong, Man and Chan (2020). Programs can also be implemented in the form of guidance for workers who wear personal protective equipment (PPE) at work, with the goal of encouraging those who do not to follow suit. Initiatives for safety promotion, such as prizes, safety video campaigns, and safety seminars, are also taken into consideration in an effort to increase worker awareness of the use of PPE (Wong, Man and Chan, 2020). In implementing a person's attitude requires another supporting factor. A person will form a complete attitude if it fulfills three components, namely beliefs or thoughts, emotions or judgments about objects, and a tendency to be able to act (Alfirdha, Basri and Nuraeni, 2018).

CONCLUSION

Based on the findings of the research conducted, individual characteristics including age and education, do not have a relationship with compliance with the use of Personal Protective Equipment (PPE) on workers in the PA Plant area. It can be said that knowledge and attitudes are related to compliance with the use of Personal Protective Equipment (PPE).

Furthermore, the recommendation for further research is that it can be carried out in other plant areas in this company, so that the causes of adherence to the use of PPE in workers can be thoroughly known.

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