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Analysis of Factors Associated with Non-Compliance Use of Personal Protective Equipment for Cleaning Staff at the Oku District Environmental Service

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Abstract

Processing and handling of waste does not only end at the place or waste bin, but more than that, if the place or bin is full. Personal Protective Equipment (PPE) is a device used by officers to protect themselves from potential dangers and work accidents that may occur in the workplace. In 2023, according to the ILO, world figures say that every year there are more than 250 million workplace accidents and more than 160 million workers become ill due to workplace hazards. In Indonesia, work accidents in 2023 will amount to 370,747 cases. In South Sumatra Province the number of work-related accidents that occurred in 2023 was 6,665 cases, while in East OKU in 2023 there were 23 cases. This research aims to analyze factors related to non-compliance with the use of personal protective equipment in the OKU Regency Environmental Service. The research design in this study is to use quantitative with a cross-sectional approach. The research sample was Cleaning Officers at the OKU Regency Environmental Service, totaling 106 respondents. Data analysis used in the research is a statistical test using the Chi Square test. Based on the research results, it was found that the relationship between knowledge and non-compliance with the use of PPE was p value 0.000, the relationship between supervision and non-compliance with the use of PPE was p value 0.000, the relationship between work experience and non-compliance with the use of PPE was p value 0.000, the relationship between action and non-compliance with the use of PPE was p value 0.000. There is a relationship between the factors of knowledge, supervision, length of service and actions with non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

INTRODUCTION

Health is a very important problem, which is interconnected with other problems outside of health itself. In particular, to overcome public health problems, it must not only be seen in terms of its own health but also from all aspects that have an influence on that health (Sa'adah, 2020).

The creation of a degree of health in society can be influenced by several factors as stated by Hendrik L. Blum. The factors include hereditary factors, health service factors, behavioral factors and environmental factors. Among these factors, environmental factors are the factors that play the biggest role in public health status (Diana, 2022).

Processing and handling of waste does not only end at the place or waste bin, but more than that, if the place or bin is full. If left to accumulate, it will cause aesthetic problems (smell, dirty) and become a nest for nuisance insects (mosquitoes, flies, cockroaches) and rats, all of which will cause

health problems (Fitriana, 2021). Therefore, personnel are needed who can clean up rubbish so that it does not endanger health and does not cause disturbances to the local community. It is the duty of rubbish cleaning workers to clean up the rubbish and collect the rubbish and take it to the final disposal site (Kusuma, et al, 2024). According to Budiono, et al (2003) to maintain the usability of personal protective equipment, it should be stored in a special place so that it is free from dust, dirt, poisonous gas and insect/animal bites. The place should be dry and easy to collect.

According to Law Number 13 of 2013, it is stipulated that every worker has the right to receive protection for occupational health and safety, morals and decency as well as treatment in accordance with human dignity and religious values to realize optimal work productivity, and every company is obliged to implement a system where occupational safety and health management is integrated with the company management system.

Data from *international labour organization* (ILO) in 2023, states that every year there are more than 250 million workplace accidents and more than 160 million workers become ill due to workplace hazards. Every fifteen seconds, one worker in the world dies due to an Occupational Accident (CAC) while at the same time one hundred and sixty workers experience Occupational Illness (PAK). The previous year (2024) the ILO recorded a total of two million deaths due to Occupational Accidents (KAK) and Occupational Diseases (PAK) (ILO, 2024). According to the data and information center of the Ministry of Health of the Republic of Indonesia in 2023 regarding the occupational health situation in 2023, the number of work-related accident cases that occurred between January and November 2023 was 370,747 cases, around 93.83% were cases of participants receiving wages, 5.37% were cases of participants receiving wages and 0.80% were cases of participants in construction services. In 2022, the number of work-related accidents that occurred will be 265,334 cases (Ministry of Health 2023).

In South Sumatra Province, the number of work-related accident cases occurring in 2023 is 6,665 cases with the rate of work accident cases occurring at work at 56% and the other 43% occurring due to traffic. Meanwhile, the number of cases of work-related accidents that occurred in OKU Regency was 23 cases (one case that attracted the attention of the K3 world at the national level was the Keban Agung PLTU work accident in OKU Regency where he died when he fell from a height while working) (South Sumatra Profile, 2023).

Personal Protective Equipment (PPE) is a device used by officers to protect themselves from potential dangers and work accidents that may occur in the workplace. The use of PPE by officers while working is an effort to avoid exposure to dangerous risks in the workplace. Although this effort is at the final level of prevention, the application of personal protective equipment is highly recommended (Kurnia, et al, 2021).

Cleaning staff is a job we often encounter in various sectors, both workplaces, outdoors and indoors, employed by company leaders. Cleaners can also work not in companies but in private or public places. The risks that janitors will face depend on the tasks they carry out. A janitor is a person who works in a place such as an office or other agency whose job is to maintain cleanliness and provide cleaning services. Waste management officers are people who carry out the work of collecting, transporting, processing, recycling or disposing of waste materials. Waste material resulting from human activities, and usually managed to reduce its impact on health, the environment or beauty. Waste management is also carried out to restore natural resources. Waste management can involve solid, liquid, gas or radioactive substances with special methods and expertise for each type of substance (Latif, Taswin, & Fitriani, 2023).

According to data obtained from the Environmental Service in OKU Regency in 2024 there were 114 cleaning workers, of the 114 cleaning workers, I took 106 people consisting of 24 cleaning workers around the park, 55 cleaning workers along Jalan A Yani, 27 rubbish cleaning workers who clean up rubbish under the auspices of the OKU Regency Environmental Service, PPE has been given from the Environmental Service once a year, namely hats, clothes, boat shoes. From the results of observations of 22 park, trash and road cleaners, there were 14 people who did not wear complete PPE. One factor is the knowledge of cleaning workers.

A person's knowledge is usually obtained from experience from various sources, for example mass media, electronic media, manuals, health workers, poster media, close relatives, friends and so on. This knowledge can help certain beliefs so that someone behaves in accordance with the

knowledge they believe in. In several studies related to anemia, it was found that those experiencing anemia had low knowledge regarding anemia (Manalu & Melda Yosepa Nainggolan, 2022).

Knowledge is what people or respondents know related to health and illness or health, for example: about disease (causes, methods of transmission, methods of prevention), nutrition, sanitation, health services, environmental health, family planning, and so on (Rafi'ah, Maliga, & Lestar, 2022).

METHOD

This research design uses a quantitative approach *cross sectinonal* namely a research to study the dynamics of the correlation between risk factors and their effects and collect data at one time, to find out whether the factors of knowledge, supervision, work period and actions are related to the use of PPE among cleaning workers at the OKU Regency Environmental Service. The population in this study were all cleaning officers at the OKU Regency Environmental Service with a total of 114 cleaning workers at the OKU Regency Environmental Service (24 Park cleaning workers, 55 Garbage cleaning workers, 35 Street cleaning workers). The sample in this study was 106 cleaning workers (24 cleaning workers around the park, 55 cleaning workers along Jalan A Yani, 27 street cleaning workers). In this study, sampling techniques were used *Total sampling* that is, the sample is taken as a whole from the existing population

Primary data was obtained by conducting interviews and observing respondents using questionnaires and observation sheets that were available to obtain the general identity of cleaning workers in the Muara Enim Cleaning Personnel Service, as well as measuring the level of Knowledge, Supervision, Behavior and Action regarding non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service or well-formulated statements, where the respondent just had to provide an answer. Secondary data was obtained by researchers indirectly, namely from the OKU Regency Environmental Service. To analyze the data obtained, it was entered into a statistical test using the Chi Square test. In determining the relationship, Ho was tested with a confidence level of 0.05 (5%). Ho is rejected if it is significant (Norfai, 2022).

RESULTS AND DISCUSSION

Univariate Analysis

Age

Table 1 Age Frequency Distribution

No	Age Category	Frequency	Percentage (%)
1	18-44	71	67,0
2	≥ 45	35	33,0
	TOTAL	**106**	**100**

From table 1 for Age Frequency in the 18-44 age category there were 71 (67.0%) respondents and in the ≥ 45 category there were 35 (33.0%) respondents.

Education

Table 2 Education Frequency Distribution

No	Education Category	Frequency	Percentage (%)
1	No/Drop out of school	9	8.5
2	SD	78	73.6
3	JUNIOR HIGH SCHOOL	18	17.0
4	SMA	1	0.9
	TOTAL	**106**	**100**

From table 2, the highest frequency of education is in the elementary school category, 78 (73.6%) respondents and the least in the high school category, 1 (0.9%) respondent.

Knowledge

Table 3 Frequency Distribution of Knowledge

No	Knowledge Category	Frequency	Percentage (%)
1	Less Good	37	34,9
2	Good	69	65,1
	TOTAL	**106**	**100**

From table 3, the Frequency of Knowledge in the Good category was 69 (65.1%) respondents and in the Poor category there were 37 (34.9%) respondents.

Supervision

Table 4 Frequency Distribution of Supervision

No	Supervision Category	Frequency	Percentage (%)
1	Less Good	47	44.3
2	Good	59	55.7
	TOTAL	**106**	**100**

From table 4, the Frequency of Supervision in the Good category was 59 (55.7%) respondents and in the Poor category there were 47 (44.3%) respondents.

Working Time

Table 5. Frequency Distribution of Work Period

No	Working Time Category	Frequency	Percentage (%)
1	Old (> 5 Years)	71	67,0
2	Not Long (≤ 5 Years)	35	33,0
TOTAL		**106**	**100**

From table 5, the Frequency of Work Period is highest in the Old category (> 5 Years) with 71 (67.0%) respondents and the Not Long category (≤ 5 Years) with 35 (33.0%) respondents.

Action

Table 6 Frequency Distribution of Actions

No	Action Category	Frequency	Percentage (%)
1	Less Good	26	24,5
2	Good	80	75,5
	TOTAL	**106**	**100**

From table 6, the Frequency of Actions in the Good category was 80 (75.5%) respondents and in the Not Good category there were 26 (24.5%) respondents.

Non-compliance

Table 7 Frequency Distribution of Non-Compliance

No	Non-Compliance Category	Frequency	Percentage (%)
1	Not Compliant	40	37,7
2	Comply	66	62,3
	TOTAL	**106**	**100**

From table 7, the highest frequency of non-compliance is in the Compliant category with 66 (62.3%) respondents and the lowest is in the Non-Compliant category with 40 (37.7%) respondents.

Bivariate Analysis

The relationship between knowledge factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

Table 8. Relationship between knowledge factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

No	Knowledge	Non-compliance		Amount	p-value
		Not Compliant	Comply		
1	Less Good	9 (24,3)	28 (75,7)	37 (100)	
2	Good	31 (44,9)	38 (55,1)	69 (100)	0,048
Amount		40 (37,7)	66 (62,3)	106 (100)	

From table 8 it is known that the proportion of incidents of respondents whose knowledge is poor and non-compliance is 9 (24.3%) respondents, which is smaller than the proportion of incidents of respondents whose knowledge is good and non-compliance is 31 (44.9%) respondents.

Based on statistical tests *who Square* obtained *p value* 0.048, so it can be concluded that there is a relationship between the knowledge factor and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

From the research results, univariate analysis of 106 respondents showed that there were 69 (65.1%) respondents with Good Knowledge compared to 37 (34.9%) respondents with Poor Knowledge. The bivariate results show that the proportion of respondents with poor knowledge and non-compliance with non-compliance is 9 (24.3%), smaller than the proportion of respondents with good knowledge and non-compliance with non-compliance, which is 31 (44.9%). Based on the results of statistical test data analysis *Chi square* results were obtained *p-value* 0.048. So it can be concluded that the results of the research carried out are that there is a relationship between knowledge factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

The results of this research are in line with research conducted by Fajrinmuha R, *et al* (2022) entitled Level of knowledge and compliance with personal protective equipment use in healthcare workers which states that there is a relationship between knowledge and non-compliance with the use of personal protective equipment. Judging from the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0.000 < 0.05. The results of this research are also the same as the conclusions of the journal Setiawan, A., & Purnomo, D. S. (2023) entitled The influence of knowledge and supervision on the compliance of using personal protective equipment in the workplace which states the results *p-value* 0.002 < 0.05 means there is a significant relationship between knowledge and non-compliance with the use of personal protective equipment. Also supported by research conducted by Dewi, K. A., & Santoso, B. (2023) in the Indonesian Public Health journal with the title The Influence of Knowledge and Attitudes on Non-Compliance with the Use of PPE among Workers in the Waste Processing Industry which states there is a relationship of knowledge with non-compliance with the use of personal protective equipment. Strengthened by research by Herlina, T., & Sugiharto, B. (2024) title Analysis of the Effect of Training and Knowledge on Non-Compliance with the Use of PPE in the Environmental Sector results *p-value* 0,000 < 0,05 The research stated that there was a relationship between knowledge and non-compliance with the use of personal protective equipment.

The knowledge factor greatly influences compliance in the use of Personal Protective Equipment (PPE) in the work environment, including at the Environmental Service. Low knowledge often causes workers to underestimate the importance of PPE and not use it properly. Conversely, good knowledge

of the risks and benefits of PPE can improve compliance. Ongoing training and education programs are important to overcome this non-compliance. (Notoatmodjo, S. 2023).

The knowledge factor plays a very important role in the level of worker compliance with the use of Personal Protective Equipment (PPE). In work environments such as the Environmental Service, workers who do not understand the risks and importance of using PPE tend to be disobedient. Increasing knowledge through training and socialization about the dangers that may be encountered, as well as the correct way to use PPE, has been proven to increase worker compliance in using PPE (Supriyadi, D., & Santoso, A. 2023).

Based on the results, researchers show that the level of knowledge regarding non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service is good, where the percentage with good knowledge has reached 65.1%. The proportion of respondents with poor knowledge and non-compliance with non-compliance was 9 respondents (24.3%), which occurred among respondents who had low education. This is proven by the fact that there are still many who have finished elementary school, some have finished junior high school, so it is difficult to understand the information that has been conveyed, especially information about non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

The proportion of respondents with good knowledge and non-compliance was 31 (44.9%) respondents. Therefore, it is necessary to increase the knowledge of Cleaning Officers in the Environmental Service, by providing education about Personal Protective Equipment and training that supports and provides education to Cleaning Officers.

The relationship between monitoring factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

Table 9 Relationship between monitoring factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

No	Supervision	Non-compliance		Amount	*p-value*
		Not Compliant	Comply		
1	Less Good	25 (53,2)	22 (46,8)	47 (100)	
2	Good	15 (25,4)	44 (74,6)	59 (100)	0,006
Amount		40 (37,7)	66 (62,3)	106 (100)	

In table 9, the proportion of incidents of respondents whose supervision was poor and non-compliance to non-compliance was 25 (53.2%) respondents, which was greater than the proportion of incidents of respondents whose supervision was good and non-compliance to non-compliance was 15 (25.4%) respondents.

Based on statistical tests *who Square* obtained *p value* 0.006, it can be concluded that there is a relationship between monitoring factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

From the research results, univariate analysis of 106 respondents showed that there were 59 (55.7%) respondents with good supervision, which was greater than the number of respondents with poor supervision, namely 47 (44.3%) respondents. The bivariate results show that the proportion of respondents who had poor supervision and non-compliance to non-compliance was 25 (53.2%), smaller than the proportion of respondents who had good supervision and non-compliance to non-compliance, which was 15 (25.4%). Based on the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0.006. So it can be concluded that the results of the research carried out are that there is a relationship between monitoring factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

The results of this research are in line with research conducted by Haryanto, A., & Setiawan, R. (2024) entitled *The Role of Supervision in Ensuring Compliance with PPE Usage in Environmental Management Sectors* which states that there is a relationship between supervision and non-compliance with the use of personal protective equipment. Judging from the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0.001 < 0.05. The results of this research are also

the same as the conclusions of the journal Lestari, S., & Putra, T. (2024) entitled *Supervisory Impact on PPE Adherence in Public Health and Environmental Services* which states the results *p-value* 0.000 < 0.05 means there is a significant relationship between supervision and non-compliance with using personal protective equipment. Also supported by research conducted by Santoso, A., & Kurniawan, E. (2023) in the journal Journal of Occupational Health and Safety entitled *Effectiveness of Supervisory Roles in Ensuring PPE Compliance among Environmental Workers* that state Effective supervision plays an important role in increasing compliance with the use of Personal Protective Equipment (PPE) in the work environment. At the Environmental Service, strict supervision ensures that workers understand the importance of PPE and comply with applicable safety protocols. Routine monitoring, as well as providing feedback and sanctions for violations, can significantly reduce non-compliance. Without adequate supervision, workers may feel that risks are not closely monitored, thereby neglecting the use of PPE. Strengthened by research by Rahmawati, N., & Syafitri, D. (2023) title *The Influence of Supervision on Compliance with Personal Protective Equipment Use in Environmental Health Workers* results *p-value* 0,000 < 0,05 The research states that there is a relationship between supervision and non-compliance with the use of personal protective equipment.

Effective supervision greatly influences worker compliance in using Personal Protective Equipment (PPE) at the Environmental Service. Consistent and firm supervision can increase worker awareness of the importance of PPE and encourage compliance. Conversely, lack of supervision can lead to non-compliance, because workers feel less supervised and tend to ignore safety protocols (Sudarmaji, T., & Hidayat, R. 2024). Supervision is one of the key factors in encouraging worker compliance with the use of Personal Protective Equipment (PPE). In the context of the Environmental Service, where workers are often exposed to dangerous risks, effective supervision is very necessary. Good supervision includes routine monitoring, evaluation and continuous feedback, which can significantly reduce non-compliance (Fauzi, A., & Mulyadi, S. 2024). Consistent supervision not only increases compliance, but also helps identify and overcome barriers that workers may face in using PPE. Active and responsive supervisors can provide direct guidance, address problems with PPE use, and ensure that safety standards are met. Additionally, supervision that involves workers in discussions regarding the importance of PPE and the impact of non-compliance can create a safer work culture. Ineffective or inconsistent supervision can cause workers to feel that PPE use is not prioritized, which in turn leads to non-compliance. Without proper supervision, workers may assume that risks are insignificant or that they will not be penalized if they do not use PPE correctly (Prasetyo, D., & Ramadhani, S. 2024).

Based on the research results, it shows that supervision regarding non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service is good, where the percentage of good supervision has reached 55.7%. The proportion of respondents with poor supervision and non-compliance with non-compliance was 25 (53.2%) respondents, while good supervision and non-compliance with non-compliance was 15 (25.4%) respondents, this was because respondents were often supervised by supervisors from the District Environmental Service and were briefed once a week.

It is recommended for effective supervision so that supervision plays an important role in increasing compliance with the use of Personal Protective Equipment (PPE) in the work environment. At the Environmental Service, strict supervision ensures that workers understand the importance of PPE and comply with applicable safety protocols. Routine monitoring, as well as providing feedback and sanctions for violations, can significantly reduce non-compliance. Without adequate supervision, workers may feel that risks are not closely monitored, thereby neglecting the use of PPE. It is also recommended that workers or officers be assessed and evaluated, and good workers will be awarded *reward*, so that it will have a positive impact on other workers

The relationship between work period factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

Table 10 Relationship between work period factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

No	Working Time	Non-compliance		Amount	*p-value*
		Not Compliant	Comply		
1	Long (>5 Years)	18 (25,4)	53 (74,6)	71 (100)	
2	Not Long (≤5 Years)	22 (62,9)	13 (37,1)	35 (100)	0,000
Amount		40 (37,7)	66 (62,3)	106 (100)	

In table 10, the proportion of incidents of respondents who had a long service period (>5 years) and non-compliance to non-compliance was 18 (25.4%) respondents, which was smaller than the proportion of incidents of respondents who had a short service period (≤5 years) and non-compliance to non-compliance was 22 (62.9%) respondents.

Based on statistical tests *who Square* obtained *p value* 0.000, it can be concluded that there is a relationship between work period factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

From the research results, it was found that univariate analysis of 106 respondents showed that there were 71 (67.0%) respondents with long work periods (>5 years) who were greater than those with short work periods (≤5 years), namely 35 (33.0%) respondents. Bivariate results: the proportion of respondents who had a long service period (>5 years) and non-compliance among non-compliances was 18 (25.4%), smaller than the proportion of respondents whose work period was not long (≤5 years) and non-compliance among non-compliances was 22 (62.9%). Based on the results of statistical test data analysis *Chi square* results were obtained *p-value* 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between work period factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

The results of this research are in line with research conducted by Kurniasari, A., & Prasetyo, W. (2024) entitled *Work Tenure and Its Impact on PPE Compliance in Environmental Health Workers* which states that there is a relationship between work period and non-compliance with the use of personal protective equipment. Judging from the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0.000 < 0.05. The results of this research are also the same as the conclusions of the journal Suharto, T., & Widodo, R. (2024) entitled *The Influence of Work Experience on Safety Compliance: A Study on PPE Usage in Public Service Workers* which states the results *p-value* 0.000 < 0.05 means there is a significant relationship between Work Period and non-compliance with using personal protective equipment. Also supported by research conducted by Yuliana, R., & Setiadi, A. (2024) in the journal *Journal of Environmental and Occupational Health* title *Work Tenure and Its Influence on PPE Compliance: A Case Study in Environmental Services* that state Worker tenure is often associated with the level of compliance in the use of Personal Protective Equipment (PPE). Workers with longer tenure typically have extensive experience and a deep understanding of workplace risks. However, this experience can have two-way consequences. On the one hand, senior workers may feel more confident in their abilities and tend to ignore the use of PPE because they feel they already recognize the danger. This can lead to non-compliance in the use of PPE, especially if they have never been in a serious accident before. Strengthened by research by Pratama, R., & Nugroho, S. (2024) title *Impact of Work Experience on Compliance with Safety Regulations in Environmental Work* results *p-value* 0,002 < 0,05 The research states that there is a relationship between length of service and non-compliance with the use of personal protective equipment.

The period of work has a significant influence on worker compliance in using Personal Protective Equipment (PPE). Workers with longer tenure tend to be more familiar with workplace

procedures and risks, but can sometimes also be more careless or feel overconfident, thereby neglecting to use PPE. On the other hand, new workers tend to be more compliant because they still try to follow the rules strictly. The importance of regular refresher programs for all workers, regardless of length of service, to ensure consistent compliance in the use of PPE (Sudibyo, H., & Anggraeni, T. 2024). The period of work has an important role in influencing workers' compliance with the use of Personal Protective Equipment (PPE). Workers with longer tenure often have a higher level of comfort in doing their jobs and feel more confident in recognizing and managing risks. However, this confidence can sometimes lead to non-compliance with safety protocols, including the use of PPE. They may consider the risks have been sufficiently controlled that the use of PPE is deemed less necessary. On the other hand, workers who have just joined or have a shorter working period tend to be more compliant in using PPE because they are still trying to adapt to the work environment and comply with existing rules. Fear of unknown risks is also a factor that drives higher compliance among new workers (Wicaksono, A., & Rahmawati, L. 2024). The period of work influences workers' compliance with the use of Personal Protective Equipment (PPE). Workers with longer tenure tend to feel more experienced and comfortable with the work environment, which sometimes leads to decreased compliance in the use of PPE. They may perceive the risk to be lower or feel better able to handle dangers without full protection. On the other hand, new workers are more compliant with the use of PPE because they are still adapting and are more alert to potential dangers (Nurhadi, A., & Saraswati, M. 2024).

Assumptions based on the research results show that the period of work with non-compliance with the use of personal protective equipment in the OKU Regency Environmental Service, the percentage of those with long service periods (>5 years) is 67.0%, greater than the work period (≤5 years) of 33.0%. The proportion of respondents with a long work period (>5 years) and non-compliance to non-compliance was 18 (25.4%) respondents, while a short work period (≤5 years) and non-compliance to non-compliance was 22 (62.9%) respondents, this is because respondents with a longer work period tend to feel more experienced and comfortable with the work environment, which sometimes leads to increased compliance in the use of PPE. They may perceive higher risks and be more compliant with PPE use because they do not need to adapt and are more alert to potential dangers.

It is recommended to provide incentives and sanctions by implementing a reward system for workers who consistently comply with the rules for using PPE, as well as providing appropriate sanctions for those who do not comply. This could be formal recognition or a safety-related bonus. The next suggestion is a Safety Campaign by holding regular internal campaigns reminding workers about the importance of PPE through posters, discussion sessions, or short videos showing the consequences of negligence in using PPE

Relationship between action factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

Table 11 Relationship between action factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

No	Action	Non-compliance		Amount	*p-value*
		Not Compliant	Comply		
1	Less Good	33 (89,2)	4 (10,8)	37 (100)	
2	Good	7 (10,1)	62 (89,9)	69 (100)	0,000
Amount		40 (37,7)	66 (62,3)	106 (100)	

In table 11, the proportion of incidents of respondents whose actions were not good and non-compliance to non-compliance was 33 (89.2%) respondents. This is greater than the proportion of

incidents of respondents who had good actions and non-compliance to non-compliance, which was 7 (10.1%) respondents.

Based on statistical tests *who Square* obtained *p value* 0.000, it can be concluded that there is a relationship between action factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service

From the research results, it was found that univariate analysis of 106 respondents showed that the Good Actions of 80 (75.5%) respondents were greater than the Bad Actions of 26 (24.5%) respondents. Bivariate results: The proportion of respondents whose actions were poor and non-compliance was 33 (89.2%), greater than the proportion of respondents whose actions were good and non-compliance was 7 (10.8%). Based on the results of statistical test data analysis *Chi square* results were obtained *p-value* 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between action factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service.

The results of this research are in line with research conducted by Suharto. B, (2024) entitled Analysis of Factors that Influence Compliance in Using PPE which states that there is a relationship between actions and non-compliance with using personal protective equipment. Judging from the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0.006 < 0.05. The results of this research are also the same as the conclusions of the Sari journal. D, (2024) entitled Case Study of Compliance with the Use of Personal Protective Equipment in the Environmental Sector which states the results *p-value* 0.000 < 0.05 means there is a significant relationship between actions and non-compliance with using personal protective equipment. Also supported by research conducted by Nugroho. Y, (2023) in the journal Occupational Safety Journal entitled The Effect of Training on Compliance with the Use of Personal Protective Equipment that state there is a relationship Action with non-compliance with the use of personal protective equipment.

An optimistic action is realized in an action (*overt behaviour)*. To turn an attitude into a real action, supporting factors or enabling conditions are needed, including facilities (Latif et al., 2023). The levels of action are (Azzahra, 2024): perception, guided response (*guide response*), mechanism (*MECHANISMS*), adoption (*Adoption*). After someone knows the stimulus or health object, then makes an assessment or opinion about what is known, the next process is expected to be that he will implement or practice what he knows or reacts to (judged good). This is what is called practice (*practice*) health, or it can also be said to be health behavior (*overt behavior*) (Ardiansyah, Prawoto, & Kurniasih, 2024). In theory, changing actions or adopting new actions follows the stages mentioned above, namely through a process of change: knowledge (*knowladge*), attitude (*attitude*), practice (*practice*) or "KAP". Several studies have proven this, but other studies have also proven that this process is not always like the theory above (KAP), even in daily practice it happens as well as possible. This means that someone has behaved positively, even though knowledge and attitudes are still negative (Ramadhani, Makaginsar, & Sakinah, 2024). The most accurate way to obtain practice or action data is through observation. However, it can also be done through interviews with a recall approach or recalling actions that were carried out by the respondent some time ago. Indicators in health actions are practices (actions) related to disease, these actions include disease prevention and disease healing and practices (actions) for maintaining and improving health (Laksono, Setyaningsih, & Lestantyo, 2024).

Assumptions based on the research results show that actions involving non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service, the percentage of good actions is 75.5%, greater than bad actions of 24.5%. The proportion of respondents with bad actions and non-compliance to non-compliance was 33 (89.2%) respondents, while good actions and non-compliance to non-compliance was 7 (10.1%) respondents, this was because the respondents' individual actions were influenced by their attitudes towards the behavior, subjective norms and perceived behavioral control. In the context of PPE use, positive actions towards work safety, support from colleagues, and confidence that they can comply with PPE regulations can increase compliance.

It is recommended that PPE be adjusted, namely by ensuring that the PPE provided is comfortable and meets the needs of workers to reduce discomfort which could be a reason for non-compliance.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions of this research are 1) There is a significant relationship between knowledge factors and non-compliance with the use of personal protective equipment in the OKU Regency Environmental Service *p-value* 0.037. 2) There is a significant relationship between monitoring factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service *p-value* 0.003. 3) There is a significant relationship between work period factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service *p-value* 0,000. 4) There is a significant relationship between action factors and non-compliance with the use of personal protective equipment at the OKU Regency Environmental Service *p-value* 0,000. Suggestions from this research. It is hoped that they can play a more active role in providing health education to workers by conducting counseling about use of Personal Protective Equipment. And for future researchers, there is a need for research on socio-cultural and environmental factors regarding non-compliance with the use of personal protective equipment.

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