

Factors Related to Compliance With The Use of Personal Protective Equipment (PPE) Cleaning Service Officer at Morowali Hospital

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ABSTRACT: Non-medical personnel who have the potential to contract occupational diseases are officers *cleaning service*. Risks that may be faced by officers *cleaning service* namely being exposed to chemicals, being pricked by sharp objects such as syringes when throwing away rubbish. Implementing compliance with the use of PPE is important to protect officers from work safety hazards. The aim of this research is to determine the factors related to compliance with the use of personal protective equipment among officers *cleaning service* at Morowali Regional Hospital. This research method is a type of quantitative research. Research design used *cross sectional*. Sampling was carried out using *total sampling* with a total of 38 respondents. Results of work period research on compliance with the use of personal protective equipment in *cleaning service* *P value*=0.235>0.05, while monitoring and compliance with the use of PPE *P value*= 0.013<0.05. As well as perceptions regarding compliance with the use of PPE with test results *chi-square* with *P value*= 0.015<0,05. There is no relationship between length of service and compliance with the use of PPE. Meanwhile, monitoring and perception results show that there is a relationship with compliance with the use of PPE *cleaning service*. It is recommended that agencies increase supervision and provide sanctions or punishments that can have a deterrent effect on officers who do not use PPE when working, carry out inspections and advise companies to prioritize the safety of each officer. *cleaning service*.

Keywords: Working Time, Supervision, Perception, PPE



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INTRODUCTION

Hospitals are one of the riskiest workplaces. Patients, staff and visitors are at risk of contracting the disease. Because of their work, medical personnel are the group most vulnerable to occupational diseases (PAK). However, non-medical staff can also be affected by PAK, even though they do not work directly with patients but interact with the environment around the patient. One of these non-medical employees works as a janitor (*cleaning service*) (Warmuni & Rusminingsih, 2020).

According to estimates by the International Labor Organization (ILO), occupational diseases and workplace accidents claim the lives of 2.78 million people every year. More than 380,000 (13.7 percent) of the 2.4 million (86.3%) incidents of occupational diseases were caused by work accidents. Every year, there are a thousand times more non-fatal work accidents than fatal work accidents. An estimated 374 million workers are affected by non-fatal accidents each year, and the majority of these incidents negatively impact workers' ability to earn a living (International Labor Organization, 2018).

Decree of the Minister of Health of the Republic of Indonesia No. 7 of 2019 as an effort to reduce the possibility of staff getting cross-infected or getting sick from hospital, patient or workplace waste materials, personal protective equipment (PPE) must be fully used. Waste management and sanitation officers are required to wear personal protective equipment, such as hats or helmets, masks, eye protection, long clothing (*coverall*), industrial aprons, gaiters or boots, and special gloves (*disposable gloves* or *heavy duty gloves*) (Ministry of Health, 2019)

Providing personal protective equipment (PPE) in the workplace does not guarantee its full use. This can be influenced by several factors that support whether personal protective equipment (PPE) is used or not. Predisposing factors, such as length of service and perceived risk, as well as reinforcing factors, such as supervision, influence the behavior of health workers when wearing personal protective equipment (PPE) at work (Wahyuni, 2022).

In order to increase worker compliance in using personal protective equipment (PPE), supervision also needs to be carried out. Supervision controls how each action is carried out in an effort to achieve predetermined goals. Previous research conducted by Tri Adi Krismanto Ramadhani at the Karadenan Community Health Center, Bogor Regency in 2021 regarding the relationship between knowledge, attitudes, supervision and compliance of vaccination officers using personal protective equipment (PPE) resulted in $P\text{ value} = 0.045 < (0.05)$, indicating that there is a relationship between supervision and compliance with the use of PPE (Ramdhani, 2021).

Perception is very important for employees to create a good work environment, understanding the importance of health and safety in the workplace. Previous research at Civitas Hospitalia RSGMP regarding the influence of knowledge, motivation, and risk perception on basic PPE

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usage behavior by Cita Chusnul Chotimah, Haryadi, and Nendyah Roestijawati in 2019 found significant values $P\text{ value} < 0.05$. This shows that the behavior of using basic personal protective equipment (PPE) is significantly influenced by risk perception variables (Chotimah et al., 2019)

Officer *cleaning service* risk of coming into contact with dangerous biological contaminants (*biohazards*) if they do not wear personal protective equipment (PPE) properly while working. The effect is skin irritation resulting in dermatitis and pulmonary fibrosis. In addition, the danger of contracting the disease can also be increased by cleaning every hospital room and coming into contact with single-use medical equipment (*disposable equipment*) such as IV tubes or used syringes (Nursiani et al., 2020).

At Morowali Regional Hospital, There are three shifts of three officers *cleaning service* who work in the room: morning, afternoon and evening with a total of 38 officers. The main tasks carried out include cleaning toilets, medical equipment, floors, windows, doors, ceilings, and removing medical waste from the room. Needle sticks are often the cause of work accidents (KK) among officers *cleaning service* at Morowali Regional Hospital. However, until now there is no definite data on the number of needle stick cases that occur in Indonesia *cleaning service* issued by the Hospital Occupational Health and Safety (K3) Unit.

The results of initial observations carried out by researchers at Morowali Regional Hospital showed that employees *cleaning service* poor behavior in following hygiene protocols and using personal protective equipment (PPE). Some officers continue to throw rubbish in the room without using gloves which could result in needle sticks, and do not use protective shoes when cleaning the hospital area. Using a mask is not according to its intended purpose and wearing sandals. In addition, officers sometimes use the same cleaning equipment when cleaning different rooms.

METHODS

This research is quantitative research. The design used is a measurement or observation approach *cross sectional*. Measurement or observation of data on both variables at the time of data review to determine whether there are factors related to compliance with the use of personal protective equipment (PPE) among officers. *Cleaning service* At Morowali Regional Hospital. The population in this study was all *Cleaning service* at Morowali Regional Hospital there were 38 people.

Sampling technique using *total sampling*, where the number of samples is equal to the population. The sample in this study was 38 people. The data analysis used in this research is univariate and bivariate analysis. The frequency distribution of data on the independent variables work period, supervision and perception, as well as the dependent variable, namely compliance with the use of personal protective equipment (PPE), is described using univariate analysis. To find

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out the relationship between two variables, bivariate analysis was carried out using tests *chi-square*.

RESULT AND DICUSSION

Univariate Results

1. Working Time

Table 1. Frequency distribution of officers' length of service *Cleaning service* Morowali Regional Hospital

Working Time	Frequency (<i>f</i>)	Percentage (%)
<5 years	37	97.4%
≥5 years	1	2.6 %
Amount	38	100 %

Source: Primary Data, 2023

Based on table 1 officer *cleaning service* Those who worked ≥5 years amounted to 1 respondent (2.6%) and the largest number of respondents was 37 respondents with a working period of <5 years (97.4%).

2. Personal Protective Equipment (PPE) Compliance

Table 2 Frequency distribution of compliance with the use of PPE by officers *cleaning service*

Subjective Group	Frequency (<i>f</i>)	Percentage (%)
Not Compliant	22	57.9 %
Comply	16	42.1 %
Total	38	100 %

Source: Primary Data, 2023

Compliance with the use of personal protective equipment (PPE) from 38 officers *cleaning service* who work at Morowali Regional Hospital, the non-compliant category is 22 respondents (57.9%) and 16 respondents (42.1%) are compliant.

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3. Supervision

Table 3 Distribution of frequency of supervision of officers' use of PPE *cleaning service*

Supervision	Frequency (f)	Percentage (%)
Less Supervision <50%	23	60.5 %
Good Supervision ≥ 50 %	15	39.5 %
Total	38	100 %

Source: Primary Data, 2023

Based on the results of data processing in table 3, the number of officers is 38 *cleaning service*. Those with good compliance were 15 respondents (39.5%) and 23 respondents (60.5%) had poor supervision.

4. Perception

Table 4 Frequency distribution of officers' perceptions *cleaning service*

Perception	Frequency (f)	Percentage (%)
Poor < Median 18	25	65 %
Good \geq Median 18	13	34.2 %
Total	38	100 %

Source: Primary Data, 2023

Based on the data in table 4, officer *cleaning service* with good perception amounted to 13 respondents (34.2%). Meanwhile, officers with unfavorable perceptions were 25 respondents (65%)

The Relationship of Working Time Factors to Compliance with the Use of Personal Protective Equipment (PPE) in Officers *Cleaning service*

Table 5 Relationships between Work Period Factors and Compliance with the Use of Personal Protective Equipment (PPE) among Officers *Cleaning service* At Morowali Regional Hospital

PPE compliance	Total	Value
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Working Time	Comply		Not Compliant				
	n	%	n	%	n	%	
<5 years	15	39.5%	22	57.9%	37	97.4%	P= 0.235
≥5 years	1	2.6%	0	0.0%	1	2.6%	
Total	16		22		38		

Source: Primary Data, 2023

Test results *chi-square* shows $p=0.235 > 0.05$ therefore there is no relationship between working hours and compliance with the use of personal protective equipment by staff *cleaning service* at Morowali Regional Hospital.

The Relationship between Supervision Factors and Compliance with the Use of Personal Protective Equipment (PPE) among Officers *Cleaning service*

Table 6 The Relationship between Supervision Factors and Compliance with the Use of Personal Protective Equipment (PPE) among Officers *Cleaning service* At Morowali Regional Hospital

Supervision	PPE compliance				Total		Value
	Comply		Not Compliant		n	%	
	n	%	n	%	n	%	
Less Supervision <50%	6	15%	17	44.7%	23	60.5%	P= 0.013
Good Conduct ≥50%	10	26.3%	5	13.2%	15	39.5%	
Total	16		22		38		

Source: Primary data, 2023

Analyze data using *chi-square*, mark *P value* $0.013 < 0.05$ then there is a relationship between the supervision factor and compliance with the use of personal protective equipment in officers *cleaning service* at Morowali Regional Hospital.

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Relationship between Perception Factors Regarding Compliance with the Use of Personal Protective Equipment (PPE) for Officers *Cleaning service*

Table 7 Relationship between Perception Factors and Compliance with the Use of Personal Protective Equipment (PPE) among Officers *Cleaning service* At Morowali Regional Hospital

Perception	PPE compliance				Total		Value
	Comply		Not Compliant				
	n	%	n	%	n	%	<i>P= 0.015</i>
Poor<Median 18	7	18.4%	18	47.4%	25	65%	
Good ≥Median 18	9	23.7%	4	10.5%	13	34.2%	
Total	16		22		38		

Source: Primary data, 2023

Analysis of statistical results using tests *chi-square* value obtained *P value* = 0.015, because value *P value* ≤ 0.05 means there is a relationship between perception factors regarding compliance with the use of personal protective equipment (PPE) by officers *cleaning service* at Morowali Regional Hospital.

The relationship between work time factors and compliance with the use of personal protective equipment (PPE) in workers *Cleaning service* at Morowali Regional Hospital

Based on the results of research and tests carried out *chi-square* obtained *P value* = 0.235. Due *P value* > 0.05 means there is no relationship between length of service factors and compliance with the use of personal protective equipment among officers *cleaning service*. Officer *cleaning service* There was 1 person with a service period of >5 years, while there were 37 officers with a service period of <5 years. The researcher's assumption is that even before carrying out their duties, officers will be given socialization on how to use personal protective equipment properly and correctly from the hospital, it cannot be carried out well if the availability of PPE is not sufficient according to needs.

This research is in accordance with research conducted by (Fadillah, 2022) on 63 officers cleaning sanitation installations and buildings at Ratu Zalecha Regional Hospital, Martapura in 2022 and there is no relationship between length of service and compliance with the use of

personal protective equipment (PPE). P value=0.668. As time passes, workers gain more experience and can realize the importance of using PPE for workplace safety.

This research is not following previous research conducted by (Ferdika, 2022) with the results of statistical tests using *Chi square* P value is obtained $value = 0.005 < 0.05$, a person's experience at work can be obtained based on length of service, the longer they work, the more experience they gain. In general, the longer a person's working period, the more experience they will gain, one of which is in recognizing work conditions and the work environment. If workers recognize the conditions of the work environment and the dangers of the work they do, it will affect workers' compliance in using PPE (Fairyo & Wahyuningsih, 2018).

The Relationship between Supervision Factors and Compliance with the Use of Personal Protective Equipment (PPE) among Officers *Cleaning service* At Morowali Regional Hospital

Based on the results of statistical analysis of the test *chi-square* that is P value = $0.013 < 0.05$. This means that there is a relationship between monitoring factors and compliance with the use of personal protective equipment among officers *cleaning service* at Morowali Regional Hospital. Supervision is carried out in two ways, namely direct supervision (*Direct control*) and indirect supervision (*Indirect control*). Direct supervision can take the form of direct inspection or on-site observation (*on the spot observation*) which is done by observing directly how the implementation process is carried out by officers *cleaning service* in each treatment room as well as administrative offices and other supporting rooms and on-site reports (*on the spot report*) if necessary. However, direct implementation cannot always be carried out, instead indirect supervision is often carried out. Indirect supervision takes the form of remote supervision in the form of written reports. The weakness of supervision is that reports are only made that are good, not in accordance with the conditions existing in the field, thus causing wrong decisions.

According to the researchers' assumptions, this is due to a lack of attention from third parties as service providers regarding the completeness of the personal protective equipment they use and a lack of supervision and sanctions carried out by the hospital. They feel there is no pressure and think that the use of complete personal protective equipment is not necessary

This is in accordance with research conducted (Handayani & Nadrisah, 2019) from 60 sample respondents showing There is a relationship between supervision and compliance with the use of PPE among officers *cleaning service* at the BLUD of Langsa City Regional Hospital. Earned value P value = $0,007$ ($P < 0,05$). High supervision can support compliance with the use of personal protective equipment. Low supervision causes officers to feel that no one is watching, there is no pressure felt from management so that officers may be more careless and ignore existing dangers. This causes non-compliance in the use of personal protective equipment.

Relationship between Perception Factors Regarding Compliance with the Use of Personal Protective Equipment (PPE) for Officers *Cleaning service* At Morowali Regional Hospital

Based on the research results, there were more officers with unfavorable perceptions, namely 25 (65%) respondents, 7 (18.4%) respondents complied with the use of PPE and 18 (47.4%) respondents did not comply. Compared with officers with a good perception with a total of 13 (34.2%) respondents, 9 (23.7%) were compliant with the use of PPE and 4 (10.5%) were non-compliant. The better a person's perception of potential vulnerabilities, the better the compliance in using personal protective equipment. The results of data analysis in this research using tests *chi-square* that is $P\text{ value} = 0.015 < 0.05$, meaning there is a relationship factor between perceptions of compliance with the use of personal protective equipment among officers *cleaning service*.

According to researchers' assumptions, feeling uncomfortable because they are not used to using personal protective equipment, feeling irritated when using it is one of the factors and reasons why officers do not use personal protective equipment. In the interview session, officers said that using personal protective equipment while working sometimes made it difficult for them to work, it felt hot and uncomfortable so they preferred not to use PPE. Most often found in the field they only wear masks when working. The availability of personal protective equipment also plays an important role, with some saying that although they want to use complete personal protective equipment, this does not really get significant support from the company that oversees them. Sometimes uniforms (identifying equipment), cleaning tools that are no longer suitable for use and are not sufficient for each room are still difficult to fulfill.

This research is in line with research conducted (Chotimah et al., 2019), namely that the behavior of using PPE is positively influenced by perception. Among the three variables, namely knowledge and motivation, risk perception has the largest beta value, indicating that risk perception contributes the most to changes in fundamental behavior in using personal protective equipment.

Perception can influence a person's behavior. This ability causes perceptions between one individual and another to be different, where the way of interpreting something seen is not necessarily the same between individuals. With different abilities, workers can misperceive PPE so that the worker's behavior becomes less compliant with PPE. Personal protective equipment is used to protect officers from certain sources of risk associated with the workplace and the surrounding environment which helps reduce disability. Cleaning workers must be aware that the main purpose of personal protective equipment (PPE) is to protect them from all risks that may arise in the workplace, such as exposure to dangerous chemicals, pathogenic germs, and potential physical hazards (Latif et al., 2023).

CONCLUSION

Based on the results of research on factors related to compliance with the use of personal protective equipment among officers *cleaning service* at Morowali Regional Hospital can be concluded as follows:

1. There is no relationship between working hours and compliance with using personal protective equipment officer *cleaning service* at Morowali Regional Hospital with $P\text{ value} = 0,235 < 0,05$.
2. There is a relationship between supervision factors and compliance with the use of personal protective equipment by officers *cleaning service* at the hospital *Morowali*, $P\text{ value} = 0,013 < 0,05$.
3. There is a relationship between the perception factor and the compliance with the use of personal protective equipment in officers *cleaning service at Morowali Regional Hospital* $P\text{ value} = 0,015 < 0,05$.

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