

Analysis of Use of Protective Equipment (PPE) in Employees PT Conch Cement Manokwari District West Papua

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ABSTRACT

Introduction: Increased work accidents in Indonesia, West Papua and especially at PT. The Conch Cement of Manokwari Regency in West Papua is caused by a lack of compliance in the use of PPE.

Target of research: Analyzing the Use of Personal Protective Equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua.

Research of result: Quantitative research with cross sectional study design. The research was conducted on September 20 to October 28 at PT. Conch Cement with population is employees of PT. Conch Cement and the number of samples were 75 people by convenience sampling. Data were obtained using a questionnaire and analyzed using the chi square test and binary logistic regression.

Research results: Obtained factors related to the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua is age (p-value 0,000; RP = 2,713; CI95% = (1,682-4,376), duration of work (p-value 0,000; RP = 0,150; CI95% = (0,050-0,448), knowledge (p-value 0,000; RP = 2,713; CI95% = (1,682-4,376), attitudes (p-value 0,001; RP = 2,558; CI95% = (1,551-4,219), availability of PPE (p-value 0,000; RP = 0,295; CI95% = (0,153-0,568), comfort of PPE (p-value 0,001; RP = 2,550; CI95% = (1,572-4,137), K3 training (p-value 0,000; RP = 2,688; CI95% = (1,534-4,709), regulations (p-value 0,004; RP = 2,286; CI95% = (1,300-4,017) and supervision (p-value 0,003; RP = 2,262; CI95% = (1,381-3,704). The dominant factor associated with the use of personal protective equipment (PPE) is age, length of work, availability of PPE, where the duration of work has a more dominant factor in the use of personal protective

equipment (PPE) at PT Conch Cement, Manokwari Regency, West Papua.

Keywords: Personal Protective Equipment (PPE), PT. Conch Cement, Manokwari Regency

1. INTRODUCTION

The Labor Social Security Agency (BPJS) noted that the number of work accidents in Indonesia continued to increase. As many as 123 thousand work accident cases were recorded throughout 2017. The increase in workplace accidents was around 20 percent compared to 2016 nationally with a claim value of more than 971 billion. This figure increased from 2016 with a claim value of only Rp 792 billion more (BPJS, 2017).

Global Personal Protective Equipment (PPE) According to the OSHA or Occupational Safety and Health Administration, personal protective equipment (PPE) is defined as a tool used to protect workers from injuries or diseases caused by hazards in workplace, whether chemical, biological, radiation, physical, electrical, mechanical and others.

Personal protective equipment is tools that are able to provide protection against the dangers of accidents. Personal protective equipment (PPE) is a tool that must be used when working in accordance with the danger and work risk to maintain the safety of the worker himself and those around him. The types of PPE needed include eye protection, ear protection devices, head protection, breathing, body, hands and arms and legs (OSHA, 2008). Law Number 1

Year 1970 has been stipulated regarding work safety requirements that must be fulfilled by every person or entity that runs a business, both formal and informal, which can change along with the development of science and technology in the future. There are two common causes of accidents, namely unsafe action (human factor) and unsafe conditions (environmental factors). The study states that 80% -85% of those causing accidents are unsafe actions. The Krug study in 1999 stated that an estimated 5.8 million people died from injuries worldwide in 1998. This is equivalent to 0.98 per 1000 people. The organization's K3 risk, both large and small, depends on the nature and type of activities. The types of PPE needed include Safety shoes (gaiters), Masks, Workwear, Veils, Safety Goggles (Ear protection devices), Ear plugs (ear protectors) and Safety Helmet (head protector) (Law Number 1 Year 1970).

According to the Minister of Manpower and Transmigration's regulation on Personal Protective Equipment (PPE) (2010) article 2, employers are required to provide PPE for workers or workers in the workplace in accordance with the Indonesian National Standard (SNI) and provided free of charge.

PT. Conch Cement is a company engaged in the production of building materials. Based on the data obtained by PT. Conch Cement Manokwari Regency West Papua has 140 employees in the production sector. From January to June 2018 there were 6 work accidents in the production section. Hazard risk in the work environment, especially in the production process, requires a complete means of personal protective equipment in order to avoid work accidents and produce a good production for the company.

To prevent and overcome workplace accidents, there is a need for workplace health and safety motivation for workers at PT. Conch Cement, Manokwari Regency, West Papua, with the aim of avoiding or minimizing work accidents. Forms of prevention and prevention of occupational

accidents can be in the form of personal protective equipment, conducting K3 training, providing PPE by companies, establishing policies and supervision of workers who do not understand the dangers in the workplace, which appears from their indiscipline in using PPE at work. Based on these problems, the authors are interested in conducting a study with the title "Analysis of the Use of Personal Protective Equipment (PPE) in Employees of PT. Conch Cement of Manokwari Regency, West Papua "

2. MATERIALS AND METHODS

2.1 Types of Research

This research is a quantitative research which is a study with the aim of finding relationships between variables by analyzing the data that has been collected. This study uses the Cross Sectional approach, namely by measuring the independent variables and the dependent variable only once at the same time (Notoatmodjo, 2012).

2.2 Location and Time of Research

Research location at PT. Conch Cement of Manokwari Regency, West Papua with the time of the study conducted in September to December 2018.

2.3 Population and Samples

Population is the overall object of research (Arikunto, 2010). This study is the population of all employees at PT. Conch Cement, Manokwari Regency, West Papua, amounting to 300 people. Then Samples are part of the number and characteristics possessed by the population (Sugiyono, 2012). The sample size in the study was 75 employees of PT Conch Cement, Manokwari Regency, West Papua

3. RESULTS

3.1 Relationship of employee age to Use of Personal Protective Equipment (PPE).

Table 1 Relationship of employee age to Use of Personal Protective Equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

Age	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Not use PPE			
	n	%	n	%	n	%
<40 year	18	78,3	5	21,7	23	100
≥40 year	15	28,8	37	71,2	52	100
Total	33	44,0	42	56,0	75	100
<i>p</i> = 0,000; RP = 2,713; CI95%=(1,682-4,376)						

Table 1 above shows that out of 23 people aged <40 years there were 18 people (78.3%) using PPE and 5 people (21.7%) not using PPE. Whereas from 52 people aged 40 years there were 15 people (28.8%) using PPE and 37 people (71.2%) not using PPE. The results of the chi-square statistical test at a significance value of 95% ($\alpha = 0.05$) obtained a *p* value = 0,000 < $\alpha = 0.05$. This means that there is a relationship between the age of employees and the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. Value results; RP = 2,713; CI95% = (1,682-4,376), indicating that respondents aged <40 years had a tendency to use PPE 2,713 times higher than respondents aged ≥ 40 years.

3.2 Long-term employee relations with the use of personal protective equipment (PPE).

Table 2 The long working relationship of employees towards the Use of Personal Protective Equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

Working duration	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Not use PPE			
	n	%	n	%	n	%
Goog	3	10,0	27	90,0	30	100
Less	30	66,7	15	33,3	45	100
Total	33	44,0	42	56,0	75	100
<i>p</i> = 0,000; RP = 0,150; CI95%=(0,050-0,448)						

Table 2 above shows that out of 30 people with good working hours there were 3 people (10.0%) using PPE and 27 people (90.0%) not using PPE. While from 45 people with a length of work there were 30 people (66.7%) using PPE and 15 people (33.3%) using PPE. The results of the chi-square statistical test at a significance value of 95% ($\alpha = 0.05$) obtained a *p* value = 0,000 < $\alpha = 0.05$. This means that there is a relationship between the lengths of work of employees on the Use of Personal Protective

Equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. The results of the value of RP = 0,150; CI95% = (0,050-0,448), indicating that respondents with a good length of work had a tendency to use PPE 0,150 times lower than respondents with longer working hours and less.

3.3 Relationship between employee knowledge of the use of personal protective equipment (PPE).

Table 3 Relationship between employee knowledge of the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

Knowledge	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Not use PPE			
	n	%	n	%	N	%
Good	18	78,3	5	21,7	23	100
Less	15	28,8	37	71,2	52	100
Total	33	44,0	42	56,0	75	100
<i>p</i> = 0,000; RP = 2,713; CI95%=(1,682-4,376)						

Table 3 above shows that of 23 people with good knowledge there were 18 people (78.3%) using PPE and 5 people (21.7%) not using PPE. Whereas from 52 people with less knowledge 15 people (28.8%) used PPE and 37 people (71.2%) did not use PPE. The results of the chi-square statistical test at a significance value of 95% ($\alpha = 0.05$) obtained a *p* value = 0,000 < $\alpha = 0.05$. This means that there is a relationship between employee knowledge of the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. The results of the value of RP = 2.713; CI95% = (1,682-4,376), indicating that respondents who have good knowledge have a tendency to use PPE 2,713 times higher than respondents who are less knowledgeable

3.4 Relationship between employee attitudes towards the use of personal protective equipment (PPE).

Table 4 Relationship between employee attitudes towards the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

Attitude	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Mot use PPE			
	n	%	n	%	n	%
Gppd	19	73,1	7	26,9	26	100
Less	14	28,6	35	71,4	49	100
Total	33	44,0	42	56,0	75	100
<i>p</i> = 0,001; RP = 2,558; CI95%=(1,551-4,219)						

Table 4 above shows that of the 26 people with good attitudes there were 19 people (73.1%) using PPE and 7 people (26.9%) not using PPE. Whereas from 49 people with less attitudes there were 14 people (28.6%) using PPE and 35 people (71.4%) not using PPE. The chi-square statistical test results at a significance value of 95% ($\alpha = 0.05$) obtained a value of p value = 0.001 $< \alpha = 0.05$. This means that there is a relationship between employee attitudes towards the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. The results of the value of $RP = 2.558$; $CI95\% = (1,551-4,219)$, indicating that respondents with less attitudes tend not to use PPE 2,558 times higher than respondents with good attitude in using PPE

3.5 Relationship between the availability of employee PPE and the use of personal protective equipment (PPE).

Table 5 Relationship between employee PPE availability and the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

Availability PPE	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Not use PPE			
	n	%	n	%	n	%
Nomplete	8	20,5	31	79,5	39	100
Not complete	25	69,4	11	30,6	36	100
Total	33	44,0	42	56,0	75	100
$p = 0,000$; $RP = 0,295$; $CI95\% = (0,153-0,568)$						

Table 5 above shows that of the 39 people with complete availability of PPE there were 8 people (20.5%) using PPE and 31 people (79.5%) not using PPE. Of the 36 people with incomplete PPE availability there were 25 people (69.4%) using PPE and 11 people (30.6%) using PPE. The results of the chi-square statistical test at a significance value of 95% ($\alpha = 0.05$) obtained a p value = 0,000 $< \alpha = 0.05$. This means there is a relationship between the availability of employee PPE on the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. The results of the value of $RP = 0.295$; $CI95\% = (0.153-0.568)$, indicating that respondents with incomplete PPE had a

tendency not to use PPE 0.295 times higher than respondents with complete PPE

3.6 The relationship between the comfort of employee PPE and the use of personal protective equipment (PPE).

Table 6 The relationship between the comfort of employee PPE and the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari District, West Papua in 2019

PPE comfort	Use of Personal Protective Equipment (PPE)				Total	
	Use PPE		Not use PPE			
	n	%	n	%	n	%
Comfort	18	75,0	6	25,0	24	100
Not comfort	15	29,4	36	70,6	51	100
Total	33	44,0	42	56,0	75	100
$p = 0,001$; $RP = 2,550$; $CI95\% = (1,572-4,137)$						

Table 6 above shows that out of 24 people with PPE comfort there were 18 people (75.0%) using PPE and 6 people (25.0%) not using PPE. Of the 51 people who were uncomfortable in using PPE there were 15 people (29.4%) using PPE and 36 people (70.6%) not using PPE. The chi-square statistical test results at a significance value of 95% ($\alpha = 0.05$) obtained a value of p value = 0.001 $< \alpha = 0.05$. This means that there is a comfort relationship between employee PPE and the use of personal protective equipment (PPE) at PT. Conch Cement of Manokwari Regency, West Papua. The results of the value of $RP = 2,550$; $CI95\% = (1,572-4,137)$, showed that respondents with uncomfortable PPE had a tendency not to use PPE 2,550 times higher than respondents who used comfortable PPE.

4. DISCUSSION

4.1 Relationship of employee age to Use of Personal Protective Equipment (PPE).

Research at PT. Conch Cement of Manokwari Regency, West Papua, states that there is a relationship between age and the behavior of using personal protective equipment. Old-aged workers have a high percentage in the behavior of using personal protective equipment. This is due to experience and length of work that make respondents in old age feel that there is no need to use PPE. Various efforts have been carried out, such as: the procurement of PPE that is quite good, providing strict

supervision of the use of PPE by conducting routine patrol in the area of the factory, establishing a safety representative in each section and giving sanctions if violating the rules regarding the use of PPE in the workplace, and providing education in the form of training for workers, but this only applies to new workers or young workers.

The results of this study are in line with the research conducted by Azis (2010), there is a relationship between working age and the level of adherence using PPE because the more adults will be stronger in taking thoughts.

According to Notoadmodjo (2014), behavior also depends on the characteristics or other factors of the workforce itself. One of the characteristics of the workforce is the age factor that affects the obedient behavior of using PPE. Age is the length of one's life since he was born until now. Work performance that will be related to the level of performance is influenced by the age of the person. The development of the times, physical and mental human beings will definitely experience changes depending on the type of work they do. Personnel who have old age are relatively more physically limited than young workers in general (Madyanti, 2012). Forms of activities that can help the workforce to acquire knowledge, skills, and shape attitudes, the behavior needed to do their job well, namely by conducting a training. Training should make the workforce behave according to the policy of using PPE because training is one way that can be done to make workers behave well in using PPE. This is what should underlie the workforce in order to be able to adhere to the use of PPE so that there is no difference between young age and old age in terms of the use of personal protective equipment.

4.2 Long-term employee relations with the use of personal protective equipment (PPE).

The results of the study at PT Conch Cement in Manokwari Regency, West Papua, stated that there was a significant relationship between the length of work and

the behavior of using personal protective equipment. This is because the company is still lacking in fully committed to K3 in the company by making policies related to K3 including one of them is the use of PPE in the workplace. The new workforce is more emphasized to use PPE, but for the old workforce only as a formality, so it can be seen that there are still many workers who lack the compliance with existing company policies. Monitoring the use of PPE is only done during certain working hours so that workers who take more work hours (overtime) are not too controlled by the supervisor to use PPE according to the procedures set by the company. One of the characteristics of the workforce that can shape the behavior of using PPE is the length of work. This should be the longer the workforce in a company will make the workforce more familiar with the conditions of the workplace environment than the new workforce entering the company (Notoatmodjo, 2014).

According to Anderson's theory in Notoadmodjo (2014), that where he is more and more a person's work experience, the more skilled, and usually the easier it is to understand the task so as to provide opportunities to improve performance and adapt to one's environment. good (Sudarmo et al., 2016). The experience of a person in his work and the environment at the time he works is influenced by the work period of the workforce, the longer he has to work, the more experience and skills, so that someone can work better than someone or workforce who does not have any experience (Madyanti, 2012). The researcher assumes that experience in any case will increase awareness, one of which is workplace accidents. Along with increasing according to age, the period of work in the company and the length of work will increase. This should be inversely proportional to the workforce just entering work. They initially did not know for sure the ins and outs of the type of work especially his safety at work in depth. The experience gained in the workplace will be

interrelated with the length of work a person can, so the longer a person works the more experience and the higher the knowledge and skills

4.3 Relationship between employee knowledge of the use of personal protective equipment (PPE).

The results of the research at PT Conch Cement, Manokwari Regency, West Papua, stated that there was a significant relationship between knowledge and behavior of the use of personal protective equipment. According to Notoatmodjo (2014), knowledge that is the result of knowing someone and occurs after people make observations and sensations of a particular object. Knowledge is a very important thing in shaping the actions of a person. Knowledge of the use of PPE is an important aspect as an understanding of the importance of the role of supervisors and company owners in implementing PPE use on their workers. This result is in line with Darmayanti's research (2015) that there is a relationship between the level of knowledge of farmers and compliance in using personal protective equipment for farmers using pesticides in the Subak area of Kenderan Village.

Based on the analysis of researchers related to the knowledge that workers, especially workers in the production section are categorized still not good because the informant can only explain the types of PPE without the actual implementation. It can be seen that workers actually understand the types of PPE and potential hazards that can threaten them if they do not use PPE, but they do not have safety awareness in working by not implementing it in their daily lives and behavior at work. But if it is related to the theory of Green knowledge, it is one of the predisposing factors that can influence behavior, therefore supervisors and companies must seriously apply the knowledge of the importance of PPE use because all informants state that they only get information about PPE during each ceremony. Mondays and companies should provide strict sanctions both verbally and in

writing to workers if they get workers not using PPE.

Work safety measures that need to be carried out include extension activities that are periodically adjusted to the needs of the company, carried out by company owners assisted by field supervisors and other competent parties in the K3 field to provide workers with information about the use of PPE accordingly, technological developments regarding PPE, the conditions for how good PPE can be used by workers and about the importance of using PPE when working in transporting garbage because it will provide a sense of security, which can reduce the incidence of workplace accidents and occupational diseases. Counseling itself has an understanding as an education that is non-formal in nature which aims to change the behavior of workers in terms of knowledge of the use of PPE to prevent potential hazards in the workplace (Tarwaka, 2014).

From the analysis of the relationship between the level of knowledge of PPE and compliance with the use of PPE, it can be seen that the level of knowledge of respondents relates to compliance with the use of PPE, if the level of knowledge is high then respondents have a high level of adherence to PPE, but vice versa if the knowledge is low who are low in using PPE that has been provided by the company.

This study is in line with Aziz (2014), the results of the analysis of the relationship between the level of knowledge of occupational safety and health and discipline of wearing masks has a relationship between the level of knowledge and the discipline of wearing masks in Winding workers at PT. Iskandar Indah Surakarta Textile Printing.

4.4 Relationship between employee attitudes towards the use of personal protective equipment (PPE).

Attitude is awareness and tendency to act. A workforce that has a good attitude is defined as a workforce that has an awareness to do good while in the workplace, from that attitude can develop

into a happy attitude which eventually becomes a habit to always pay attention to safety in the workplace (Notoatmodjo, 2014)

This result is in line with the research of Kusuma (2013) which concluded that there was a relationship between attitude and the use of personal protective equipment.

Based on the results of the research respondents' attitudes about the use of PPE, it was found that more than half of respondents' knowledge was in the less category as many as 52 people (69.3%). Attitudes are very closely related to the level of one's knowledge; a person's attitude towards an object shows the person's knowledge of the object in question. Thus it can be concluded that someone who has bad knowledge about the use of PPE will have a negative attitude towards the use of PPE and vice versa someone who has good knowledge about the use of PPE will have a positive attitude towards the use of PPE. The attitude if associated with Green theory is that the formation of a person's behavior is influenced by good knowledge and followed by good attitudes, this is in line with the results of research that workers' attitudes are all good categories, meaning informants have a positive attitude towards the use of PPE but at the time of research still get workers who work not using PPE, of course this is contrary to what was conveyed during the in-depth interview.

This is because there is no decisive action from the supervisor if it is found that workers do not use personal protective equipment. Workers' behavior towards the use of PPE is strongly influenced by the behavior of management. Supervisors must be the first example of using PPE. There must be training and education programs for workers in terms of using and treating PPE properly (Rahma, 2012). Therefore, it is necessary to have a good and correct example from the supervisor in terms of the use of PPE to change the behavior of a worker.

This result is still consistent with Putra's research (2012), that there is a relationship between attitude and the use of personal protective equipment. This can be understood because attitude is the most important concept in social psychology. Attitudes can also be interpreted as readiness to react to a stimulus in a certain way, when faced with a stimulus that requires a response. A pattern of behavior, tendency or anticipatory readiness to adapt to a conditioned social situation. Work safety measures that need to be carried out include periodic training activities tailored to the needs of the company, carried out by the company owner assisted by other parties who are competent in the K3 field to be given to field supervisors and workers namely providing training on K3 such as OHS training for field supervisors because so many supervisors must be able to assume great responsibility in the field of OHS because it involves the safety of their workers. Training and debriefing of K3 for workers who are already working and new workers are intended so that workers are able to understand the potential hazards that can occur in the workplace and the right steps to notify the hazards that occur to the field supervisor so that they can be quickly resolved the potential danger of work accidents and occupational diseases. Providing information on how to use PPE that is appropriate when working and following and adhering to procedures or regulations in the company where he works.

Training is an effort to improve or improve the performance of the workforce in their current work and in other work related to what they are currently holding, both individually and as part of a work team. It needs to be understood together that K3 training is not a substitute for controlling potential hazards. However, training is only part of one way of learning to identify, assess and control hazard. In addition, it is necessary to understand that K3 training is held not only for workers but also for those who are responsible for K3, including those who are related and have an interest in the

company's business (Tarwaka, 2014). The results of the study from Sahli and Pratiwi (2011) stated that 63.4% of household industry workers making furniture in Jaya Village had an unfavorable attitude towards the use of masks. A certain attitude has not been able to show the actions of someone. To manifest attitudes into concrete actions, supporting factors or a condition are needed which can also support these actions as well as facilities (Notoatmodjo, 2014).

4.5 Relationship between the availability of Personal Protective Equipment (PPE) for the Use of Personal Protective Equipment (PPE).

In the working area of PT. Conch Cement of Manokwari Regency, West Papua, the provision of personal protective equipment is still not provided in full with policies governing the use of personal protective equipment, meaning that Personal Protective Equipment has been provided by the company but the PPE provided is not yet complete, given the conditions in the company which requires the complete use of PPE from head to toe. In reality, the company only provided masks that did not meet the standards because of the large amount of iron and steel dust that flew, while the masks provided were only ordinary masks so that dust could still be inhaled by workers, then the company also provided masks and safety shoes. Helmet has been provided even though the amount is not sufficient for all workers and the severity of the helmet provided is not used at all by workers. Glasses, aprons and other types of PPE equipment to support work with heat conditions with heavy equipment everywhere are still not provided by the company. The existence of PPE facilities provided by the company can affect a person's behavior.

This is in line with Green's theory which explains that necessary for behavioral resources can influence behavior because it can be an enabling factor for someone to behave in accordance with expectations. 4.3 Comfort relationship of PPE to the use of personal protective equipment (PPE).

The results of the study stated that all informants were in accordance with the PPE used by each, all of which also stated that they still felt discomfort.

The inconvenience is due to the use of PPE which is felt hot when using a mask because it is seen as a hot workplace condition and is found in the work area, especially in the production section. Because of the inconvenience sometimes workers choose to take it off not to wear it. Personal protective equipment should be used in certain circumstances in this case for workers because it is indeed the use of PPE as a last resort to prevent workplace accidents. Based on Green's theory that something inherent in someone as a predisposing factor in this case is the convenience of using PPE can affect a person's behavior.

5. CONCLUSION

The results of this study can be concluded that the significant factors and dominant factors associated with the use of PPE are as follows:

1. There is a relationship between age and the use of personal protective equipment (PPE) the results of the prevalence ratio test are obtained (p-value = 0,000; RP = 2,713; CI95% = (1,682-4,376)
2. There is a long working relationship with the use of personal protective equipment (PPE) the results of the prevalence ratio test are obtained (p-value = 0,000; RP = 0,150; CI95% = (0,050-0,448)
3. There is a relationship between knowledge with the use of personal protective equipment (PPE) the results of the prevalence ratio test are obtained (p-value = 0,000; RP = 2,713; CI95% = (1,682-4,376).
4. There is a relationship between the attitude and the use of personal protective equipment (PPE) on the results of the prevalence ratio test obtained (p-value = 0.001; RP = 2,558; CI95% = (1,551-4,219).

5. There is a correlation between the availability of PPE and the use of personal protective equipment (PPE) the results of the prevalence ratio test are obtained (p-value = 0,000; RP = 0,295; CI95% = (0,153-0,568).
6. There is a relationship between the comfort of PPE and the use of personal protective equipment (PPE) the results of the prevalence ratio test are obtained (p-value = 0.001; RP = 2,550; CI95% = (1,572-4,137).

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How to cite this article: Kalasuat J, Rantetampang AL, Ruru Y et.al. Analysis of use of protective equipment (PPE) in employees PT conch cement Manokwari district west Papua. Galore International Journal of Health Sciences & Research. 2019; 4(1): 62-71.
