

# Analysis Of Personal Hygiene And Sanitation Facilities For The Incidence Of Skin Disease In Scavengers At Tpa Klotok, Kediri City

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**Abstract:** *Garbage can cause several diseases, garbage piles can cause the emergence of several vectors such as mice and flies. Scavengers can be directly affected by garbage. Based on observations made from 10 scavengers, there are 7 who have skin diseases and there are still many scavengers who do not have good hygiene behavior and the lack of sanitation facilities can trigger several diseases, one of which is skin disease. The purpose of this study was to analyze the effect of personal hygiene and sanitation facilities on the incidence of skin disease among scavengers at TPA Klotok, Kediri. The research design used was observational analysis, the research observing the subject with cross sectional approach with quantitative research methods. Implemented in TPA Klotok Kediri City with 44 respondents and used Simple Random Sampling. Based on the statistical test results Of logistic regression, personal hygiene was obtained for the incidence of skin disease sig = 0.032 and sanitation facilities for the incidence of skin disease sig = 0.998. It can be concluded that the results of both have the significance value > 0.05 furthermore there is an effect of personal hygiene on the incidence of skin disease, meanwhile there is no effect of sanitation facilities on the incidence of skin disease in scavengers at TPA Klotok, Kediri City. One of the causes of skin disorders is poor work and personal hygiene. To maintain clean skin, healthy habits must be considered such as maintaining clean clothes, bathing regularly, bathing using clean water and soap. So it is concluded that it is very important for scavengers to maintain and care for the cleanliness of the skin, especially from exposure in the work environment.*

**Keywords:** *Personal Hygiene, Sanitation, Facilities, Incidence of Skin Disease*

## PRELIMINARY

Skin disease is one of the most common diseases in tropical countries, including Indonesia. Its prevalence in developing countries range between 20-80% (Hay R, 2012). It's happen because in tropical countries the temperature and humidity vary from time to

time. The humid and hot air throughout the year is perfect for the development of skin diseases such as skin diseases caused by fungi, bacteria and parasites (Putra I, 2008). Skin disease is one of the most common diseases suffered by humans, in a recent survey found that skin disease is the fourth most common cause of human disease. The study, published in the Journal of the European Academy of Dermatology and Venereology, shows that it is the most common disease suffered by and unfortunately, many affected people do not consult a doctor. From 2,701 individuals in this study, at least one skin disease was found in 1,662 participants (64.5%). The most common diagnoses were 26.6% actinic keratosis, 25.5% rosacea and 11.7% eczema.

These three skin diseases usually occur on the face. for example Actinic keratosis and rosacea are skin diseases that usually rough, scaly and festering. This disease is the result of sun exposure. Skin disease increased with increasing age and more frequent found in men as much as 72.3% compared to women which was only 58.0%. Nearly two thirds of the affected participants were unaware of their cultured disease. (Febriansyah, 2019).

Garbage is something that is not used, disliked or something that is thrown away from human activities and does happen by itself. One of the factors that influence the amount of waste is population size and population density. The denser the population, the more waste piles up because there is less space to accommodate waste and the increasing activity of the population, the more waste is produced (Chandra, 2007). Garbage can cause various kinds of diseases, especially when it is wet because in wet conditions, decomposition will occur more quickly. Even puddles in wet trash are believed to attract flies, mosquitoes, mice. These animals can cause various skin diseases.

Based on data from the Pos UKK at Sukorame Health Center regarding skin tanning data on scavengers at the Klotok TPA in the last 3 months, around 10-18 out of 35 scavengers have skin diseases. Every day the scavengers wrestle with garbage from all corners of the region. The risk of being a scavenger is of course enormous because the waste certainly contains a lot of pathogenic bacteria due to decay of organic substances that can enter the body through the pores, skin and respiration. If the components of hazardous substances in used goods enter the body, they will cause various diseases (Triyanto, 2009; Al-Blooshi et al., 2020; Al-Husseini, 2020; Al-Tufaili, 2020; Alblooshi & Abdullah, 2020).

Based on a preliminary study conducted at the Klotok City Waste Disposal Site (TPA), it is known that the number of scavengers who come to work is 55 people with various age characteristics and unhealthy lifestyle habits such as not washing their hands before and after eating with soap. . In addition, during interviews and observations, many scavengers did not use personal protective equipment such as shoes, gloves, and masks) complaints of illness, complaints that are often felt are coughs, colds, dizziness, itching and redness of skin based on interviews obtained 10 from 7 scavengers experienced itching around the neck and back along with reddish skin.

From the description above, the researcher is interested in making a research proposal in formulating the research title " Analysis of Personal Hygiene and Sanitation Facilities on the Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City ".

## **RESEARCH METHODS**

Research design is something that is very important in research, allowing maximum control of several factors that can affect the accuracy of a result. Design can be used by researchers as a guide in planning and implementing research to achieve a goal or answer a research question (Nursalam, 2003).

The research design used was observational analysis, namely research by observing the research subject (Notoatmodjo, 2012). With cross sectional approach, a research conducted to determine the relationship between variables according to demand without intervention from researchers, where data collection each research subject is only observed once (Sugiono, 2010). The research design used logistic regression.

This research was conducted at TPA Klotok Kota Kediri on June 15 to 16, 2020. The sample consists of a part of the population that is affordable for use by some research subjects through sampling (Nursalam, 2016). The sample in this study amounted to 44 scavenger respondents with the sampling technique "Simple Random Sampling". The variables examined in this study were the independent variables of personal hygiene and sanitation facilities, while the dependent variable was the incidence of skin diseases.

Collecting data in this study by giving informed consent to the respondents if the prospective respondent agrees to become a respondent then the researcher give a questionnaire and then filled in by the respondent. Personal hygiene data was collected by direct interviews and questionnaires with scavengers at TPA Klotok Kota Kediri, while for sanitation facilities and incidence of skin disease, it was using observational method. Data processing is carried out to determine the analysis between variables that influence each other. Then the data is presented descriptively in the form of frequency distribution tables, respondent characteristic variables,

## RESEARCH RESULT

### Respondent Characteristics

**Table 1.** General Characteristics

<b>Characteristics</b>	<b>F</b>	<b>%</b>
<b>Age</b>		
20-35	11	25%
> 35	33	75%
<b>Gender</b>		
Men	28	64%
Woman	16	36%

Based on table 1, it shows that the age characteristics of the most respondents are > 35 years old, namely as many as 33 people (75%), while the ages of 20-35 years are 11 people (25%). Characteristics of the sex of the most respondents were male as many as 28 people (64%), while the type of woman was 16 people (36%).

### Variable Characteristics

**Table 2.** Distribution of Number of Respondents Based on Personal Hygiene Variables for Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

<b>Personal Hygiene</b>	<b>F</b>	<b>%</b>
Enough	8	18.2%

Less	36	81.8%
Total	44	100.0%

Based on Table 2. it is known that out of 44 respondents most of the personal hygiene was not good with a total of 36 respondents (81.8%), while for personal hygiene was quite good with a total of 8 people (18.2%).

**Table 3.** Distribution of Number of Respondents Based on Variable Sanitation Facilities at TPA Klotok, Kediri City on June 15 to 16, 2020.

Sanitation Facilities	F	%
Less	22	50.0
Well	22	50.0
Total	44	100.0

Based on Table 3. It can be seen that of the 44 respondents have the same value for sanitation facilities with a total of 22 people (50.0%) for the poor and good categories.

**Table 4.** Distribution of Number of Respondents Based on Variable Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

Incidence of Skin Diseases	F	%
Happen	31	70.5
Not occur	13	29.5
Total	44	100.0

Based on Table 4. It can be seen that of the 44 respondents most of the incidence of skin disease occurred with a total of 31 people (70.5%). Meanwhile, the incidence of skin disease did not occur in 13 people (29.5%).

#### Cross tabulation between variables

**Table 5.** Cross-Age Tabulation and Personal Hygiene for Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

Age	<i>Personal Hygiene</i>				Total	
	Enough		Less		F	%
	F	%	F	%	F	%
20-35 th	1	2.3%	10	22.7%	11	25.0%
> 35 years old	7	15.9%	26	59.1%	33	75.0%
Total	8	18.2%	36	81.8%	44	100.0%

Based on table 5. It can be seen that in this study the most personal hygiene was at the age > 35 years with the poor category of 59.1% and the least at the age of 20-35 years with the fairly good category of 2.3%.

**Table 6.** Cross-tabulation of Sex and Personal Hygiene for Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

Gender	<i>Personal Hygeine</i>				Total	
	Enough		Less		F	%
	F	%	F	%		
Men	7	15.9%	21	47.7%	28	63.6%
Woman	1	2.3%	15	34.1%	16	36.4%
Total	8	18.2%	36	81.8%	44	100.0%

Based on table 6. It can be seen that in this study the most personal hygiene was in the male gender with the poor category of 47.7% and the least in the female gender with the fairly good category of 2.3%.

**Table 7.** Cross-Age Tabulation and Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

Age	Incidence of Skin Diseases				Total	
	Happen		Not occur		F	%
	F	%	F	%		
20-35	7	15.9%	4	9.1%	11	25.0%
> 35	24	54.5%	9	20.5%	33	75.0%
Total	31	70.5%	12	29.5%	44	100.0%

Based on table 7. It can be seen that in this study the incidence of skin disease was mostly at the age > 35 years with the category of skin disease occurring at 54.5% and the least at the age of 20-35 years with the category of no skin disease occurring at 9, 1%.

**Table 8.** Cross-tabulation of Sex and Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

Gender	Incidence of Skin Diseases				Total	
	Happen		Not occur		F	%
	F	%	F	%		
Male	17	38.6%	11	25.0%	28	63.6%
Women	14	31.8%	2	4.5%	16	36.4%
Total	31	70.5%	13	29.5%	44	100.0%

Based on table 8. It is known that in this study the incidence of skin disease was mostly male with a skin disease category of 38.6% and the least in a female gender with a non-occurring Skin disease category by 4.5%.

**Table 9.** Cross Tabulation of Personal Hygiene and Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

<i>Personal</i>	Incidence of Skin Diseases				Total	
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<i>Hygiene</i>	<b>Happen</b>		<b>Not occur</b>		F	%
	F	%	F	%		
Enough	0	0%	8	18.2%	8	18.2%
Less	31	70.5%	5	11.4%	36	81.8%
Total	31	70.5%	13	29.5%	44	100.0%

From the table above, the results show that in this study the most incidence of skin disease was personal hygiene with a poor category of 70.5% and the least on personal hygiene with a poor category of 11.4%.

**Table 10.** Cross Tabulation of Sanitation Facilities and Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City on June 15 to 16, 2020.

<b>Sanitation Facilities</b>	<b>Incidence of Skin Diseases</b>				<b>Total</b>	
	<b>Happen</b>		<b>Not occur</b>		F	%
	F	%	F	%	F	%
Less	22	50%	0	0%	22	50%
Well	9	20.5%	13	29.5%	22	50%
Total	31	70.5%	13	29.5%	44	100.0%

From the table above, the results show that in this study the most disease incidence was in respondents who stated that sanitation facilities were in a poor category of 50.0% and the least was in a good category of sanitation facilities by 20.5%.

**Table 11.** Analysis of Personal Hygiene and Sanitation Facilities Data on the Incidence of Skin Disease in Scavengers at TPA Klotok, Kediri City.

<b>Variable</b>	<b>B</b>	<b>Wald</b>	<b>Sig</b>	<b>OR</b>	<b>R Square</b>	<b>Simultaneous Sig</b>	<b>Hosmer-Sig</b>
<i>Personal Hygiene</i>	1,969	4,577	0.032	7,165	0.933	0,000	0.995
Sanitation Facilities	20,570	0,000	0.998	8,579			

In the table above, the results show that the research model is acceptable and hypothesis testing can be done because there is a significant difference between the model and the questionnaire or observation value where the sig value on the hosmer test is  $0.995 > 0.05$ , this means that the hypothesis rejects  $H_0$ . The ability of the independent variable in

explaining the dependent variable is 93%, this means that 3% of other factors outside the research explain the dependent variable.

All variables have a significant effect on variable y where the sig  $< 0.000$  value. But the only influential factor is sig X1 (Personal Hygiene) of 0.032. Meanwhile for X2 (Sanitation Facilities) it does not significantly influence the incidence of skin disease among scavengers at TPA Klotok Kediri City, because the sig X2 value is  $0.998 > 0.05$ . The amount of influence is indicated by the OR value. Personal Hygiene variable with OR 7,165, so respondents who have poor personal hygiene (code 0) are more at risk of experiencing skin disease as much as 7,165 times compared to respondents who have fairly good personal hygiene.

## DISCUSSION

### *Personal Hygiene Scavengers at the Klotok TPA, Kediri City*

The results of research conducted on 44 respondents to scavengers at TPA Klotok, Kediri City on June 15, 2020 to June 16, 2020, found that 36 respondents (81.8%) had personal hygiene in the poor category and 8 respondents (18.2%) have personal hygiene with good enough category.

The results of cross tabulation between age and personal hygiene can be seen that there are 26 respondents aged  $> 35$  years (59.1%) who have personal hygiene with a poor category. This is in line with research (Intan, 2013) which shows that there is no difference in personal hygiene among scavengers aged  $< 45$  years and  $> 50$  years.

Diseases caused by poor personal hygiene can affect all ages, whether children, adolescents or adults. In an adult, they will have the independence to do good personal hygiene, due to the increasing amount of knowledge and experience gained regarding the importance of health. According to (Hurlock 1998 in Intan 2013), the more old you are, the level of maturity and strength of a person will be more mature in thinking and working.

This study shows that 20-35 year olds have better personal hygiene behavior than those  $> 35$  years old because of the common attitudes found in almost every elderly person, namely the desire to live long, and the knowledge factor and their sense organs are still functioning normally than the elderly  $> 35$ . year. Age is one of the factor that plays an important role in a person, with increasing age there will be changes in physical and psychological aspects. Psychologically, getting older, the level of thinking a person will be more mature and mature. Indirectly, a person's knowledge will increase (Mubarak, 2007).

According to (Suryabudhi 2003 in Intan 2013), a person who lives a normal life can assume that the longer he lives, the more experience is, the more knowledge is wider, his expertise is deeper and his wisdom is getting better in making decisions about his actions.

The results of cross tabulation between sexes with personal hygiene with the highest category, namely men as many as 21 respondents (47.7%) had personal hygiene with poor category. This is in line with research (Intan, 2013) based on the Chi Square test, there is

no significant relationship between gender and personal hygiene ( $p > 0.05$ ). This shows that there is no difference in personal hygiene between male and female scavengers.

According to (Intan, 2013) the risk of disease problems related to personal hygiene behavior can occur to everyone, regardless of men or women. In addition, questions to measure personal hygiene were in the form of general health questions, without measuring specific health related to the health behavior of men and women. In everyday life, cleanliness is very important and must be considered because cleanliness will affect one's health and psychology. Cleanliness itself is very influential, including culture, social, family, education. a person's perceptions of health and development (Tarwoto & Wartonah 2006).

Hygiene practices are the same as improving health. By implementing patient hygiene measures, or helping family members to perform these actions in a hospital environment, nurses increase the patient's recovery rate. By teaching hygiene to respondents, respondents will play an active role in improving health and participate in self-care whenever possible (Perry & Potter, 2005). Personal hygiene is one of the basic abilities of humans in fulfilling their needs in order to maintain their life, health and well-being in accordance with their health conditions, clients are declared to be disturbed by their nursing if they cannot perform self-care (Direja, 2011).

The results of research on self-care or personal hygiene are self-care which is done to maintain health, both physically and psychologically. The fulfillment of self-care is influenced by various factors, including culture, values, social for individuals or families, knowledge of self-care and perceptions of self-care (Sulastri, 2018). This definition concludes that personal hygiene is an activity or act of cleaning all members of the body which aims to maintain a person's hygiene and health.

The results of the study, most of the respondents had personal hygiene with poor category. This shows that the knowledge about personal hygiene is still lacking because there are still scavengers who have not applied personal hygiene properly. Result characteristics such as age and gender have no effect on personal hygiene. This can be seen from the results of the research on how personal hygiene does not affect respondents

This study shows that male gender tends to have less personal hygiene behavior than female, this is different from previous research which states that female gender tends to be better than male gender. This difference can occur because there are more men than women who work as scavengers in TPA Klotok, Kediri City.

### **Sanitation Facilities at TPA Klotok, Kediri City**

The results of research conducted on 44 respondents to scavengers at TPA Klotok, Kediri City on June 15, 2020 to June 16, 2020, it was found that 22 respondents (50.0%) stated that sanitation facilities were poor and 22 respondents (50.0%) stated that the facilities sanitation is good enough. The result of cross tabulation between sanitation facilities and the incidence of skin disease shows that in this study the most disease incidence in sanitation facilities with poor category was 50.0% of skin diseases.

This is in line with research (Agsa, 2012) based on statistical tests there is a significant relationship between sanitation facilities and complaints of skin diseases ( $p < 0.05$ ). This shows that there is a relationship between sanitation facilities and complaints of skin diseases. This is also in line with research (Erna, 2013) based on statistical tests there is a significant relationship between the availability of sanitation facilities and the incidence of scabies skin disease ( $p < 0.05$ ). This shows that there is a relationship between sanitation facilities and scabies skin disease.

Basic sanitation facilities that are directly related to health problems include the provision of clean water, latrines, waste water disposal, and household waste management (Tarigan, 2008). Fulfillment of sanitation facilities such as clean water, latrines, bathrooms to meet the needs of bathing, washing and latrines as well as for wu'du for Muslims. One of them is the availability of clean water facilities is the most important thing in sanitation, where if there is no sufficient clean water used for hygiene, it is closely related to the occurrence of diseases, one of which is skin disease (Erna, 2013).

According to (July 2002 in Erna 2013) water has a close relationship with health. Water is the most essential thing for health, not only for production but also for domestic consumption and utilization (drinking, cooking, bathing, etc.). An increasing percentage of infectious diseases that can be fatal or detrimental to health are transmitted through contaminated water. Some water-related diseases are contagious, these diseases are generally classified according to various environmental aspects that can be intervened by humans.

According to the research results, the lack of good sanitation facilities causes problems, one of them is the occurrence of skin diseases. The importance of the aspects of the fulfillment of facilities and infrastructure as well as support from the manager of the Klotok City TPA Kediri for scavengers working to sort waste. From the observational data, it found that there were toilets in quite good condition, there were latrines and bathrooms that were quite clean, but there were no special bathrooms for men and women. Meanwhile, clean water, which is a basic need for sanitation, is sufficient and odorless. The absence of a sink for washing hands can lead to disease because scavengers who collect garbage need to wash their hands to kill bacteria and germs in the trash which can cause several diseases for scavengers. Fulfillment of the requirements for the office and industrial work environment based on the RI Minister of Health No. 1405 of 2002 concerning the health requirements of office and industrial work environments that the work environment must have sanitation facilities, one of the sanitation facilities in the work environment, namely toilets, toilet requirements, which are separate between women and men and have a sink, latrine and a toilet.

### **Incidence of skin disease in scavengers at TPA Klotok, Kediri City**

The results of research conducted on 44 respondents to scavengers at TPA Klotok, Kediri City on June 15, 2020 to June 16, 2020, found that 31 respondents (70.5%) had the category of skin disease and 13 respondents (29.5%) had the category no skin disease occurs. The results of cross tabulation between personal hygiene and the incidence of skin disease showed that 31 respondents (70.5%) had poor personal hygiene.

This is in line with research (Mushallina, 2014) based on statistical tests there is a significant relationship between personal hygiene and suspect scabies ( $p < 0.05$ ). This shows that there is a relationship between personal hygiene and suspect scabies. As well as this is in line with research (Erna, 2013) based on a statistical test, the  $p$ -value = 0.002 ( $p < 0.05$ ), the results of this statistical test show that there is a significant relationship between personal hygiene and the incidence of scabies skin disease.

This is in line with (Mosby, 1994 in Mushalina, 2014) saying that personal hygiene is important because good personal hygiene will minimize the entrance to microorganisms that are everywhere and ultimately prevent someone from contracting disease, in this case including skin diseases.

*Hygiene* individually It is vital for skin health, so any skin disorders can cause serious health problems. As an organ that functions as protection, the skin plays an important role in minimizing any disturbances and threats that will enter through the skin (Laily & Sulisty, 2012).

The result of cross tabulation between age and the incidence of skin disease shows that the most skin disease incidence is at age  $> 35$  years with the category of skin disease occurring at 54.5%. This is in line with research (Triana, 2019) based on statistical tests ( $p < 0.05$ ) which showed a relationship between age and the incidence of skin diseases.

One of the factors that can influence health behavior is age where health behavior varies based on age. Typically, children's health behavior can be said to be good, worsening in adolescence and adults, but increases in older people. A skin disease that affects all people of all ages but human skin degenerates with age, someone who is older has dry and thin skin so that they cannot tolerate soap or solvents. This dryness of the skin can make it easier for chemicals to infect the skin, making the skin more susceptible to skin diseases (Triana, 2019).

The results of cross tabulation between sexes and the incidence of skin disease, it can be seen in most of the incidence of skin disease within male, with a skin disease category of 38.6%. This is in line with research (Triana, 2019) based on statistical tests ( $p < 0.32$ ) which showed that there was no sex relationship with the incidence of skin diseases.

Based on (Aesthetic Surgery Journal in Triana, 2019) women are said to be more at risk of developing skin diseases than men. There is a difference between men's and women's skin, men's skin has a dominant hormone, namely androgens, which can cause men's skin to sweat more and have more hair, while women's skin is thinner than men's skin so it's more susceptible to skin damage. Male skin has apocrine glands that are responsible for secreting oil in the hair and hair on the body, these glands are active during adolescence, while as women age, the skin becomes drier.

For garbage collectors is very important to paying attention to treatment because the working conditions are not clean, thus increasing the likelihood of being exposed to various diseases such as skin diseases (Tarwaka, 2008). Skin disease is a disease that attacks the surface of the body, and is caused by various causes. Of course every skin

disease has varieties which will show variants in symptoms and severity and may display some unique characteristics. Types of skin diseases can range from nearly invisible to life threatening. Some living things can cause skin diseases caused by living things such as bacteria, viruses and fungi (Susanto & Made, 2013).

Causes of skin disorders are poor work and personal hygiene. To maintain clean skin, healthy habits must be considered such as maintaining clean clothes, bathing regularly, bathing using clean water and soap, using daily necessities of one's own, eating nutritious, especially lots of vegetables and fruits, and keep the environment clean. From these things, it is concluded that it is very important for scavengers to maintain and care for skin hygiene, especially from exposure in the work environment. Skin care is very important to do because the skin is an active organ that functions as a defense organ from various kinds of germs or trauma, a place for secretions and excretions, regulates temperature and sensation conditions, so it takes a balanced treatment in maintaining its function. According to the results of the study, most respondents experienced or had skin diseases. This shows that awareness of good hygiene behavior and the performance of health workers must be optimized to reduce the number of skin diseases that occur in respondents.

The results of the study most of the respondents had a risk of skin disease. This is due to environmental conditions that interact with substances that cause the risk of skin disease every day, supported by research results > 35 years of age tend to develop skin diseases and more predominantly male, which shows that most male sexes can be said to have less concern for making efforts to prevent skin diseases. So that the impact on most of them has a risk of developing skin diseases.

### **The Effect of Personal Hygiene and Sanitation Facilities on the Incidence of Skin Diseases in Scavengers at TPA Klotok, Kediri City**

The results of research conducted on 44 respondents to scavengers at TPA Klotok Kota Kediri from June 15 2020 to June 16 2020 showed that the personal hygiene of 36 respondents (81.8%) had personal hygiene in the poor category and 8 respondents (18.2 %) had personal hygiene in a fairly good category, while the sanitation facilities showed that 22 respondents (50.0%) stated that the sanitation facilities were not good and 22 respondents (50.0%) stated that the sanitation facilities were good enough and the incidence of skin diseases showed that 31 respondents (70.5%) had a skin disease category and 13 respondents (29.5%) had no skin disease category.

Based on the results of cross tabulation of age and personal hygiene in this study, personal hygiene was mostly found at the age > 35 years with the poor category of 59.1% and the least at the age of 20-35 years with the fairly good category of 2.3%. Cross tabulation of sex and personal hygiene in this study, personal hygiene was mostly found in the male gender with the poor category of 47.7% and the least in the female gender with the moderate good category of 2.3%. Cross tabulation of age and the incidence of skin disease in this study, the highest incidence of skin disease was at the age > 35 years with the category of skin disease occurring at 54.5% and the least being at the age of 20-35 years with the category of no skin disease occurring at 9, 1%. Cross tabulation of sexes

and the incidence of skin diseases in this study, the highest incidence of skin disease was in the male gender with the category of skin disease occurring at 38.6% and the least in the female gender with the category of not having skin disease by 4, 5%. Cross tabulation between personal hygiene variables and the incidence of skin disease showed that in this study the most incidence of skin disease was personal hygiene with poor category at 70.5% and the least on personal hygiene with poor category at 11.4%. Cross tabulation between the variables of sanitation facilities and the incidence of skin disease showed that in this study the most disease incidence was in sanitation facilities with a poor category of 50,

Based on the results of the Logistic Regression statistical test, it was obtained personal hygiene for the incidence of skin disease  $\text{sig} = 0.032$  and sanitation facilities for the incidence of skin disease  $\text{sig} = 0.998$ . From the results of the two, the significance value is  $> 0.05$ , so it can be concluded that there is an effect of personal hygiene on the incidence of skin disease, meanwhile there is no effect of sanitation facilities on the incidence of skin disease in scavengers at TPA Klotok, Kediri City.

*Hygiene* studying the influence of environmental conditions on human health, efforts to prevent disease due to the influence of the health environment and to make environmental conditions in such a way that health maintenance is guaranteed (Soegiarto, 2007). Personal hygiene is included in specific primary preventive measures, personal hygiene is important because good personal hygiene will minimize the entrance (portal of entry) to microorganisms that are everywhere and ultimately prevent a person from getting sick. Poor personal hygiene will make it easier for the body to suffer from various diseases, one of which is skin disease (Sheizi P, 2007). The final disposal site (TPA) is a place that has the potential to affect the health of scavengers, because in the TPA there are many piles of garbage that allow bacteria and viruses to reproduce. Poor waste management can have a negative effect on health, one of which is skin disease (HJ Mukono, 2006).

Sanitation is a deliberate behavior in cultivating clean living with the intention of preventing humans from coming in contact with dirt and other hazardous waste in the hope that this effort will maintain and improve human health. Sanitation generally refers to the provision of facilities and facilities for disposing of human waste such as urine and feces (WHO, 2004).

There is a close relationship between sanitation and health facilities. Inadequate sanitation facilities and infrastructure can affect the spread of diseases such as skin diseases. The purpose of sanitation is to ensure the cleanliness of the human environment so as to create a condition that is in accordance with health requirements and to restore, repair and maintain health. One of the benefits of sanitation is preventing the emergence of infectious diseases, one of which is skin disease. Therefore, sanitation facilities create a healthy quality environment with a condition that is free from risks that endanger the health and safety of human life, through the work environment between offices or similar industrial areas.

One part of the body that is sensitive to various diseases is the skin. The skin is an elastic wrap that protects the body from environmental influences. A healthy and clean

environment will have a good effect on the skin. Likewise, on the contrary, a dirty environment will be a source of various diseases, including skin diseases. The factors that influence the high prevalence of skin diseases are a hot and humid climate which allows the proliferation of fungi, poor personal hygiene and inadequate economic factors (Harahap, 2000 in Rizal, 2017). One of the factors that cause skin disease is personal hygiene which includes skin cleanliness, hair and scalp hygiene, nail hygiene, shower intensity and others (Potter, 2005).

A healthy and clean environment will have an effect on the skin. Likewise, on the contrary, a dirty environment will be a source of various diseases, for example skin diseases that can be caused by bacteria, fungi, viruses and lice (Harahap, 2000 in Rizal, 2017). Personal hygiene including skin hygiene is very important in health care efforts such as bathing every 2 times a day using soap and diligently washing hands and feet when finished activities to avoid infectious diseases. One of the most important factors is the availability of adequate sanitation facilities, through the provision of good facilities that will prevent the occurrence of diseases caused by bacteria and fungi.

The results of this study indicate that the personal hygiene of the respondents in TPA Klotok, Kediri, is more dominated by the male gender which tends to have less personal hygiene behavior than the female gender. This is different from previous research which states that the female gender tends to be better than the male gender. This difference can be due to the fact that there are more men than women who work as scavengers in TPA Klotok, Kediri City.

From the observational data, it was found that there were toilets that were in quite good condition, there were latrines and bathrooms that were quite clean, but there were no special bathrooms for men and women. Meanwhile, clean water, which is a basic need for sanitation, is sufficient and odorless. The absence of a sink for washing hands can lead to disease because scavengers who collect garbage need to wash their hands to kill bacteria and germs in the trash which can cause several diseases for scavengers. Fulfillment of the requirements for the office and industrial work environment based on the RI Minister of Health No. 1405 of 2002 concerning environmental health requirements for offices and industries that the work environment must have sanitation facilities,

The results of the study most of the respondents had a risk of skin disease. This is due to environmental conditions that interact with substances that cause the risk of skin disease every day, supported by research results > 35 years of age tend to develop skin diseases and are more predominantly male, which shows that most male sexes can It is said that there is less concern for making efforts to prevent skin diseases. So that the impact on most of them has a risk of developing skin diseases.

## **CONCLUSION**

Based on the results of the Logistic Regression statistical test, it was obtained personal hygiene for the incidence of skin disease  $\text{sig} = 0.032$  and sanitation facilities for the incidence of skin disease  $\text{sig} = 0.998$ . From the results of the two, the significance value is > 0.05, so it can be

concluded that there is an effect of personal hygiene on the incidence of skin disease, meanwhile there is no effect of sanitation facilities on the incidence of skin disease in scavengers at TPA Klotok, Kediri City. The incidence of skin disease has a direct effect on personal hygiene because personal hygiene is the main thing in every human being that can prevent the occurrence of skin diseases and other diseases. Scavengers who are active in collecting garbage can develop skin diseases that can attack the body if they do not pay attention to their hygiene.

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