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The Relationship Between Personal Hygiene and Environmental Sanitation and the Incidence of Skin Diseases (Leprosy)

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A B S T R A C T

There has been an increase in leprosy cases at the Meo-Meo Health Center, namely in 2020 there were 5 cases, in 2021 there were 9 cases, and continued to increase in 2022 there were 12 cases. Risk factors related to personal hygiene have a major influence on the possibility of leprosy transmission. A good degree of environmental sanitation usually will not experience leprosy cases, while a poor degree of environmental resolution will experience leprosy cases. The type of research used is analytical research with a cross-sectional study design. The results of this study indicate that the personal hygiene variable bathing habits p value = 0.003, the habit of borrowing towels p value = 0.017, clean water facilities p value = 0.018 wastewater disposal facilities p value = 0.748, Waste facilities variable p value = 418 Toilet variable p value = 0.540. The conclusion is that there is a relationship between the variables of bathing habits, the habit of borrowing towels, clean water facilities and there is no relationship between wastewater disposal facilities, garbage disposal facilities, toilets with the incidence of leprosy

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INTRODUCTION

Describe the background of your article in a concise and detailed way by using data and/or literature review to show the novelty. This section describes the problematic reality that is studied based on a scientific perspective. The introduction concludes by describing thfe purpose of writing the article

Leprosy is an infectious disease that can cause very complicated problems. This problem is not only medical but also spreads to social, economic and psychological problems. Leprosy is highly stigmatized in society, not because it causes death, but because it causes permanent disability. Leprosy germs often attack the peripheral nerves of the skin and other body tissues. The cause of leprosy is the bacteria Mycobacterium leprae. Although leprosy is rarely fatal, leprosy is a disease that can damage, paralyze, and stigmatize Mycobacterium leprae reproduces slowly and the average incubation period of this disease is 3-5 years. Symptoms can appear within a year or last for 20 years or even longer. This disease can be cured with combination therapy. Leprosy is likely transmitted through nasal and oral droplet infections through close and frequent contact with untreated sufferers (Tarigan 2022)

The source of transmission of this disease is a patient with multilocular leprosy or wet leprosy. If Mycobacteria leprae enters the human body, the clinical symptoms that appear depend on the person's level of vulnerability. The clinical type depends on the patient's cellular immune system (Astri Yunita Prasetyaningtyas 2017).

Based on (WHO, 2020) According to official figures, there were 127,558 new cases of leprosy worldwide from 139 countries in 6 WHO regions. Including 8,629 children under 15 years of age. The new case detection rate in children is 4.4 per million children.

According to the Ministry of Health (Kemenkes), the prevalence of leprosy in Indonesia is 0.55 per 10,000 population in 2022. This prevalence has increased compared to the previous year, which was 0.5 cases per 10,000 population. According to the province, West Papua will have the highest number of leprosy cases in Indonesia in 2022. Up to 9.89 per 10,000 provincial residents suffer from leprosy. North Maluku follows in second place with a leprosy prevalence of 5.32 per 10,000 population. At that time, Papua and Maluku recorded leprosy cases per 10,000 of 4.18 and 2.08, respectively. Then the incidence of leprosy in North Sulawesi is 1.94 per 10,000 population. The prevalence of leprosy in Gorontalo and West Sulawesi is 1.24 cases per 10,000 population. The prevalence of leprosy in Southeast Sulawesi is 0.95 cases per 10,000 population. At that time the incidence of leprosy in Central Sulawesi was 0.94 cases per 10,000 population. West Sumatra is currently the area with the lowest incidence of leprosy, which is 0.1 cases per 10,000 population. Above that, North Sumatra and Jambi, both have a leprosy prevalence rate of 0.11 cases per 10,000 population (Widi 2023)

Based on the profile data of the Southeast Sulawesi Health Office in 2021, there were 0.86 cases per 10,000 population, increasing in 2022 to 0.95 cases per 10,000 population (Ministry of Health of the Republic of Indonesia 2022).

Based on the Baubau City Health Office, Southeast Sulawesi in 2020 there were 35 cases of leprosy, increasing in 2021 to 47 cases of leprosy and decreasing by 1 case in 2022 to 46 cases of leprosy.

Meo-meo Health Center is ranked first with 12 cases of leprosy, followed by Batarugu Health Center with 5 cases and the third rank is Bungi Health Center where there are 4 cases of leprosy.

In 2020, the Meo-Meo Health Center had 5 cases of leprosy, increased by 9 cases in 2021, and continued to increase by 12 cases in 2022. And leprosy cases are also divided into several sub-districts in the Meo-Meo Health Center's working area, namely, 6 cases of leprosy in Wameo sub-district, 3 cases of leprosy in Lanto sub-district, 3 cases of leprosy in Kaobula sub-district and 1 case in Ngaumala sub-district.

Based on the results of interviews at the Meo-Meo Health Center with health center officers, especially officers in the field of leprosy, that the mycobacterium leprae germ is transmitted to humans through direct contact, and through respiratory contact, then the germ divides within 14-12 days with the incubation period of leprosy after direct contact with leprosy sufferers is 5-10 years or 15 years. Treatment for dry leprosy (Pausi Basiler) with a treatment period of 6 months, while treatment for wet leprosy (Multi Basiler) with a treatment period of 12 months. And if leprosy sufferers have undergone examination and treatment, the germs cannot be transmitted to others. But if leprosy sufferers do not undergo treatment, the germs can be transmitted through direct contact. So based on the description above, the purpose of the study was to examine the "Relationship of Personal Hygiene and Environmental Sanitation to the Incidence of Skin Disease (Leprosy) in the Community in the Meo-Meo Baubau Health Center Work Area".

LITERATURE REVIEW

Overview of Personal Hygiene and Environmental Sanitation

Personal Hygiene is an effort to maintain a healthy life in the form of personal hygiene behavior. Personal hygiene includes bathing behavior, dressing behavior, hand washing behavior and sleeping behavior (Rofifah et al., 2019).

Personal Hygiene is an early sign of the entry of disease agents, because if someone has good personal hygiene, it reduces the risk of health problems. However, if someone has poor personal hygiene, then the risk of health problems is high (Rabiatul Adwiyah, 2021).

Many health disorders are suffered by a person due to poor personal hygiene. Common physical diseases are skin integrity disorders, oral mucosal diseases, eye and ear infections, and physical disorders of the nails (Mayona, 2017).

Sanitation is a conscious behavior in a clean living culture that aims to prevent humans from coming into direct contact with dirt and other waste materials in the hope that these efforts will maintain and improve human health (Abdillah Saragih, 2021).

The physical environment also has a relationship with the quality of life of former sufferers who are affected, namely an unhealthy physical environment is 1,805 times more likely to have a poor quality of life (Aminah et al., 2023)

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Environmental Sanitation Factors That Affect the Incidence of Leprosy

1. **Provision of Clean Water**

The provision of clean water can support health and avoid health problems, on the other hand, inadequate clean water facilities will have an impact on health and result in diseases, one of which is skin disease complaints (Abdillah Saragih, 2021).

2. **Waste Disposal**

Waste is a material that is no longer used or reused which comes from human activities that do not occur by themselves. Poor waste management can have a negative impact on health, the environment, as well as on the socio-economic and cultural life of the community. Waste that is in the open will become a breeding ground for disease vectors such as flies and rats and damage the aesthetics of the environment (Abdillah Saragih, 2021).

3. **Waste Disposal Facilities (Latrines)**

Latrines are one of the facilities used for human waste disposal that must be owned by every house, the availability of latrines can minimize the occurrence of infectious diseases, this is because there are still many people who dispose of their waste into the water source used by the surrounding environment which can cause infectious diseases (Abdillah Saragih, 2021).

4. Wastewater Disposal Facilities

Wastewater is wastewater that is disposed of by households and industries and often contains hazardous materials or substances, according to the substances in the wastewater, untreated waste causes public health and environmental problems, including waste as a means of transmitting disease (Abdillah Saragih, 2021)

5. Overview of Leprosy Disease

According to the World Health Organization (WHO), leprosy is one of the seventeen neglected tropical diseases that require special attention worldwide. Leprosy is also called "The Great Imitator Disease" because the manifestations are similar to many other skin diseases, such as fungal skin infections. It is rare for someone to realize that they have leprosy (WHO, 2020).

Leprosy is a chronic granulomatous infectious disease caused by the obligate intracellular bacteria Mycobacterium leprae (M. leprae). Leprosy originated in India, 600 years before Christ (BC). This disease was discovered in America in 1866, and is thought to have been brought by immigrants from Europe. In 1873, Armauer G. Hansen in Norway succeeded in identifying the organism that causes leprosy, so this disease is also known as Hansen's diease (Gunawan et al., 2018).

METHODOLOGY

Research Instruments

The type of research used is analytical research, which is research aimed at testing hypotheses and conducting deeper interpretations of the relationship between independent variables and dependent variables. This research includes cross-sectional research, which is a study to study the dynamics of correlation between risk factors and effects using an observational approach or data collection at one time (point time approach.)

Data Collection Processes

Primary Data

Primary data is original data collected by the researcher himself to solve a particular research problem. In general, this primary data is not yet available, so researchers must collect data according to their own needs. This study consists of interviews using questionnaires, observations made directly by researchers and measurements.

Secondary Data

Secondary data is data obtained as a result of collecting data from sources or other parties, especially by conducting literature studies with research subjects or which can be done using data obtained from authorized parties. Secondary data for this study includes data obtained from the Baubau Health Office, Meo-Meo Health Center, and others.

Hypothesis Testing Processes

a. There is a significant relationship between the habit of bathing in a day, the habit of borrowing and using towels, the provision of clean water, wastewater drainage, garbage disposal facilities, provision of toilets with the incidence of leprosy in the work area of the Meo-Meo Health Center. Ha is accepted and Ho is rejected
b. There is no significant relationship between the habit of bathing in a day, the habit of borrowing and using towels, the provision of clean water, wastewater drainage, garbage disposal facilities, provision of toilets with the incidence of leprosy in the work area of the Meo-Meo Health Center. Ha is rejected and Ho is accepted

Data Presentation Process

Data Processing

Data processing is part of a series of activities carried out after data collection. For ease of data processing, computer programs are used. Data processing steps include editing, scoring, coring, entry, tabulating.

1. **Data Editing**

Editing is usually done to check the completeness and accuracy of data such as filling in, filling in errors, consistency of filling in each questionnaire answer.

2. **Scoring**

Scoring is giving a score or value to the answer to facilitate the addition process.

3. **Coding**

Coding is the process of classifying data and giving respondent answer codes. Done when making a questionnaire to facilitate further data processing.

4. **Data Entry (entry)**

Entry, is the process of entering questionnaire data that has been given a code for each variable, then data analysis is carried out by entering the data with statistical software to be carried out univariate.

5. **Tabulating**

Tabulating which groups data according to the variables to be studied to facilitate data analysis.

RESULTS AND DISCUSSION

The data collection technique was carried out using a questionnaire about the relationship between personal hygiene and environmental sanitation and the incidence of skin disease (leprosy) in the community in the Meo-meo Health Center Working Area of Baubau City. With the results of the research that has been carried out, there are 365 respondent samples studied from a total of 4,176 Heads of Families (KK). Where the number of samples obtained is adjusted using the sample size formula.

Based on the data obtained from the collection and processing of respondent data studied, the results obtained are:

Table 1. Subject characteristics (n=158)

Variable	N	%
Age		
20-30 years	147	40,3
31-40 years	78	21,4
41-50 years	62	17,0
51-60 years	41	11,2
61-70 years	26	7,1
71-80 years	11	3,0
Education		
No Schooling	49	13,4
Elementary School Graduated	54	14,8
Junior High School Graduated	60	16,4
High School Graduated	138	37,8
D1	6	1,6
D2	1	0,3
D3	2	0,5
S1	51	14,0
S2	4	1,1
Occupation		
Not working/housewife	170	46,6
Farmer	51	14,9
Fisherman	26	7,1
Trader	29	7,9
Self-employed	59	16,2
Civil servant	30	8,2
Personal Hygiene Bathing Habits		
Poor		
Good	31	8,5
	334	91,5
Personal Hygiene Habit of Borrowing Towels		
Yes		
No	168	46,0
	179	54,0

Variable	N	%
Clean Water Facilities		
Poor	66	18,1
Good	299	81,9
Wastewater Facilities		
Poor	162	44,4
Good	203	55,6
Waste Disposal		
Poor	92	25,2
Good	273	74,8
Toilet		
Not good	16	4,4
Good	349	95,6
Leprosy Disease		
Yes	8	2,2
No	357	97,8

Table 1 also shows that knowledge of poor bathing habits is 31 people with a percentage (8.5%) and those who have good bathing habits are 334 respondents with a percentage (91.5%). Knowledge of the habit of borrowing towels is 168 respondents with a percentage (46.0%), and those who do not have the habit of borrowing towels are 197 respondents with a percentage (54.0%), while knowledge of clean water facilities is poor is 66 respondents with a percentage (18.1%). And people who have good clean water facilities are 299 respondents with a percentage (81.9%). Knowledge of poor wastewater disposal facilities is 162 respondents with a percentage (44.4%) and respondents who have good wastewater disposal facilities are 203 respondents with a percentage (55.6%). Knowledge of poor waste disposal facilities is 92 respondents with a percentage (25.2%) and respondents who have good waste disposal facilities are 273 respondents with a percentage (74.8%). Knowledge of poor toilet facilities was 16 respondents with a percentage (4.4%) and respondents who had good toilets were 349 respondents with a percentage (95.6%). As for the incidence of leprosy, with a total of 357 respondents with a percentage (97.8%) while the category of leprosy affected by the disease was 8 respondents with a percentage (2.2%).

Table 2. Distribution of the relationship between daily bathing habits, habits of borrowing and using towels, provision of clean water, wastewater disposal, waste disposal facilities, provision of toilets with the incidence of leprosy in the Meo-Meo Health Center work area.

Personal Hygiene Bathing Habits	**Incidence of Leprosy**						
	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Poor	3	9,7	28	90.3	31	100	0,003
Good	5	1,5	329	98,5	334	100	
Total	8	2,2	357	97,8	365	100	
	Incidence of Leprosy						
Personal Hygiene Habit of Borrowing Towels	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Yes	7	4,2	161	95,8	168	100	0,017
No	1	0,5	196	99,5	197	100	
Total	8	2.2	357	97,8	365	100	
Clean Water Facilities	**Incidence of Leprosy**						
	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Poor	4	6,1	62	93,9	66	100	0,018
Good	4	1,3	295	98,7	299	100	
Total	8	2,2	357	97,8	365	100	
Wastewater Facilities	**Incidence of Leprosy**						
	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Poor	4	2,5	158	97,5	162	100	0,746
Good	4	2,0	199	98,0	203	100	
Total	8	2,2	357	97,8	365	100	
Waste Disposal	**Incidence of Leprosy**						
	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Poor	3	3,3	89	96,7	92	100	0,418
Good	5	1,8	268	98,2	273	100	
Total	8	2,2	357	97,8	365	100	
Toilet	Incidence of Leprosy						
	Yes		No		Amount		P Value
	N	%	N	%	N	%	
Not good	0	0	16	100	16	100	0,540
good	8	2,3	341	97,7	341	100	
Total	8	2,2	357	97,8	365	100	

Based on the results of Chi Square shows a significant value where p value = 0.003 <α = 0.05 thus Ha is accepted and Ho is rejected, which means there is a relationship between personal hygiene bathing habits and the incidence of leprosy in the Meo-meo Health Center Work Area, Based on the results of Chi Square shows a significant value where p value = 0.017 <α = 0.05 thus Ha is accepted and Ho is rejected, which means there is a relationship between personal hygiene habits of borrowing towels and the incidence of leprosy in the Meo-meo Health Center Work Area, Based on the results of Chi Square shows a significant value where p value = 0.018 <α = 0.05 thus Ha is accepted and Ho is rejected, which means there is a relationship between clean water facilities and the incidence of leprosy in the Meo-meo Health Center Work Area. Based on the results of Chi Square shows a significant value where p value = 0.746 >α = 0.05 thus Ha is rejected and Ho is accepted, which means there is no relationship between wastewater disposal facilities and the incidence of leprosy in the Meo-meo Health Center Work Area Meo-meo Health Center. Based on the results of Chi Square shows a significant value where p value = 0.418 > α = 0.05 thus Ha is rejected and Ho is accepted, which means there is no relationship between waste disposal facilities and the incidence of leprosy in the Meo-meo Health Center Work Area. Based on the results of Chi Square shows a significant value where p value = 0.540 > α = 0.05 thus Ha is rejected and Ho is accepted, which means there is no relationship between latrines and the incidence of leprosy in the Meo-meo Health Center Work Area.

Relationship Between Personal Hygiene Bathing Habits and Leprosy

According to several experts, leprosy can be prevented because leprosy is transmitted through the respiratory tract and skin (direct contact for a long time), and bacteria reach the skin surface through hair follicles, sweat glands, and possibly breast milk, so leprosy can be prevented by improving personal hygiene (Rismawati, 2020). Humans are a source of transmission of bacteria such as Mycobacterium leprae, and these bacteria can infect 10-15 people. According to a study conducted by the Ecology Research Center, the rate of leprosy transmission in families with leprosy is very high, with one affected individual potentially infecting an average of two to three people in their home. Therefore, personal hygiene or hosts in this case humans need to be improved through clean and healthy living habits (Marsanti & Ardiani, 2020).

Based on the bivariate analysis showing the relationship between personal hygiene and bathing habits with the incidence of leprosy, it is known that the number of respondents who have poor bathing habits with non-leprosy status is 28 respondents (90.3%). This is because there are still people who are less concerned about their own hygiene. Meanwhile, respondents who have poor bathing habits with leprosy status are 3 respondents (9.7%). This is because these respondents are also less concerned about their hygiene, such as not bathing twice a day on the grounds of being lazy to bathe and saving water. According to (Wijayanti, 2017) Skin is one of the important aspects that needs to be considered in personal hygiene, so bathing is one way to remove dirt from the body, especially the skin. Skin is an elastic layer that protects the body from environmental influences, so it requires proper care to maintain its function. In order for the body to remain comfortable, it is necessary to bathe twice a day.

Bathing can be refreshing, relieve anxiety, and help prevent unpleasant body odor. In addition to physical health, bathing is also needed to maintain skin health so that the body can ward off various types of infections. Maintaining personal hygiene can reduce the occurrence and spread of leprosy. Personal hygiene practices aim to improve health, as the skin is the first line of defense against infection.

The number of respondents who have good bathing habits with no leprosy status is 329 respondents (98.5%). This is because respondents have implemented good personal hygiene such as bathing 2-3 times a day using soap, etc. While respondents who have good bathing habits with leprosy status are 5 respondents (1.5%). This is because respondents have also implemented good personal hygiene such as bathing 2-3 times a day using antibacterial soap, but the respondent's environmental factors influence the transmission of leprosy. According to (Muharry, 2018) Bathing alone is not enough to stop the transmission of leprosy. Therefore, improving personal hygiene must be improved to prevent the transmission of leprosy by getting used to bathing at least 2 times a day using non-irritating soap, using soap all over the body, especially on skin folds, and not using soap for the face.

Based on the results of the Chi Square test to determine the relationship between personal hygiene and the incidence of leprosy, it shows a p value = 0.003 $<\alpha = 0.05$, this means that there is a significant relationship between personal hygiene and the incidence of leprosy in the Meo-meo Health Center Work Area. This is in line with research (Saleh et al., 2024) on "Analysis of Risk Factors Related to the Incidence of Leprosy at the Tamalanrea Jaya Health Center, Makassar City" showing that there is a relationship between personal hygiene bathing habits and the incidence of leprosy with a p value = 0.002

Relationship Between Personal Hygiene Habit of Borrowing Towels and Leprosy

Towels that are used as body drying tools are objects that are very susceptible to germs because of the dirt that is transferred from the body. That is why it is highly recommended not to reuse towels and not to wash them for a long time. It is better to clean towels every three times of use and always dry the towels in the sun (Indri M. Riwu Djata et al., 2022).

Based on the bivariate analysis showing the relationship between personal hygiene habits of borrowing towels and the incidence of leprosy, it is known that the number of respondents who have a habit of borrowing towels with non-leprosy status is 161 respondents (95.8%). This is because there are still respondents who do not apply personal hygiene properly. Meanwhile, respondents who have a habit of borrowing towels with leprosy status are 7 respondents (4.2%). This is because respondents have towels that do not match the number of family members at home. And it is possible that they have a habit of borrowing towels with other family members, and respondents rarely change towels so that many germs and bacteria stick to the towels. According to (Aprita Nurkarima, 2018) who stated that towels should not be used alternately because they can easily transmit bacteria from sufferers to others. If the towel has never been dried in the hot sun or has not been washed for a long time, the number of

bacteria on the towel is likely to increase and is at risk of transmitting the disease to others.

The number of respondents who do not have the habit of borrowing towels with non-leprosy status is 196 respondents (99.5%). This is because some respondents have implemented good personal hygiene. While those who do not have the habit of borrowing towels with leprosy status are 1 respondent (0.5%). This is because respondents have also implemented good personal hygiene, but the environmental factors of respondents affect the transmission of leprosy. According to (Lidiawati, 2016) Personal hygiene is self-care carried out to maintain physical and mental health. Personal hygiene is an individual's self-care to maintain their health and is influenced by values and skills. Individual efforts to maintain personal hygiene and health in order to achieve physical and psychological well-being and health. The desire for personal hygiene is needed for both healthy and sick people. Therefore, prevention of leprosy can be done by improving personal hygiene, including skin cleanliness, washing hands and feet, hair cleanliness, clothing cleanliness, towel cleanliness, and bed cleanliness because leprosy transmission is greatly influenced by contact with sufferers. Based on the results of the Chi Square test to determine the relationship between personal hygiene habits of borrowing towels and the incidence of leprosy, it shows a significant value where p value = 0.017 <α = 0.05, this means that there is a relationship between personal hygiene habits of borrowing towels in the Meo-meo Health Center Work Area.

This is in line with research (Novita et al., 2023) on "The Relationship between Personal Hygiene and the Incidence of Leprosy at the Manguharjo and Ngegong Health Centers" which shows that there is a relationship between personal hygiene habits of borrowing towels and the incidence of leprosy with a p value = 0.006.

Relationship Between Clean Water Facilities and Leprosy

Water is one of the basic human needs. The water used by people every day is closely related to their health. Water can be a vector for the spread of disease if water sources and health standards are not adhered to (Annisa & Susilawati, 2022).

Based on the bivariate analysis showing the relationship between clean water facilities and leprosy, it is known that the number of respondents who have poor clean water facilities with no leprosy status is 62 respondents (93.9%). This is because some respondents have poor clean water, but with good individual immune status so they do not get leprosy. Meanwhile, respondents who have poor clean water facilities with leprosy status are 4 respondents (6.1%). This is because respondents with poor clean water are at risk of getting leprosy, because poor clean water, such as water that has been contaminated with bacteria, viruses, and parasites, can cause leprosy.

Some respondents use poor clean water facilities, so they can get leprosy compared to people who use good clean water facilities.

Relationship Between Wastewater Disposal Facilities (SPAL) and Leprosy

Based on the bivariate analysis showing the relationship between wastewater disposal facilities (SPAL) and leprosy, it is known that the number of respondents who have poor wastewater disposal facilities with no leprosy status

is 158 respondents (97.5%). This is caused by other factors that are met such as individual hygiene where clean toilets, clean water meets the requirements in the sense that it is not cloudy, does not smell and is not colored. Meanwhile, respondents who have poor wastewater disposal facilities with leprosy status are 4 respondents (2.5%). This is because some wastewater disposal channels are <10m from the water source so that liquid waste can pollute clean water sources, and there are also respondents whose wastewater is channeled into open gutters so that liquid waste can pollute clean water sources and does not flow smoothly. The number of respondents who have good wastewater disposal facilities (SPAL) with no leprosy status is 199 respondents (98.0%). This is because respondents have wastewater disposal facilities (SPAL) that meet the requirements, namely not polluting water sources, or flowing into closed gutters. Meanwhile, respondents who have good wastewater disposal facilities (SPAL) with leprosy status are 4 respondents (2.0%).

Relationship Between Waste Disposal Facilities and Leprosy

Based on the bivariate analysis showing the relationship between waste disposal facilities and leprosy, it is known that the number of respondents who have poor waste facilities, with no leprosy status, is 89 respondents (96.7%). This is because the community in the Meo-Meo Health Center's work area, in terms of waste disposal sites, still does not meet the requirements, as well as in terms of waste management sites that are left piled up until the waste collectors come to collect the community's waste. Waste disposal that does not meet environmental health requirements can result in groundwater pollution, air pollution, and can even cause health problems, one of which is leprosy. Meanwhile, the number of respondents who have poor waste disposal facilities with leprosy status is 3 respondents (3.3%). This is because respondents have waste disposal facilities that do not meet the requirements, where the waste bins that do not have covers owned by respondents can trigger the transmission of leprosy, where if it rains the waste will be stagnant. so that when they want to throw away the waste, the skin comes into direct contact with the waste. So that the bacteria move to the hands and cause the occurrence of leprosy disease vectors.

The number of respondents who have good waste disposal facilities with non-leprosy status is 268 respondents (98.2%). This is because respondents also have good waste disposal facilities, which are equipped with covers and are waterproof. Meanwhile, respondents who have good waste disposal facilities with leprosy status are 5 respondents (1.8%). This is because respondents also have good waste disposal facilities, but even though waste disposal facilities are good, there is a possibility of other factors in the environment that can affect the health of respondents. such as lack of clean living behavior or dense and unhygienic living conditions. According to (Mallongi et al., 2017). Waste facilities are needed to facilitate waste collection and transportation, and prevent environmental pollution. With the right place to collect waste, waste will not be scattered around the environment. In addition, regular waste disposal can also help improve the health and cleanliness of the environment. Based on the results of the Chi-Square test to determine the relationship between waste facilities and the incidence of leprosy, it shows a significant value where p value = 0.418 > α =

0.05, this shows that there is no significant relationship between waste facilities and the incidence of leprosy in the Meo-meo Health Center Working Area.

Relationship Between Latrines and Leprosy

Based on the bivariate analysis showing the relationship between latrines and leprosy, it is known that the number of respondents who have poor latrines, with a status of no leprosy, is 16 respondents (100%). This is because latrines that do not meet the requirements are one of the risk factors for the occurrence of the disease. According to (Nadiya et al., 2020). That people who live in houses with unhealthy latrines are more likely to get leprosy, compared to those who live in houses with healthy latrines but are not significant. Several studies have also shown that the health of latrines is closely related to various infectious diseases, including leprosy.

The number of respondents who have good toilets with no leprosy status is 341 respondents (97.7%). This is because toilets that meet the requirements do not have a high chance of transmitting leprosy. Meanwhile, respondents who have good toilets with leprosy status are 8 respondents (2.3%). This is because the community has used goose-neck toilets that meet the requirements, but these toilets are rarely cleaned and can cause unpleasant odors, and are filled with insects so that they can cause leprosy transmission. According to (Siswanti, 2018) that human waste is solid waste that causes odor, pollutes the environment, and can be a vector for disease transmission. Therefore, it is very important to maintain the cleanliness of the toilet to avoid germs. According to (Agustin, 2017). The requirements for a healthy toilet are that it does not pollute the drinking water source (the distance between the drinking water source and the storage hole is at least 10 meters), it does not smell, the waste is not touched by insects and rats, and it does not pollute the surrounding soil, it is easy to clean and safe to use, it is equipped with protective walls and roof, it has adequate lighting and ventilation, and there is water, soap, and cleaning materials available.

Based on the results of the Chi-Square test to determine the relationship between toilet facilities and the incidence of leprosy, it shows a significant value where p value = 0.540 > α = 0.05, this indicates that there is no significant relationship between toilet facilities and the incidence of leprosy in the Meo-meo Health Center Working Area.

CONCLUSION AND RECOMMENDATION

Based on the results of research on the relationship between personal hygiene and environmental sanitation and the incidence of skin disease (leprosy) in the community in the Meo-meo Health Center Working Area, Baubau City, the following conclusions can be drawn:

1. There is a relationship between personal hygiene bathing habits and the incidence of leprosy in the Meo-meo Health Center Work Area
2. There is a relationship between personal hygiene habits of borrowing towels and the incidence of leprosy in the Meo-meo Health Center Work Area
3. There is a relationship between clean water facilities and the incidence of leprosy in the Meo-meo Health Center Work Area
4. There is no relationship between wastewater disposal facilities (SPAL) and the incidence of leprosy in the Meo-meo Health Center Work Area
5. There is no relationship between waste disposal facilities and the incidence of leprosy in the Meo-meo Health Center Work Area
6. There is no relationship between toilets and the incidence of leprosy in the Meo-meo Health Center Work Area

Recommendations

1. Health institutions are advised to conduct active screening efforts for people suspected of having leprosy in the field and provide fast and appropriate treatment to patients who have been diagnosed with PB or MB leprosy. So as not to become a source of transmission for other healthy people. In addition to screening and treatment, it is also necessary to provide counseling about leprosy to the community in order to increase knowledge and provide special understanding for families of patients not to discriminate against patients.
2. For the community, in reducing the risk of leprosy transmission by wearing long clothes, avoiding sharing towels, and bathing at least 2x a day using clean water, and maintaining environmental cleanliness by disposing of garbage in its place, cleaning the SPAL, and maintaining the cleanliness of the toilet to avoid complaints of skin diseases.

FUTHER STUDY

It is hoped that further researchers can develop research in other places to analyze more deeply about leprosy and other factors that can cause leprosy because several research variables have no relationship with the incidence of leprosy.

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REFERENCES

Abdillah Saragih. (2021). Hubungan Personal Hygiene dan Sanitasi Lingkungan Dengan Kejadian Scabies Di Pondok Pasantren Modern Al-Kautsar Simalungun. 6.

Agustin. (2017). The Determinant Of The Ownership Of Healthy Latrines In Sukomulyo Village Martapura Palembang. Jurnal Aisyah : Jurnal Ilmu Kesehatan, 2(2), 107. https://aisyah.journalpress.id/index.php/jika/article/view/FN-RA

Aminah, S., Wahidin, A., & Nurlan, F. (2023). Pengembangan Kawasan Sehat Terpadu Masyarakat Penderita Kusta. JMM (Jurnal Masyarakat Mandiri), 7(3), 2715. https://doi.org/10.31764/jmm.v7i3.14859

Annisa, C., & Susilawati, S. (2022). Gambaran Sanitasi Lingkungan Terhadap Sarana Air Bersih dan Jamban Keluarga di Kelurahan Sukaraja. PubHealth Jurnal Kesehatan Masyarakat, 1(1), 85–90. https://doi.org/10.56211/pubhealth.v1i1.46

Aprita Nurkarima. (2018). Hubunganantarapersonalhygienedankejadian Skabies Pada Santri Di Pondok Pesantren Qodratullah Desalangkan Kabupaten Banyuasin.

Gunawan, H., Achdiat, P. A., & Rahardjo, R. M. (2018). Tingkat pengetahuan penyakit kusta dan komplikasinya pada siswa sekolah menengah atas negeri Jatinangor. Dharmakarya, 7(2), 101–105. https://doi.org/10.24198/dharmakarya.v7i2.19379

Ilhami, A. Z., Pramuningtyas, R., Lestari, N., Sigit, F. R., Kedokteran, F., Surakarta, U. M., Flora, K., Sigit, R., & Alamat, P. (2019). Lingkungan Fisik Rumah dan Sarana Air Bersih Berpengaruh terhadap Kusta Wanita di Kabupaten Gresik. Publikasi Ilmiah UMS, 308–325.

Indri M. Riwu Djata, Agus Setyobudy, & Indriati A. Tedju Hinga. (2022). Gambaran Sanitasi Lingkungan dan Hygiene Perseorangan dengan Kejadian Penyakit Kulit di Lapas Anak Kota Kupang. SEHATMAS: Jurnal Ilmiah Kesehatan Masyarakat, 1(4), 486–496. https://doi.org/10.55123/sehatmas.v1i4.842

Kemenkes RI. (2022). Pencegahan dan Pengendalian Penyakit.

Lidiawati. (2016). Journals of Ners Community Volume 6 No 1 Juni 2015. Journal of Ners Community, 6(1), 1–7.

Mallongi, A., Parasitologi, B., Kedokteran, F., Muslim, U., Pascasarjana, D., Musllim, U., Diri, K., & Lingkungan, S. (2017). HUBUNGAN PERSONAL HYGIENE DAN SANITASI LINGKUNGAN DENGAN KEJADIAN PENYAKIT KULIT KUSTA PADA PASIEN DI PUSKESMAS TABARINGAN MAKASSAR.

Marsanti, A. S., & Ardiani, H. (2020). Hubungan Antara Personal Hygiene Dengan Kejadian Kusta Di Wilayah Kerja Puskesmas Wonoasri Kabupaten Madiun. Jurnal Keperawatan Dan Kesehatan Masyarakat Cendekia Utama, 9(2), 102. https://doi.org/10.31596/jcu.v9i2.590

Mayona, F. (2017). Faktor-Faktor yang berhubungan dengan Personal Hygiene Ibu Rumah Tangga di RW I Kelurahan Lambung Bukit Kecamatan Pauh Kota Padang. 1–114.

Muharry, A. (2018). Jurnal Kesehatan Masyarakat. 9(2), 174–182.

Nadiya, A., Listiawaty, R., & Wuni, C. (2020). Hubungan Personal Hygiene Dan Sanitasi Lingkungan Dengan Penyakit Scabies Pada Santri Di Pondok Pesantren Sa'Adatuddaren. Contagion: Scientific Periodical Journal of Public Health and Coastal Health, 2(2), 99. https://doi.org/10.30829/contagion.v2i2.7240

Novita, L., Widiarini, R., & Sakufa, A. (2023). Relationship Between Personal Hygiene With Leprosy At Manghuharjo and Ngegong Health Center. Jurnal Ilmu Kesehatan, 11(2), 6. https://doi.org/10.32831/jik.v11i2.464

Rabiatul Adwiyah. (2021). Hubunngan Personal Hygiene dan Sanitasi Lingkungan Dengan Keluhan Penyakit Kulit Di Desa Rambung Merah Kecamatan Siantar Kabupaten Simalungun. 3(2), 6.

Rismawati, D. (2020). Hubungan Antara Sanitasi rumah dan Personal Hygiene dengan kejadian Kusta Multibasiler. Unnes Journal of Public Health, 2(1).

Saleh, A. A., Mutmainna, A., & Sabil, F. A. (2024). TAMALANREA JAYA KOTA MAKASSAR. 4, 44–50.

Siswanti. (2018). Faktor Risiko Lingkungan Kejadian Kusta. Higeia Journal of Public Health Research and Development., 2(3), 352–362.

WHO. (2020a). Jumlah Penderita Kusta Di Seluruh Dunia. https://www.who.int/news-room/fact-sheets/detail/leprosy

WHO. (2020b). Pengertian Kusta.

Zahrawani, T. F., Nurhayati, E., & Fadillah, Y. (2022). Hubungan Kondisi Jamban Dengan Kejadian Stunting Di Puskesmas CicalengkaTahun 2020. Jurnal Integrasi Kesehatan & Sains, 4(1), 1–5. https://doi.org/10.29313/jiks.v4i1.7770

Widi, S. (2023). Prevalensi Kusta Papua Barat Tertinggi di Indonesia pada 2022. Dataindonesia.Id. https://dataindonesia.id/kesehatan/detail/prevalensi-kusta-papua-barat-tertinggi-di-indonesia-pada-2022