

Relationship of Knowledge and Personal Hygiene with the Incidence of Leprosy in Tanjung Jabung Timur

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Abstract:- Leprosy poses a very complex problem not only from a medical point of view but extends to social, economic and cultural problems. Based on initial observations in the working area of the Kampung Laut Health Center, 1 case was obtained in February 2021, and also from the results of initial interviews with 6 respondents and the survey results showed that most of the community still showed poor personal hygiene for leprosy prevention in the Puskesmas working area. the sea village of the east tanjung jabung district. This study aims to determine the relationship between knowledge and personal hygiene with the incidence of leprosy. This research is descriptive analytic using a Case Control approach. The results of this study show with Mann-Whitney test on knowledge produce a probability value ($\text{sig} > 0.05$) ($0.000 > 0.05$) so that it can be said that there is a difference in knowledge between the intervention group and the control group. The results of the Mann-Whitney test on personal hygiene show a probability value ($\text{sig} > 0.05$) ($0.310 > 0.05$), which means that in general there is no difference in personal hygiene in the intervention group and the case group.

Keywords:- Knowledge, Personal Hygiene, Leprosy.

I. INTRODUCTION

Leprosy is one of the infectious and chronic diseases caused by the bacteria *Mycobacterium leprae*. This disease attacks the skin of the peripheral nerves and can also attack other body tissues except the brain. Leprosy is an infectious disease that causes complex problems [1].

The main factor as the cause of leprosy, namely *Mycobacterium leprae*, needs to be identified related to the pattern of the disease and the quantity of exposure that causes problems in a population. *Mycobacterium leprae* is an acid-fast bacterium, entering the human body through wounds on the skin surface. These bacteria can also enter the human body through droplets exhaled from the respiratory tract. Leprosy is not only transmitted from human to human, but can also be transmitted from animal to human [1].

Currently, Indonesia is still faced with various challenges in the prevention and control of leprosy. In 2019, 17,439 new cases of leprosy were reported, 85% of which were multi-bacillary (MB) leprosy. WHO data in 2020 shows that Indonesia is still the 3rd largest contributor to new cases of leprosy in the world after India and Brazil, with the number of cases ranging from 8% of the world's

cases. Looking back at the program's achievements until January 13, 2021, 26 provinces and 401 districts/cities have achieved elimination, marked by a prevalence rate of less than 1 case per 10,000 population. Nevertheless, there are still many pockets of leprosy in various regions in Indonesia. A total of 9,061 new cases of leprosy were found in Indonesia. This figure is lower than the discovery of leprosy cases in recent years, which is around 16,000-18,000 new cases per year. This is probably due to restrictions on case-finding activities in the community during the Covid-19 pandemic. The level 2 disability rate reaches 1.18 per 1,000,000 population and the proportion of child cases is around 9.14% of the total new cases. The high rate of grade 2 disability and the proportion of child cases in Indonesia indicate that transmission is still ongoing and there is a delay in finding new cases [2].

Leprosy poses a very complex problem not only from a medical point of view but extends to social, economic and cultural problems. Because in addition to the defects caused, excessive fear of leprosy will strengthen the socio-economic problems of leprosy sufferers. The Leprosy Disease Control Program (P2) implemented in Indonesia has a long-term goal, namely the eradication of leprosy in Indonesia [3].

Mycobacterium leprae can only cause leprosy in humans not in animals. Transmission is through prolonged contact due to close and repeated contact through the respiratory tract and skin (long and close direct contact), germs reach the skin surface through follicles, hair and sweat. Prevention of leprosy can be done by improving personal hygiene, including skin care, hair care, hand hygiene, clothing and bedding because leprosy transmission is strongly influenced by direct contact with patients. Personal hygiene is a preventive measure that involves the individual's responsibility to improve health and limit the spread of infectious diseases, especially those transmitted through direct contact such as leprosy. Personal Hygiene includes bathing, hand hygiene, towel hygiene, clothing hygiene, bed linen, blankets and pillowcases [4].

According to the 2018 Jambi Provincial Health Service Report, 78 cases of leprosy were found spread across all regencies in Jambi Province. Most of the leprosy cases found were MB (Multi Basiler) type of leprosy as many as 66 people and partly PB type of leprosy (Pausi Basiler) as many as 12 people. Of the 11 regencies/cities in Jambi Province, the highest number of leprosy cases is in Tanjung Jabung Timur Regency with 49 cases of leprosy. In 2019, 93 new cases of leprosy were found with PB

leprosy cases (Pausi Basiler) as many as 14 people and MB (Multi Basiler) leprosy as many as 79 people, this shows that cases of leprosy from 2018 to 2019 have increased in number leprosy case. The highest number of leprosy cases was in Tanjung Jabung Timur Regency with 36 cases of leprosy [5].

The Tanjung Jabung Timur District Health Office in 2020 it was found that the highest leprosy cases were in East Tanjung Jabung Regency with 36 cases. There are 29 cases of MB (Multi Basiler) leprosy and 7 cases of PB (Pausi Basiler) leprosy and 1 person with leprosy has died, therefore it is necessary to intervene as early as possible so that no one else dies due to leprosy [6].

In 2018-2020 leprosy cases were found as many as 20 cases, according to a report from the Kampung Laut Health Center and there were 5 people who recovered from Multi-bacillary (MB) leprosy, the treatment process for 12 months in 2019, and in 2019 3 new cases were found. cases of multi-bacillary (MB) leprosy [7].

Based on initial observations in the working area of the Kampung Laut Health Center, 1 case was found in February 2021, and also from the results of initial interviews with 6 respondents, namely 3 people with leprosy and 3 people who do not suffer from leprosy, it shows that many still have poor personal hygiene. Where there are 5 people who still use the same bar of soap as other family members, 4 people don't wash their hands before and after eating with soap, and 6 people don't get used to washing their hands, feet and face before going to bed. The results of the survey above show that most people still show poor personal hygiene for leprosy prevention in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency.

Based on this phenomenon, the researchers were interested in choosing the title "Relationship of knowledge and personal hygiene with the incidence of leprosy in Tanjung Jabung Timur Regency, Jambi Province in 2021".

II. RESEARCH METHOD

This study is an analytical descriptive study with a *Case Control* design that aims to see the relationship between knowledge and personal hygiene with the incidence of leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021.

The sample is 20 people. This study used a ratio of 1:1 between the case group and the control group with 20 cases and 20 controls, so that the total sample size was 40 people. The sampling technique was carried out by *purposive sampling*. Collecting data using a questionnaire by filling out a questionnaire by respondents who have a history of leprosy. The study was conducted from June to July 2021 in the working area of the Kampung Laut Health Center. The data will be analyzed univariately, and bivariately using the *Man-Whitney test*.

III. RESULT AND DISCUSSION

Age (Year)	Intervention		Control	
	n	%	n	%
≤25	7	35	5	25
26-35	1	5	4	20
36-45	2	10	6	30
46-55	8	40	5	25
56-65	2	10	0	0
Gender	Intervention		Control	
	n	%	n	%
Women	9	45	8	40
Man	11	55	12	60
Responden Work	Intervention		Control	
	n	%	n	%
Not Working	2	10	2	10
Housewife	7	35	12	60
Farmer	4	20	3	15
Employee	0	0	1	5
Fisherman	3	15	2	10
Student	4	20	0	0
Education	Intervention		Control	
	n	%	n	%
Not School	3	15	1	5
Elementary	9	45	8	40
JHS	5	25	3	15
SHS	3	15	8	40
Leprosy type	Intervention		Control	
	n	%	n	%
MB	20	100	-	-

Tabel 1: Subject Characteristics

Based on table 1, it can be seen that the age characteristics of the 20 respondents, namely the intervention group were mostly 46-55 years old (40%) and the control group was mostly 36-45 years old (30%). Characteristics based on gender of the 20 respondents in the intervention group were mostly male (55%) and the control group was mostly male (60%). Characteristics based on occupation of the 20 respondents in the intervention group mostly with IRT (35%) and in the control group, most with IRT occupation (60%). Characteristics based on education of the 20 respondents in the intervention group mostly with elementary school education (45%) and in the control group most of them with elementary and high school education as much as (40%). characteristics based on the type of leprosy of the 20 respondents in the intervention group mostly with MB type of leprosy (100%).

Leprosy Incidence	Intervention		Control	
	n	%	n	%
Leprosy	20	100	-	-
Not Leprosy	-	-	20	100
Knowledge	Intervention		Control	
	n	%	n	%
Not Good	8	40.0	7	35.0
Good	12	60.0	13	65.0
Personal Hygiene	Intervention		Control	
	n	%	n	%
Risky	3	15.0	4	20.0
Not Risk	17	85.0	16	80.0

Tabel 2: Univariat Analysis

Based on the results of the study, it is known that the frequency distribution of leprosy in the working area of the Kampung Laut Health Center, East Tanjung Jabung Regency, Jambi Province in 2021 can be seen in the table 2. It can be seen from the description of the incidence of leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021 in the intervention group as many as 20 respondents (100%) had leprosy and in the control group as many as 20 respondents (100%) did not have leprosy. Description of community knowledge about leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021 in the intervention group as many as 12 respondents (60%) with good knowledge and in the control group as many as 13 respondents (65.0%) with good knowledge. Personal hygiene about leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021. In the intervention group, 17 respondents (85.0%) were not at risk of developing leprosy and in the control group, 16 respondents (80.0%) were not at risk of developing leprosy.

Variabel	Mann-Whitney	Z	Asymp.sig. (2-tailed)	Description
Pengetahuan	61.500	-3.771	0.000	There is a significant difference
Personal hygiene	166.500	-1.015	0.310	There is no significant difference

Table 3: Bivariate Analysis

Bivariate analysis aims to study the effect between two variables, the statistical test used is the square-test. For the results of statistical research used is p-value 0.05 on the hypothesis, if p-value 0.05 means that there is a relationship (Ho is rejected), if p-value > 0.05 means that there is no relationship (Ho failed to be rejected).

Based on table 3, the results of the Mann-Whitney test on knowledge produce a probability value (sig) > 0.05 (0.000 > 0.05) so that it can be said that there is a difference in knowledge between the intervention group and the case. While the results of the Mann-Whitney test on personal hygiene showed a probability value (sig) > 0.05 (0.310 > 0.05), which means that in general there is no difference in

personal hygiene in the intervention group and the case group.

IV. DISCUSSION

Based on the results of the study, the description of the incidence of leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021, in the intervention group, 20 respondents (100%) had leprosy and in the control group, 20 respondents (100%) did not have leprosy. The description of community knowledge about leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021 in the intervention group as many as 12 respondents (60%) with good knowledge and in the control group as many as 13 respondents (65.0%) with good knowledge. And the description of community personal hygiene about leprosy in the Work Area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021. In the intervention group, 17 respondents (85.0%) were not at risk of developing leprosy and in the control group, 16 respondents (80.0%) were not at risk of developing leprosy.

And based on the results of the Mann-Whitney test on knowledge, it produces a probability value (sig) > 0.05 (0.000 > 0.05) so it can be said that there is a difference in knowledge between the intervention group and the control group while the results of the Mann-Whitney test on personal hygiene show a probability value. (sig) > 0.05 (0.310 > 0.05) which means that in general there is no difference in personal hygiene in the intervention group and the case group.

This study is in line with research conducted by Scolastica, where of 69 respondents, 36 respondents (52.17%) had good knowledge while 33 respondents (47.83%) had less knowledge. This study is in line with Novita Scolastica (2018), where from 69 respondents there were 39 respondents (56.52%) who had good personal hygiene while 30 respondents (43.48%) had poor personal hygiene [8].

Furthermore, the results of this study are in line with those of Indriani Silvia, which states that there is a relationship between personal hygiene behavior and the incidence of leprosy [9]. The results of this study are also in line with research conducted by Wibowo Edi and Wahyun, which stated that there was a significant relationship between knowledge and personal hygiene of people with leprosy at the Padas Ngawi Health Center [10]. The results of this study are in line with the results of Manyullei's research where there is a relationship between knowledge and personal hygiene in leprosy patients in the Sukoharjo Regency area, showing a strong relationship strength [11]. And the results of this study are also in line with the results of Kiki Tia's research on the personal hygiene description of leprosy clients at the Padas Ngawi Health Center which shows that most have sufficient personal hygiene, as many as 17 respondents (56.7%). These results mean that most of the respondents have performed personal hygiene care actions quite well [12].

Risk factors that influence the incidence of leprosy are personal hygiene, knowledge, age, gender, education and household contacts [13]. According to Scholastica, knowledge is the result of human sensing of objects through their senses. Personal Hygiene or personal hygiene is a preventive measure that involves the individual's responsibility to improve health and limit the spread of infectious diseases, especially those transmitted by direct contact [8].

Knowledge is one of the factors in the fulfillment of self-care for people with leprosy, while other factors that influence the fulfillment of self-care are culture, social values in individuals, and perceptions of self-care [14].

According to Ummah (2015) this means that in preventing the transmission of leprosy, good personal hygiene is needed, especially on the skin. As for the factors that affect personal hygiene, one of which is individual habits, from these habits it can be seen that individuals who apply personal hygiene well, especially on the skin, will have an impact on their own hygiene so that skin hygiene is maintained and protected from various diseases, one of which is leprosy [15].

Because in principle leprosy can attack anyone, both men and women. The results of this study are in line with research by Muharry which shows that gender has no effect on the incidence of leprosy [13]. Basically leprosy can attack at all ages [16].

According to the assumption of the researcher, the majority of respondents in this study have good knowledge and have good personal hygiene because the majority of respondents have suffered from leprosy for quite a long time, although the majority of respondents have a low level of education, but their level of knowledge is both about leprosy and personal hygiene. Moreover, some respondents live in a neighborhood known as a leprosy complex, so to get information they can exchange information with neighbors who are there. However, there are also respondents who have less knowledge and poor personal hygiene, due to lack of exposure to information about leprosy and information about personal hygiene for people with leprosy and some respondents are still classified as new leprosy sufferers even though they have education as high as high school and college. For respondents who have good knowledge but poor personal hygiene, it means that respondents already know about leprosy and personal hygiene, but the implementation has not been carried out properly.

V. CONCLUSION

From the results of the study, it can be concluded that the description of the incidence of leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021, in the intervention group, as many as 20 respondents (100%) had leprosy and in the control group, 20 respondents (100%) did not have leprosy. . The description of community knowledge about leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur

Regency, Jambi Province in 2021 in the intervention group as many as 12 respondents (60%) with good knowledge and in the control group as many as 13 respondents (65.0%) with good knowledge. The description of community personal hygiene about leprosy in the working area of the Kampung Laut Health Center, Tanjung Jabung Timur Regency, Jambi Province in 2021. In the intervention group, 17 respondents (85.0%) were not at risk of developing leprosy and in the control group, 16 respondents (80.0%) were not at risk of developing leprosy.

The results of the Mann-Whitney test on knowledge resulted in a probability value (sig) > 0.05 (0.000 > 0.05) so that it can be said that there was a difference in knowledge between the intervention group and the control group. The results of the Mann-Whitney test on personal hygiene show a probability value (sig) > 0.05 (0.310 > 0.05), which means that in general there is no difference in personal hygiene in the intervention group and the case group.

REFERENCES

- [1.] Ministry of Health RI. Eliminate Stigma and Discrimination against Leprosy. In Data and Information Center of the Indonesian Ministry of Health (pp. 1–11). 2018.
- [2.] Direktorat Jendral P2P. (n.d.). Direktorat Jendral P2P. Retrieved March 31, 2021, from <http://p2p.kemkes.go.id/pravalensi-kusta-pada-anak-tinggi-temukan-kasusnya-periksa-kontak-dan-obati-sampai-tuntas/>
- [3.] Depkes RI. National Guidelines for the Eradication of Leprosy. RI Department of Health. 2006.
- [4.] Wartonah. Basic Human Needs and Nursing Process. Medika. 2007.
- [5.] Jambi Provincial Health Office. JAMBI PROVINCE HEALTH PROFILE. Jambi Provincial Health Office. 2019.
- [6.] East Tanjung Jabung District Health Office. HEALTH PROFILE OF TANJUNG JABUNG TIMUR DISTRICT. East Tanjung Jabung District Health Office. 2020.
- [7.] Kampung Laut Health Center. PROFILE OF KAMPUNG LAUT HEALTH CENTER. 2020.
- [8.] Scolastica, N.A., Yuliana, R.R., Deviarbi, S.T. The Relationship between Risk Factors and the Incidence of Leprosy in Kupang City in 2018. Journal of Community, 2019 .e-ISSN 2685-2438.
- [9.] Indriani, Silvia. Risk Factors Associated with the Incidence of Leprosy. Naskah Publikasi. 2014.
- [10.] Wibowo, Edi., Wahyuni. Knowledge of Leprosy Improves Personal Hygiene Behavior in People with Leprosy at the Padas Public Health Center, Ngawi Regency. INFOKES, VOL. 3 NO. 2 Agustus 2013. ISSN : 2086 – 2628
- [11.] Manyullei, S., Deddy, A, U., Agus, B, B. Overview of Factors Associated with Leprosy Patients in Tamalate District, Makassar City, Indonesian Journal of Public Health, 2012. ISSN: 9772302139009.
- [12.] Kiki, Tia, A. Overview of Personal Hygiene Care for Leprosy Clients at Padas Public Health Center, Ngawi Regency. Naskah Publikasi. 2016.

- [13.] Muharry, A. Risk Factors for Leprosy Kejadian. Jurnal Kesehatan Masyarakat, 2014. ISSN 1858-1196
- [14.] Isro'in, L., Andarmoyo, S. Personal Hygiene, Concepts, Processes and Applications in Nursing Practice. 2012. Yogyakarta:Graha Ilmu.
- [15.] Ummah, Khoiroh. Relationship of Personal Hygiene with Prevention of Leprosy Transmission. Journals of Ners Community Volume 6 No 1 2015.
- [16.] WHO (World Health Organization). 2017. Retrieved on October 28, 2019 from page <https://www.who.int/>