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RELATIONSHIP BETWEEN KNOWLEDGE AND COMMUNITY ATTITUDES IN PREVENTING LEPTOSPIROSIS

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ABSTRACT
Leptospirosis is a zoonotic (animal-to-human transmission) disease caused by Leptospira bacteria that has flu-like symptoms. This disease has a major impact on health, especially in sub-tropical and tropical countries. The main reservoir of this disease is rats. This study aims to determine the relationship between knowledge and community attitudes in preventing Leptospirosis in Sumberrejo village, RT 03 RW 02, Pakal, Surabaya. Method: using quantitative method with cross sectional study design. The population in this study was the community of Sumberrejo RT03, RW02, Pakal, Surabaya, which amounted to 85 people. Samples were taken using purposive sampling technique in accordance with the inclusion and exclusion criteria totaling 70 people. The measuring instrument used was a knowledge and attitude questionnaire. Results: 37 (52.9%) knowledge, 51 (72.9%) attitude, p-value < α which is 0.001. Conclusion: Based on the variables, most people have knowledge of Leptospirosis in the low category as many as 37 (52.9%), for the attitude of the community most of the attitude is bad as many as 51 (72.9%), the correlation coefficient value is 0.420 which shows a positive correlation direction. This shows that there is a relationship between knowledge and community attitudes in preventing Leptospirosis. Suggestion: Socialization of both material exposure and the application of clean and healthy living behavior is needed, so that people can increase awareness of the dangers if exposed to Leptospirosis.

Keywords: attitude; community; knowledge; leptospirosis; prevention

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INTRODUCTION

Leptospirosis (a zoonotic infection caused by the bacteria Leptospira interrogans) is a disease of great concern. The spread of Leptospirosis has occurred again in various parts of Indonesia (Zida et al., 2023). This disease is classified as an infectious disease that must be watched in various developing countries due to the impact of urbanization (slums), global warming, and extreme climate change (floods) (Intansari et al., 2022).Global research shows a significant increase in Leptospirosis cases and a disproportionate rate of Leptospira infection in communities with low socioeconomic status (Prinsen et al., 2023), largely due to inadequate sanitation infrastructure or non-compliance with safe drinking water requirements. Leptospirosis has been designated by the US Centers for Disease Control as a Neglected Tropical Disease (Bradley & Lockaby, 2023). The disease causes flu-like symptoms that can be self-limiting, but also has the potential for serious health problems, and can lead to multiple organ failure and death (Jahja & Drew, 2024).

According to the World Health Organization (WHO), the estimated annual incidence of Leptospirosis in endemic areas is 1 case per 100,000 population, increasing to 100 cases per 100,000 in tropical climates, while in subtropical climates it is 0.1 to 1 case per 100,000 (Rahim et al., 2023). The country that ranks third highest in the world in terms of Case Fataly Rate (CFR) for Leptospirosis is Indonesia, ranging from 2.5% to 16.45% with an average of about 7.1% (Illahi & Fibriana, 2015).Based on data from the East Java Health Office, there were 606 cases of Leptospirosis in 2022, and 249 cases on March 5, 2023, so people need to pay attention to hygiene to maintain health, especially in the rainy season (Endarto, 2020).

The lack of public knowledge on Leptospirosis is caused by the lack of health socialization. Health socialization needs to be improved to increase public knowledge about Leptospirosis (Iqbal, 2022). The lack of public knowledge on Leptospirosis is caused by a lack of health socialization (Kusumaratna et al., 2021). Health socialization needs to be improved to increase public knowledge about Leptospirosis disease (Martini et al., 2020). According to the Ministry of Health of the Republic of Indonesia, activities that are considered risk factors for Leptospirosis include contact with water that has been contaminated with Leptospira bacteria, doing activities in polluted water, working in fields or gardens barefoot, contact with animals infected with Leptospira bacteria, and activities that have the potential to contact the source of infection (Mazhar et al., 2016).

Several ways to overcome this problem, namely the first, implementing a clean and healthy lifestyle by maintaining environmental hygiene. Second, cover the wound with a waterproof cover, especially before being exposed to water in the outside environment (Nalle, 2019). Third, use Personal Protective Equipment (such as gloves, boots, and glasses) when working in areas at risk of transmission of Leptospira bacteria to reduce exposure to hazards, especially in the workplace, this can be proven by the people of Mexico, that people who have wounds or abrasions on the skin and come into direct contact with animal feces without protection will cause Leptospirosis (Rahim et al., 2023). Fourth, the implementation of socialization and training on the use and installation of rat traps was carried out together with village health center officers and took place according to the health center's field working hours, namely in the morning until noon (Heni Sunaryanti & Iswahyuni, 2020).

In the Sumberrejo RT 03 RW 02 area, Pakal, Surabaya, which is a final waste disposal area, until now there have been no concrete steps taken to prevent the potential spread of this disease in the neighborhood. Also, it has not been heard of any socialization activities carried out to increase public awareness of the dangers of Leptospirosis and the preventive measures that can be taken. Therefore, it is necessary to consider conducting prevention and socialization efforts related to Leptospirosis in the area to protect the health and safety of the local community. The purpose of this study is to determine whether there is a relationship between knowledge and attitude to prevent Leptospirosis.

METHOD

The type of research used by researchers today is using quantitative methods with an analytical survey research design and a cross sectional research design, which is a study that studies the relationship between risk factors (independent) and effect factors (dependent), where observations or measurements of variables are made once and at the same time. The population in this study is all residents in Sumberrejo Village RT 03 RW 02, Pakal, Surabaya, and are aged from 23-67 years old. The sample used in this study is respondents who are willing to participate in socialization activities and are willing to fill out questionnaires. This study was also conducted on 70 respondents, to find out if there is a relationship between

knowledge and public attitudes towards leptospirosis prevention. The sampling technique in this study is Purposive Sampling. The instrument used in this study in the form of a questionnaire includes 5 questions about knowledge, and 9 statements about attitudes from the prevention of Leptospirosis. The data using Rank Spearman analysis was used to find the relationship between knowledge variables and attitudes in leptospirosis prevention

RESULTS

This research was conducted in Sumberrejo village. The research period starts from 8-9 June 2024. The subjects of this research are the Sumberrejo community. This research uses Spearman Rank analysis. The results of the research are as follows.

Table 1.
Characteristics of Respondents

Ages	f	%
17-25 Y.o	9	12,8
26-35 Y.o	13	18,6
36-45 Y.o	14	20
46-55 Y.o	23	32,9
56-65 Y.o	10	14,3
>65 Y.o	1	1,4

Table 1 shows that of the 70 respondents, almost half were in the 46-55 year age group, 23 respondents (32.9%).

Table 2.
Characteristics of Respondents Based on Gender

Gender	f	%
Male	2	2,9
Female	68	97,1

Table 2 shows that out of 70 respondents, 68 respondents (97.1%) were female, compared to 2 respondents (2.9%) male.

Table 3.
Characteristics of Respondents Based on Education

Education	f	%
Elementary School	30	42,9
Junior High School	19	27,1
Senior High School	21	30

Table 3 shows that out of 70 respondents, almost half had elementary school education as many as 30 respondents (42.9%).

Table 4.
Characteristics of Respondents Based on Frequency Distribution of Knowledge

Characteristics	f	%
High	10	14,3
Medium	23	32,9
Low	37	52,8
Total	70	100

Table 4 shows that out of 70 respondents, 37 respondents (52.9%) had low knowledge.

Table 5.
Characteristics of Respondents Based on Frequency Distribution of Attitudes

Characteristics	f	%
Good	19	27,1
Bad	51	72,9
Total	70	100

Table 5 shows that out of 70 respondents, 51 respondents (72.9%) had bad attitudes.

Table 6.
Characteristics of Respondents Based on the Relationship between Knowledge and Attitude

Level of Knowledge	Attitude			
	Good		Bad	
	f	%	f	%
High	8	42,10	2	3,92
Medium	6	31,58	17	33,33
Low	5	26,32	32	62,75
Total	19	100	51	100

Table 6 shows that of the 70 respondents most had low knowledge with poor attitudes, namely 32 people (62.75%).

Table 7.
Characteristics of Respondents Based on the Analysis of the Relationship between Knowledge and Attitude

Relationship	*P-value*	Koefisien Korelasi
Knowledge with attitude	0,001	0,420

Table 7 shows that out of 70 respondents, the p value < α 0.001 indicates that there is a relationship between knowledge and community attitudes in preventing leptospirosis in Sumberrejo 2 RT 03 RW 02, Pakal District, Surabaya City. The Rank Spearman correlation coefficient value of 0.001 indicates a positive correlation direction.

DISCUSSION

Knowledge

Based on the analysis that has been done, most respondents have low knowledge as many as 37 respondents (52.9%). This can be concluded from the percentage which exceeds half of the number of people who are respondents have low knowledge. In filling out the knowledge questionnaire, many people in Pakal, RT 03 RW 02 were wrong in answering questions on indicators of understanding, symptoms, causes, environmental factors, and modes of transmission. The community of Sumberrejo, RT 03 RW 02, Pakal, Surabaya is classified as lacking knowledge because the community has not received health education about Leptospirosis. Therefore, the lack of public knowledge is caused by the lack of information sources that have never been obtained. The results of this study are in line with (Shafie et al., 2021), which shows that 71.43% have poor knowledge. Many local people have not received socialization about Leptospirosis in any place. Globally, Leptospirosis has a very wide spread especially in the tropics. The mortality rate is as high as 6% and symptoms are varied and clinical manifestations are nonspecific, and diagnosis is difficult (Picardeau, 2015). This requires high public knowledge in order to prevent the occurrence of Leptospirosis, so that it does not become fatal. Research in (Pujiyanti et al., 2023) showed that respondents at the location did not understand how the causes, symptoms, modes of transmission, and prevention were 49.0%. Community behavior in this area has a low level of knowledge. This can affect the incidence of Leptospirosis.

The education level of the respondents was mostly elementary school graduates, as many as 30 people (42.9%). This causes education to be one of the factors that can influence people's knowledge in gaining knowledge about Leptospirosis (Baharom et al., 2024). The higher a person is educated, the easier it is for someone to receive information and can increase knowledge (Ginting & Indiarjo, 2022). Factors that can affect knowledge are education, work, environment, age, experience, mass media, social, economic, and culture according to (Jahja & Drew, 2024).

Attitude

Based on the analysis that has been done, most respondents have a bad attitude as many as 51 respondents (72.9%). This can be concluded from the percentage which exceeds half of the number of people who are respondents have a bad attitude. Lack of awareness to protect themselves from Leptospirosis leads to an increased risk of infection (Sari, 2021). This is different from research (Luxiarti, 2018) which states that most have a good attitude of 80.7%. Low knowledge about Leptospirosis can lead to a lack of attitude to protect themselves, so that people ignore this disease. In this study, the age of most respondents was in the range of 46-55 years. According to (Ginting & Indiarjo, 2022) a person who has a productive age will have a higher level of productivity than an older age. Because the physical possession will be weak and limited. It can be concluded that the age of 46-55 years is the age of early elderly, where they already have a decrease in productivity, so that the attitude to prevent Leptospirosis is greatly reduced (Chou et al., 2023).

Research in (Ginting & Indiarjo, 2022), showed that respondents who did not wash their hands with soap were 28.9%. Someone who has the behavior of washing hands and washing feet with soap has a very small risk of getting Leptospirosis compared to someone who does not have the behavior of washing hands and feet with soap (Dewi & Yudhastuti, 2019). Many people still do not care about Leptospirosis due to lack of knowledge, so it is necessary to provide understanding to the community in order to increase public awareness to prevent Leptospirosis (Zeng et al., 2023). Understanding the risk factors for preventing Leptospirosis can help people to live a clean and healthy lifestyle to reduce the risk of Leptospirosis (Destra & Firmansyah, 2022).

Analysis of the Relationship between Knowledge and Attitude

The level of knowledge about Leptospirosis in Sumberrejo, RT 03 RW 02, Pakal, Surabaya is mostly low on indicators of understanding, symptoms, causes, environmental factors, and modes of transmission. The attitude of the community in preventing Leptospirosis is mostly poor. The results showed a significant relationship between knowledge and community attitudes in preventing Leptospirosis. Socialization of both material exposure and the application of clean and healthy living behavior is needed, so that people can increase awareness of the dangers if exposed to Leptospirosis.

CONCLUSION

The study concludes that occupation and education are the primary factors influencing Prolanis participation at Puskesmas Kecamatan Cempaka Putih. Individuals with specific occupations and higher educational attainment exhibit higher levels of engagement in the program. To enhance participation, tailored educational initiatives should target diverse educational backgrounds, while outreach efforts should include partnerships with local businesses to accommodate working individuals. Additionally, community engagement strategies should be employed to promote awareness and support among residents, particularly those with lower educational backgrounds. Continuous monitoring, feedback

collection, and collaborative efforts with educational institutions are essential for optimizing the effectiveness and inclusivity of the Prolanis program..

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