

Factors Influencing Yaws Disease in Bambakaenu Village, Pinembani District, Donggala Regency

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ABSTRACT

Yaws is a contagious disease caused by *Treponema pertenu* bacteria. Yaws is one of a group of diseases that spread without a host but occurs by direct contact. Yaws disease is strongly influenced by low socio-economic levels, occupancy density, clean water supply, and personal hygiene. This study aimed to determine the factors of yaws disease, including pure water supply, house conditions, and bathing habits. This type of research is analytical survey research with a cross-sectional approach. This research was conducted in Bambakaenu Village, Pinembani District, Donggala Regency in January 2020, with a sample of 86 respondents. The results showed no relationship between clean water supply and yaws, as proven by statistical tests with a p-value of $0.629 > 0.05$. Meanwhile, the results showed an association between house conditions and yaws, as confirmed by statistical tests with a p-value of $0.002 < 0.05$. The results showed no relationship between bathing habits and yaws, as proven by statistical tests with a p-value of $0.786 > 0.05$. It is expected for the community to maintain and always maintain personal and environmental hygiene by still trying to behave clean and healthy to reduce the transmission of yaws disease.

Keywords - Provision of clean water, House Conditions, Bathing Habits, Russian Disease

INTRODUCTION

The World Health Organization (WHO) states that the three countries have yaws problems in the Southeast Asia region, namely India, Indonesia, and Timor Leste. Until now, Indonesia's yaws disease has not been eliminated from all areas even though the national prevalence rate is less than 1 per 10,000 population. In 2006 there were five provinces in Indonesia with relatively high prevalence rates, namely West Papua (15.00), Papua (10.01), Southeast Sulawesi (7.92), East Nusa Tenggara (2.80), and Maluku (1.08) (1).

In Indonesia, as many as 4000 cases each year are reported in 8 out of 30 provinces where 95% of the total number of patients come from four regions, namely East Nusa Tenggara, Southeast Sulawesi, Papua, and Maluku. The implementation of this disease eradication program has stalled in recent years, mainly due to limited resources. Efforts should be directed towards policy support, and greater attention is urgently needed for more effective implementation and strengthening of this program.

The most extensive spread of yaws disease in Indonesia covers most eastern Indonesia and several provinces in Java, Nusa Tenggara, and Sumatra. In 2008, there were found 5926 cases of yaws. The number of cases is based on reports from 8 provinces and 36 regencies

and cities in Indonesia. Until now, not all areas that have recorded cases of Yaws have sent this (2).

Yaws is a contagious disease caused by *Treponema pertenue* bacteria. Yaws is one of a group of diseases that spread without a host but occurs by direct contact. Yaws is strongly influenced by low socio-economic levels, occupancy density, clean water supply, and personal hygiene.

Based on data from the village of Bambakaenu, Pinembani District, Donggala Regency, a population of 628 people from some community, data from the Pinembani Community Health Center in 2019, three people positively experienced the yaws disease (3).

Based on the results of the survey conducted by researchers, the community still does not know and understand about the factors that influence yaws, which consists of the provision of clean water, house conditions, and bathing habits so that people do not know the relationship between clean water, house conditions, and bathing habits that are prone to yaws disease. For example, the smell of water, the state of the narrow house, and the practice of people who rarely shower.

This study aimed to determine the factors that influence yaws disease in Bambakaenu Village, Pinembani District, Donggala Regency.

METHODOLOGY

This research type is analytic with a Cross-Sectional Study approach to know the factors that influence yaws disease in Bambakaenu Village, Pinembani District, Donggala Regency. This research was conducted in January 2020 and was carried out in Bambakaenu Village, Pinembani District, Donggala Regency.

RESULT

Table 1. Relationship between House Conditions and Yaws Disease in Bambakaenu Village, Pinembani District, Donggala Regency

House Conditions	Yaws Disease				Total	P-Value	
	Suffer		Not Suffer				
	n	%	n	%			
Qualify	1	1,3	75	98,7	76	100	0,002
Not Qualify	2	20,0	8	80,0	10	100	
Total	3	3,5	83	96,5	86	100	

The results of the research table 1 show that of the 76 respondents who have housing conditions that meet the requirements, there is one yaws disease (1.3%) who suffer from yaws and 75 (98.7%) who do not suffer, while those who have house conditions that do not meet the requirements. Requirements are ten respondents; there are two yaws (20.0%) who suffer from yaws and 8 (80.0%) who do not suffer from yaws. The statistical test results showed a p-value of 0.002 <0.05, so H0 was rejected, which means that there was a

relationship between the condition of the house and yaws disease in Bambakaenu Village in Pinembani District, Donggala Regency.

Table 2. Relationship between Bathing Habits and Yaws in Bambakaenu Village, Pinembani District, Donggala Regency

Bathing Habits	Yaws Disease				Total	P-Value	
	Suffer		Not Suffer				
	n	%	n	%	N	%	
Qualify	3	3,6	81	96,4	84	100	0,786
Not Qualify	0	0	2	100	2	100	
Total	3	3,5	83	96,5	86	100	

The results of the study table 2 show that of the 84 respondents who have qualified bathing habits, there are three yaws (3.6%) who suffer from yaws and 81 (96.4%) who do not suffer. In comparison, those who have bath habits that do not meet the requirements amounted to 2 respondents; there are 0 yaws disease (0%) who suffer and two yaws (100%) who do not suffer. The statistical test results showed a p-value of $0.786 > 0.05$, so H_0 was accepted, which means no relationship between bathing habits and yaws disease in Bambakaenu Village in Pinembani District, Donggala Regency.

DISCUSSION

The relationship between clean water supply and yaws disease in Bambakaenu Village in Pinembani District, Donggala Regency

The analysis results showed no significant relationship between the provision of clean water and yaws in Bambakaenu Village in the Pinembani District, Donggala Regency, as evidenced by statistical tests with a p-value of 0.629.

According to the researchers' assumptions, this can happen because some people in Bambakaenu Village have not physically met the requirements. After all, the water is not suitable for consumption for their daily needs. And also, in fetching water, they have to travel at an incredible pace.

Water is one of the necessities for human life both for drinking, cooking, bathing, washing, etc. By paying attention to the quality and quantity sufficient to suit the daily household needs, environmental-based diseases are directly related to drinking water as a vital human need (3).

According to Juli Soemirat (2005), Lack of clean water, especially for maintaining personal hygiene, can cause various skin and eye diseases. This occurs because bacteria in the skin and eyes have the opportunity to develop (7). This is also one of the factors that cause the rapid development of yaws disease in Bambakaenu Village, namely that the quality and physical quantity of clean water for daily needs does not meet health standards.

The results of this study are in line with the research of Nofi Irma Aminu (2009), which states that the Lack of clean water supply strongly influences the incidence of yaws disease in the Mawasangka District.

This study's results are in line with sensory research (2009) that there is a relationship between yaws and the availability of clean water in Jayapura City with $p = 0.000$.

Based on the results of research and observation and literature review, Bambakaenu Village must collaborate with health workers to conduct socialization so that the water they consume does not cause signs of yaws disease.

The relationship between the condition of the house and the yaws disease in Bambakaenu Village in Pinembani District, Donggala Regency

The analysis results show that there is a significant relationship between house conditions and yaws disease in Bambakaenu Village in Pinembani District, Donggala Regency, as evidenced by statistical tests with a p-value of 0.002.

According to the researchers' assumptions, this can happen because the conditions of the community houses in Bambakaenu Village have met the requirements. After all, the house's needs have met the requirements, including having floors, romanization, the number of residents in the home according to the conditions of the house. With the house conditions that meet the requirements, the house can prevent the transmission of yaws disease.

This study's results are in line with previous research in the village of Nggaha Ori Angu, East Sumba, that the incidence of yaws is associated with environmental hygiene with a $p = 0.024$.

This study's results are not in line with the research of Minarsih (2005), which states that the incidence of yaws in the Lakudo District is strongly influenced by the conditions of the house that do not meet the requirements.

According to Notoatmodjo (2011), housing health requirements are technical health that must be fulfilled to protect residents and communities who live in housing and surrounding communities from health hazards or problems (4). Housing development requirements, which include the needs for housing and residential environments and the conditions for the house itself, are essential because housing development has a significant effect on improving the health status of individuals, families, and communities.

Based on the results of research and observations, and literature review, the people of Bambakaenu Village, Pinembani District, Donggala Regency should pay more attention and improve the conditions of the house conditions disease does not arise.

The relationship between bathing habits and yaws in Bambakaenu Village in Pinembani District, Donggala Regency

The analysis results showed no significant relationship between bathing habits and yaws in Bambakaenu Village in Pinembani District, Donggala Regency, as evidenced by statistical tests with a p-value of 0.786.

According to the researchers' assumptions, this can happen to people who suffer from yaws because the habit of bathing rarely causes infection of yaws; besides that, usually, the reach of water from homes is far away, so they find it difficult to get water.

This study's results are not in line with previous research in the village of Nggaha Ori Angu, East Sumba, that the incidence of yaws is associated with personal hygiene with a $p = 0.003$.

This study's results are in line with the research of Jasmurni (2011), which concludes that Yaw's sufferers who have bad personal hygiene have a risk of developing Yaws disease (2). According to Maryam (2013), bathing is one of the necessities because, by bathing, they can maintain health and prevent nosocomial infections. Therefore, it is expected to be fulfilled properly (5).

Based on the results of research and observations and a literature review that the community, government, and health workers must collaborate so that people can maintain their cleanliness so that they do not experience yaws infection. The city must play an active role because it is very influential for personal hygiene, such as bathing habits.

CONCLUSIONS

From the results of research and discussion, it can be concluded that: 1) There is no relationship between clean water supply and yaws disease in Bambakaenu Village, Pinembani District, Donggala Regency., Where $0.629 > 0.05$ means that H_0 is accepted, indicating that the two variables have no significant relationship. Significant. 2) There is a relationship between the house and yaws disease condition in Bambakaenu Village, Pinembani District, Donggala Regency, where $0.002 < 0.05$ means that H_0 is rejected, indicating that the two variables have a significant relationship. 3) There is no relationship between bathing habits and yaws disease in Bambakaenu Village, Pinembani District, Donggala Regency, where $0.786 > 0.05$ means that H_0 is accepted, indicating that the two variables do not have a significant relationship.

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