
The Relationship Between Community Knowledge and Attitudes Toward Latrine Availability in Telaga Nipa, West Seram Regency

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ABSTRACT

Background: Basic sanitation plays a vital role in enhancing human health by ensuring a clean environment, with the availability of proper latrines being essential for the safe disposal of human waste and the prevention of disease transmission. **Objective:** This study aimed to identify the factors influencing the availability of basic sanitation facilities, particularly family latrines, in Telaga Nipa, located in West Seram Regency. **Method:** A quantitative research design with a cross-sectional approach was applied, involving 100 households, using univariate and bivariate analyses including the chi-square test. **Results:** The findings showed that both community knowledge and attitudes were significantly associated with the availability of latrines (P value = 0.038 for both), indicating a strong correlation between public understanding and the presence of sanitation facilities. **Conclusion:** It is essential to improve community awareness and attitudes regarding sanitation to enhance access to proper, health-compliant latrines and support better public health outcomes. **Novelty:** This study contributes novel empirical data from an underreported and remote region in Eastern Indonesia, highlighting behavioral determinants as critical factors in household sanitation infrastructure.

Keywords: Knowledge, Attitude, Basic sanitation, Community knowledge and attitude, Cross-sectional sanitation study, Public health rural sanitation

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INTRODUCTION

Basic sanitation refers to efforts aimed at improving human health status through various means, such as maintaining a clean and healthy environment that meets health standards. Efforts to maintain basic

sanitation in communities include the provision of clean water, solid and liquid waste management, access to improved latrines, and wastewater drainage systems. ⁽¹⁾.

Latrines are one of the key indicators of basic sanitation and are used to improve public health. Sanitation plays an essential role in supporting both human health and environmental health, thereby influencing the overall level of community health. Poor latrine conditions can have negative impacts on the community, leading to a decline in environmental quality and an increase in the incidence of environmentally related diseases such as diarrhea. Every household is required to have a latrine that meets health standards, which includes a proper wastewater disposal system (SPAL) and is equipped with a septic tank. ⁽²⁾.

A household latrine is a built structure designed to dispose of human excreta or waste. The provision of such waste disposal facilities is a crucial component of sanitation efforts, particularly in preventing the spread of gastrointestinal diseases. From an environmental health perspective, unhygienic waste disposal sites can lead to environmental contamination, including soil pollution and contamination of water sources. ⁽³⁾.

According to the 2023 Indonesia Health Profile data on national access to improved latrines, in Maluku Province, 80.3% or 349,748 households had access to improved latrines. Of this number, 144,532 households had access to permanent improved latrines, while 186,463 households used semi-permanent improved latrines. Additionally, 18,753 households shared communal latrines, and a significant portion 113,983 households still practiced open defecation. ⁽⁴⁾.

According to the 2023 Health Office Profile of Maluku Province regarding access to latrines, in West Seram Regency, Huamual Subdistrict, a total of 1,877 households had access to permanent improved latrines. Additionally, 552 households used semi-permanent improved latrines, 211 households relied on shared or communal latrines, and 369 households still practiced open defecation. Overall, the percentage of households with access to improved latrines in this area was 78.82%. In the same year, there was some progress reported; however, this progress did not reflect an actual increase in the number of households with latrine access. ⁽⁵⁾.

Clean and Healthy Living Behavior refers to daily practices adopted by individuals and communities to achieve the highest possible level of health. PHBS plays a significant role in raising awareness of the importance of hygiene. Therefore, maintaining environmental sanitation particularly the availability and proper use of latrines as facilities for human waste disposal is essential in breaking the chain of disease transmission. The absence or underutilization of sanitation facilities, such as latrines, can contribute to the spread of digestive system-related diseases, including diarrhea. Several factors influence the availability of basic sanitation within communities, particularly the availability of latrines, which include knowledge, attitudes, and practices. ⁽⁶⁾.

Low education levels contribute to the community's limited knowledge about the function and importance of latrines. This issue is further compounded by insufficient funds to build proper latrines. The community's understanding of latrine use and the availability of sanitation access within the household environment also affect their knowledge and attitudes. Having a latrine does not necessarily guarantee that people will stop practicing open defecation; some individuals still prefer to defecate on the beach, considering it more convenient. ⁽⁷⁾.

Telaga Nipa is a hamlet located in Huamual Belakang, West Seram Regency. Telaga Nipa has a total of 233 households. The hamlet is served by one community health post (Pustu Telaga Nipa), one elementary school, one kindergarten, one junior high school, one senior high school, and one vocational high school. The residents of Telaga Nipa work primarily as farmers, fishermen, and civil servants; however, the majority are laborers in farming and fishing. Most households in Telaga Nipa have private latrine facilities, but the community lacks public latrine facilities.

Community behavior, particularly regarding latrine use, shows that some members of the population still do not utilize or provide latrines. A portion of the community continues to practice open defecation on the beach and in plantations, which poses a significant problem. Data obtained from the Telaga Nipa Community Health Post (Pustu) indicate the ten most common diseases: diarrhea, hypertension, myalgia, cystitis, asthma, diabetes mellitus, vertigo, anemia, gastritis, and malaria. There were 46 reported cases of diarrhea. This issue is linked to the lack of latrine use and availability in the Telaga Nipa community. Interviews with health workers at the Telaga Nipa Pustu revealed that sanitation education was conducted once in 2020. However, no further sanitation outreach was carried out between 2021 and 2022. Data collection on latrine availability showed that 25 households still lacked latrines. The main factor preventing latrine construction is insufficient funding, leading some residents to continue practicing open defecation on beaches, plantations, or relying on neighbors' latrines.

This study aims to examine the relationship between community knowledge and attitudes toward the availability of household latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency, which consists of 233 households and is divided into 4 neighborhood units (RT) without further division into community units (RW).

Previous studies have shown that low levels of knowledge and attitudes among the community are associated with high rates of open defecation practices ^[1,2]. However, studies in remote island areas such as Telaga Nipa Hamlet remain limited, despite the fact that geographical, economic, and cultural factors greatly influence access to latrines. This study aims to fill this gap by examining the relationship between community knowledge and attitudes toward latrine availability, as well as the lack of sanitation education outreach.

METHOD

Research Design

This study is a quantitative research using a cross-sectional design approach, aiming to identify factors associated with the availability of basic sanitation, specifically household latrine ownership. The main focus of this study is on the variables of community knowledge and attitudes toward the presence of household latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency.

Population dan Sample

The population of this study includes all household heads residing in Telaga Nipa Hamlet, totaling 233 households, both those who have latrines and those who do not. A sample of 100 households was selected using purposive sampling, which involves choosing respondents based on specific criteria relevant to the research objectives.

Data Analysis

Data analysis was conducted in two stages. First, univariate analysis was used to describe the respondents' characteristics and the frequency distribution of each variable studied. Second, bivariate analysis was performed to evaluate the relationship between the independent variables (community knowledge and attitudes) and the dependent variable (household latrine availability) using the chi-square (χ^2) statistical test. The test was conducted at a significance level of $\alpha = 0.05$, where a p-value < 0.05 was interpreted as indicating a statistically significant relationship between the two variables.

Hypothesis

There is a significant relationship between the level of knowledge and community attitudes and the availability of latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency.

RESULTS AND DISCUSSIONS

RESULTS

1. Frequency Distribution of Respondent Characteristics Based on Age, Gender, Education and Occupation

Univariate analysis was conducted to determine the basic characteristics of respondents based on the variables of age, gender, education level, and occupation. Table 1 below shows the frequency distribution and percentage of each characteristic from the 100 respondents studied in Telaga Nipa Hamlet, Huamual Belakang Subdistrict.

Table 1. Frequency Distribution of Respondent Characteristics Based on Age, Gender, Education and Occupation

Respondent Characteristics		Frequency (n=100)	Percentage (%)
Age	16 - 25	36	36,0
	26 - 35	21	21,0
	36 - 45	26	26,0
	46 - 55	11	11,0
	≥ 56	6	6,0
Gender	Male	46	46,0
	Famale	54	54,0
Education	Elementary School	16	16,0
	Junior High School	16	16,0
	Senior High School	60	60,0
	Vocational School	1	1,0
	Diploma 1,2,3	1	1,0
	Collage	6	6,0
Occupation	Civil Servant	4	4,0
	Self-Employed	11	11,0
	Farmer	20	20,0
	Fisherman	19	19,0
	House Wife	31	31,0
	Unemployed	15	15,0

Table 1 presents the results of the univariate analysis of respondents' characteristics. Based on Table 1, the majority of respondents were in the 16–25 years age group, totaling 36 individuals (36.0%), followed by

the 36–45 years age group with 26 individuals (26.0%), and the 26–35 years age group with 21 individuals (21.0%). The oldest age group (≥ 56 years) accounted for only 6 individuals (6.0%).

The gender distribution shows that the respondents consisted of 46 males (46.0%) and 54 females (54.0%). Regarding the highest level of education, the majority of respondents were high school graduates (60.0%), followed by elementary and junior high school graduates, each accounting for 16.0%. Respondents with higher education (diploma level to university) comprised only 8.0% of the total.

In the occupation category, housewives dominated with 31 individuals (31.0%), followed by farmers (20.0%), fishermen (19.0%), and entrepreneurs (11.0%). Meanwhile, 15 respondents (15.0%) reported being unemployed, and only 4 individuals (4.0%) worked as civil servants.

2. Frequency Distribution of Knowledge, Attitude, Availability of Latrines, and Healthy Family Latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

The following table presents the results of the univariate analysis describing the distribution of knowledge, attitudes, latrine availability, and latrine quality (improved/unimproved) among the respondents

Table 2. Frequency Distribution of Knowledge, Attitude, Availability of Latrines, and Healthy Latrines

Respondent Characteristics		Frequency (n=100)	Percentage (%)
Knowledge	Good	99	99,0
	Poor	1	1,0
Attitude	Positive	99	99,0
	Negative	1	1,0
Latrine Availability	Available	81	81,0
	Not Available	19	19,0
Healthy Latrine	Healthy	32	39,5
	Unhealthy	49	60,5

Table 2 presents the results of knowledge assessment regarding the availability of household latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency. Of the total respondents, 99 individuals (99.0%) demonstrated good knowledge, while only 1 individual (1.0%) showed poor knowledge. Similarly, respondents' attitudes also indicated a positive trend, with 99 individuals (99.0%) having a positive attitude toward latrine availability, and only 1 individual (1.0%) having a negative attitude. A total of 81 respondents (81.0%) reported having access to latrines, whereas 19 respondents (19.0%) did not have access. Among those with latrine access, 32 respondents (39.5%) had improved (healthy) latrines, while 49 respondents (60.5%) had unimproved (unhealthy) latrines.

3. The Relationship between Knowledge and the Availability of Latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

Table 3. The Relationship Between Knowledge and Latrine Availability

Knowledge	Latrine Availability				N	%	P value
	Available		Not Available				
	n	%	n	%			
Good	81	81,8	18	18,2	99	100,0	0,038
Poor	0	0,0	1	100,0	1	100,0	
Total	81	81,8	19	118,2	100	100,0	

Table 3 shows that among the 99 respondents with good knowledge, 81 individuals (81.8%) had latrines, while 18 individuals (18.2%) did not. On the other hand, the one respondent with poor knowledge did not have a latrine (0.0% with a latrine; 100.0% without). The statistical test yielded a p-value of 0.038, which is less than the significance level of $\alpha = 0.05$. Therefore, the null hypothesis (H_0) is rejected. It can thus be concluded that there is a significant relationship between knowledge and household latrine availability in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency.

4. The Relationship Between Attitude and the Availability of Latrines in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

Table 4. The Relationship Between Attitude and Latrine Availability

Attitude	Latrine Availability				N	%	P value
	Available		Not Available				
	n	%	n	%			
Positive	81	81,8	18	18,2	99	100,0	0,038
Negative	0	0,0	1	100,0	1	100,0	
Total	81	81.8	19	118.2	100	100.0	

Table 4 shows that among the 99 respondents with a positive attitude, 81 individuals (81.8%) had latrines, while 18 individuals (18.2%) did not. In contrast, the one respondent with a negative attitude did not have a latrine (0.0% with a latrine; 100.0% without). The statistical test resulted in a p-value of 0.038, which is less than the significance level of $\alpha = 0.05$. Therefore, the null hypothesis (H_0) is rejected. It can thus be concluded that there is a significant relationship between attitude and household latrine availability in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency.

Table 5. Correlation Analysis of the Relationship Between Attitudes and Latrine Availability in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

Parameter	Age	Gender	Education	Occupation
Age	1	-0,86	0,77	0,84
Gender	-0,86	1	-0,62	-0,83
Education	0,77	-0,62	1	0,82
Occupation	0,84	-0,83	0,82	1

Table 5 shows a very strong negative correlation between age and gender ($r = -0.86$), as well as between gender and occupation ($r = -0.83$), and a moderately strong negative correlation between gender and education ($r = -0.62$). On the other hand, there is a very strong positive correlation between age and occupation ($r = 0.84$), between education and occupation ($r = 0.82$), and a strong positive correlation between age and education ($r = 0.77$). These results indicate that age, education, and occupation are positively interrelated, while gender shows a negative correlation pattern with the other variables.

DISCUSSIONS

The Relationship Between Knowledge and Latrine Availability in Dusun Telaga Nipa, Huamual Belakang Subdistrict, West Seram Regency

Community knowledge regarding basic sanitation, particularly related to the availability of household latrines in Telaga Nipa Hamlet, was measured using a questionnaire consisting of 10 questions. Respondents were classified as having “good” knowledge if they answered $\geq 50\%$ of the questions correctly, and as having “poor” knowledge if they answered $< 50\%$ correctly. Based on the survey results from 100 household heads, 99 respondents (99.0%) demonstrated good knowledge, while only 1 respondent (1.0%) demonstrated poor knowledge.

The results of the bivariate analysis show that out of 99 respondents with good knowledge, 81 individuals (81.0%) owned household latrines. The chi-square test produced a p-value of 0.038, which is lower than the significance threshold ($\alpha = 0.05$), indicating a statistically significant relationship between knowledge and household latrine availability. This finding suggests that knowledge plays an important role in encouraging the ownership of sanitation facilities. One contributing factor to knowledge levels is formal education. The majority of respondents had completed senior high school (60.0%), followed by higher education (6.0%), both of which generally contributed to a better understanding of the importance of latrine ownership. In contrast, respondents with only primary or junior high school education (16.0% each) tended to have lower levels of knowledge. Limited access to sanitation information and low functional literacy are key factors that influence their understanding of the urgency of owning an adequate and healthy latrine. However, good knowledge does not always directly translate into latrine ownership. There were 18 respondents (18.0%) who demonstrated good knowledge but did not yet own a household latrine. This was largely due to economic constraints, particularly low income levels. Data show that 82% of respondents had a monthly income below IDR 1,000,000. This financial barrier significantly hinders the construction of sanitation facilities, despite adequate awareness and understanding.

In addition to latrine availability, the quality of latrines is also a critical concern. Possessing good knowledge does not necessarily guarantee that the latrines meet the standards of improved sanitation. Field observations revealed that many latrines lacked septic tanks or adequate waste treatment systems. This discrepancy highlights that, despite high levels of knowledge, the physical realization of proper sanitation infrastructure still largely depends on economic and technical support. Furthermore, a solid understanding of latrine management is essential in efforts to prevent open defecation practices. Communities that understand the risks of poor sanitation tend to have a stronger intention to construct and maintain improved latrines. However, limitations in facilities and financial resources still lead some individuals to practice open defecation along coastal areas or in nearby forests.

These findings are consistent with previous studies. Research by Nazira et al. (2024) in the working area of Jeumpa Public Health Center, Bireuen District, found that knowledge was significantly correlated with ownership of improved latrines ($p = 0.003$). Similar results were reported in a study by Mallo et al. (2024) in

Pegunungan Bintang District, Papua, which recorded a p-value of 0.000, confirming that knowledge has a significant influence on household behavior regarding the ownership of improved latrines.

Therefore, it can be concluded that increasing knowledge is an essential prerequisite for driving changes in sanitation behavior. However, knowledge must be accompanied by structural interventions, such as latrine construction assistance programs, technical training, and economic incentives for low-income families, to produce tangible improvements in the availability and quality of household sanitation facilities.

The Relationship Between Attitudes and Latrine Availability in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

The community's attitude toward household latrine availability in Dusun Telaga Nipa was assessed using a questionnaire containing 10 statements covering both positive and negative attitudes. Respondents were asked to respond with one of three options: agree, somewhat agree, and disagree. Among the 100 heads of households surveyed, 99 individuals (99.0%) exhibited a positive attitude toward latrine availability, while only 1 individual (1.0%) showed a negative attitude. Based on the chi-square test results, a p-value of 0.038 ($\alpha = 0.05$) was obtained, indicating a significant relationship between community attitude and household latrine availability. This finding reinforces that attitude is a psychosocial factor influencing sanitation behavior at the household level.

Of the 99 respondents with a positive attitude, 81 individuals (81.0%) already owned a latrine. This indicates that a positive attitude toward latrine use correlates with tangible actions in providing such facilities. Respondents who owned latrines generally understood the importance of using latrines to prevent environmental contamination and the spread of diseases, particularly in protecting water sources from contamination. This positive attitude is influenced by social communication, which is the process of disseminating information through interpersonal and institutional interactions that can change individuals' perspectives on the importance of household sanitation.

However, there were 18 individuals (18.0%) who had a positive attitude but did not yet own a latrine. This condition reflects the presence of non-attitudinal barriers, primarily economic factors. The majority of them worked as farmers (20%) and fishermen (19%), two occupations characterized by irregular income. Data also showed that 82% of respondents had a monthly income below IDR 1,000,000, indicating limited purchasing power to build a healthy latrine despite having a supportive attitude.

Meanwhile, only one individual exhibited a negative attitude and also did not have a latrine. This condition is generally associated with a low level of knowledge, which plays a role in shaping an individual's attitude and behavior. Negative attitudes toward latrine use often stem from a lack of information about the benefits and impacts of sanitation on family and environmental health. Therefore, although the majority of the community's attitudes are positive, implementation in the field still faces structural obstacles. Attitude change needs to be accompanied by supportive policies and community empowerment programs, particularly through sanitation education, campaigns, and latrine construction assistance programs for low-income families. The

involvement of community leaders, health workers, and village cadres is crucial in fostering sustainable behavioral change.

These findings are consistent with the study by Arafah et al. (2024) in Suka Datang Village, Bengkulu, which demonstrated a significant relationship between attitude and latrine ownership ($p = 0.013$). Similarly, research conducted by Nanda et al. (2024) in the coastal area of Serdang Bedagai reported a p-value of 0.001, further strengthening the evidence that attitude has a significant influence on the ownership of healthy latrines. In general, the community of Telaga Nipa has demonstrated a positive attitude towards the importance of family latrines. However, economic disparities and infrastructural limitations have resulted in some households being unable to build their own latrines. Consequently, open defecation practices are still observed, particularly along coastal areas and forest zones. To address this issue, community-based approaches and subsidized latrine construction programs are highly recommended as comprehensive solutions.

Correlation Analysis of the Relationship Between Attitudes and Latrine Availability in Telaga Nipa Hamlet, Huamual Belakang Subdistrict, West Seram Regency

To evaluate the strength of the relationship between community attitudes towards sanitation and the availability of family latrines, a correlation analysis was conducted using the Pearson statistical approach. This analysis is important to determine the extent to which positive community attitudes are reflected in actual behaviors, namely the ownership of latrine facilities at the household level.

The correlation analysis results indicate a complex and interrelated relationship among demographic variables, namely age, gender, education, and occupation, which collectively influence community sanitation behavior, particularly regarding the ownership and use of family latrines. A very strong negative correlation between age and gender ($r = -0.86$) suggests an imbalance in age distribution between males and females. It is likely that certain age groups are dominated by one gender for example, males predominating in the productive age group, while females are more prevalent in other age categories. This imbalance may reflect differing work patterns, domestic roles, or social responsibilities between males and females, ultimately affecting their involvement in decision-making concerning the provision of household sanitation facilities.

The strong positive correlation between age and education ($r = 0.77$) indicates that the older an individual is, the more likely they have attained higher levels of formal education. This may be attributed to better educational opportunities in the past or the fact that older age groups have completed their education before entering the workforce. Higher education levels significantly influence the formation of knowledge, understanding, and awareness regarding the importance of adequate sanitation. Furthermore, the very strong correlation between age and occupation ($r = 0.84$) reinforces the finding that older age is closely related to job stability. Older respondents are more likely to have permanent employment or more stable sources of income, whereas younger respondents tend to be in transitional phases toward economic independence. The implications of this relationship are critical, as job stability directly impacts the financial capacity to build and maintain healthy latrine facilities and sustain household sanitation infrastructure.

Meanwhile, the negative correlation between gender and education ($r = -0.62$) suggests that females tend to have lower educational attainment compared to males. In rural community contexts, this can be explained by the fact that females are often confined to domestic roles and less likely to pursue higher formal education. This disparity is significant because education level not only affects knowledge about sanitation but also influences women's confidence and participation in decision-making related to household environmental health. Similarly, the very strong negative correlation between gender and occupation ($r = -0.83$) indicates a substantial imbalance in job distribution between males and females. Males are more likely to engage in productive labor such as farming or fishing, while females predominantly undertake domestic roles as housewives. These role differences affect influence and control over resource allocation, including in the provision and maintenance of family latrines.

The very strong positive correlation between education and occupation ($r = 0.82$) indicates that higher educational attainment significantly increases the likelihood of obtaining formal, stable, and adequately remunerated employment. Education not only influences cognitive aspects such as knowledge and attitudes toward sanitation but also impacts economic opportunities that enable individuals to access healthy and sustainable sanitation facilities. This implies that education and occupation are inseparable factors in the context of household sanitation provision, as they mutually reinforce individual and household capacity to act autonomously and conscientiously regarding environmental health. Overall, these findings affirm that sanitation behaviors in the community are shaped not only by individual factors such as knowledge and attitudes but are also profoundly influenced by structural and demographic conditions. The interplay of age, gender, education, and occupation creates a social structure that affects the distribution of access to sanitation facilities. Therefore, effective sanitation interventions must be designed with a holistic approach that is responsive to social inequalities. Such approaches should consider gender disparities in educational access, age-based occupational distribution, and the influence of economic stability on household decision-making. Only through integrated strategies grounded in social justice can inclusive, sustainable, and community-based sanitation behavior change be realized effectively

CONCLUSION

This study demonstrates a significant association between the level of community knowledge and attitudes with the availability of household latrines in Telaga Nipa Hamlet, Huamual Belakang District, West Seram Regency. The majority of respondents possess good knowledge and positive attitudes regarding the importance of sanitation; however, this is not entirely reflected in the ownership of adequate latrine facilities. While 81% of respondents have latrines, only 40% of these meet the criteria for healthy latrines, and 19% of respondents do not have any latrine facilities. Economic factors serve as the primary barrier to the provision of latrine facilities, particularly among respondents with a monthly income below IDR 1,000,000. Correlation analysis further reveals that age, education, and occupation variables are positively interrelated and collectively influence the community's capacity and awareness in providing sanitation facilities. Conversely, gender shows a negative correlation with education and occupation, indicating disparities in access and roles within sanitation-related decision-making. Overall, community sanitation behaviors are influenced by a

combination of individual factors (knowledge and attitudes) and structural factors (demographics and economic conditions).

To comprehensively address sanitation issues in Telaga Nipa Hamlet, an integrated series of strategies is required. The local government, through the health department, should reactivate sustainable sanitation education and outreach programs using a participatory approach based on local needs. Additionally, subsidies and incentives for constructing healthy latrines, particularly for low-income families, should be provided through community-based initiatives such as cash-for-work programs or mutual cooperation (*gotong royong*). Given the existing gender disparities in access to education and employment, targeted interventions for women and vulnerable groups must be promoted to enable their active participation in household sanitation decision-making. Village authorities are also expected to integrate demographic data at the neighborhood and household levels into sanitation planning to ensure that interventions are more targeted and measurable. A holistic approach involving behavior change, sanitation literacy, and synergy among community leaders, government, and educational institutions is essential to foster a culture of cleanliness and sustainably eliminate open defecation practices.

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CONFLICT OF INTEREST STATEMENT

The author declares that there is no conflict of interest related to the publication of this manuscript.

ETHICAL APPROVAL

This study was conducted in accordance with applicable ethical standards.

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