



Factors Influencing The Unachievement of ODF Status in Tingkis Village, Singgahan Subdistrict, Tuban District

Amilus Sholikhah^{1*}, Dwi Faqihatus Syarifah Has¹, Sestiono Mindiharto¹, Zufra Inayah¹

¹Public Health Study Program, Faculty of Health, Universitas Muhammadiyah Gresik, Gresik, East Java, Indonesia

ARTICLE INFO

Article Type:
Research

Article History:
Received: 3/2/2024
Accepted: 3/31/2024

***Corresponding author**
Email:
amilusholikhah82@gmail.com

ORIGINAL ARTICLE

ABSTRACT

Tingkis Village has access to healthy latrines only 52%, and open defecation behavior to the river is 48%. This study aimed to analyze the factors that influence the unachievement of ODF status in Tingkis Village, Singgahan Sub-district. The research design was a cross-sectional survey with an observation approach. The population was 950 households in Tingkis Village. The sample size was 282 respondents taken by simple random sampling. The independent variables consisted of knowledge, attitude, economic status, ownership of healthy latrines, and commitment of village-level stakeholders, while the dependent variable was the unachievement of ODF status. Instruments used questionnaires on knowledge, attitude, economic status, ownership of healthy latrines, and observation sheets/checklists on the commitment of village-level stakeholders and the unachievement of ODF status. Analysis used Multiple Logistic Regression tests at a 95% confidence level ($p < 0.05$). The research results show that the study showed that knowledge had a p-value of $0.000 < 0.05$, attitude with a p-value of $0.033 < 0.05$, economic status with a p-value of $0.016 < 0.05$, ownership of healthy latrines with a p-value of $0.016 < 0.05$, the commitment of village-level stakeholders with a p-value of $0.003 < 0.05$, and knowledge had the highest Exp(B) value (34.198) compared to other variables. The conclusion is knowledge, attitude, economic status, ownership of healthy latrines, and commitment of village-level stakeholders have an influence on the achievement of ODF status, and knowledge is the most dominant factor influencing the achievement of ODF status.

Keywords: Knowledge, Attitude, Economic Status, Ownership of Healthy Latrines, Stakeholder Commitment, ODF Status.

ABSTRAK

Desa Tingkis memiliki akses ke jamban sehat hanya 52%, dan perilaku buang air besar sembarangan ke sungai sebesar 48%. Tujuan penelitian ini untuk menganalisis faktor yang mempengaruhi belum tercapainya status ODF di Desa Tingkis. Desain penelitian adalah survey cross sectional dengan pendekatan observasi. Populasi adalah masyarakat Desa Tingkis sebanyak 950 kepala keluarga. Jumlah sampel sebanyak 282 responden diambil dengan simple random sampling. Variabel bebas terdiri dari pengetahuan, sikap, status ekonomi, kepemilikan jamban sehat dan komitmen stakeholder tingkat desa, sedangkan variabel terikat yaitu belum tercapainya status ODF. Instrumen menggunakan lembar kuesioner tentang pengetahuan, sikap, status ekonomi, kepemilikan jamban sehat, dan lembar observasi/ceklist tentang komitmen stakeholder tingkat desa dan belum tercapainya status ODF. Analisis menggunakan uji Regresi Logistik Berganda pada tingkat kepercayaan 95% ($p < 0,05$). Hasil penelitian menunjukkan bahwa pengetahuan memiliki nilai $p=0,000 < 0,05$, sikap dengan nilai $p=0,033 < 0,05$, status ekonomi nilai $p=0,016 < 0,05$, kepemilikan jamban sehat nilai $p=0,016 < 0,05$, komitmen stakeholder tingkat desa nilai $p=0,003 < 0,05$, dan pengetahuan memiliki nilai Exp(B) (34,198) paling tinggi dibanding variabel lainnya. Kesimpulannya ada pengaruh pengetahuan, sikap, status ekonomi, kepemilikan jamban sehat, dan komitmen stakeholder tingkat desa dengan belum tercapainya status ODF, serta pengetahuan merupakan faktor paling dominan mempengaruhi belum tercapainya status ODF.

Kata Kunci: Pengetahuan, Sikap, Status Ekonomi, Kepemilikan Jamban Sehat, Komitmen Stakeholder, Status ODF.

INTRODUCTION

The Ministry of Health of the Republic of Indonesia reported in 2021 that sanitation access in Indonesia had increased to 81%, with 30,709 villages achieving ODF (Open Defecation Free) status (Fadilla, 2022). On the other hand, in East Java Province, according to the Health Profile of 2021 (Dinkes Prov. East Java, 2022), 74.6% of villages/urban neighborhoods had ceased Open Defecation in 2021, exceeding the national target of 66.42%. However, several Districts/Cities, such as Malang District (39.7%), Tuban District (28.7%), Pasuruan District (26%), Probolinggo District (25.2%), and Jember District (15.3%), still had low percentages (Dinkes Prov. East Java, 2022). In the Health Profile of 2020, Tuban District reported only 64 villages (19.5%) out of a total of 328 villages having ODF status (Dinkes Kab. Tuban, 2020).

According to Ahmadi et al. (2021), areas that have not achieved ODF status have a higher prevalence of diarrhea, potentially affecting the social health and well-being of the community. Fadilla, (2022) added that ODF status plays a crucial role in breaking the chain of disease transmission through the ownership of sanitary latrines as an effective means of waste disposal and as a step towards Community-Led Total Sanitation (STBM). However, there are still challenges, both direct and indirect, related to waste disposal and environmental quality.

Data compiled by the Tuban Population Control and Family Planning Health Office showed that in 2021, there were 94 ODF villages out of 328, increasing to 149 villages as of September 2022 (Dinkes P2KB Tuban, 2022). Tuban has 20 districts, with Montong District being the largest and Tuban District being the smallest (BPS Kab. Tuban, 2023).

Based on initial observations in March 2023, only Tuban District had achieved ODF status, while the other 19 districts had not fully achieved ODF status yet. The top three districts with the lowest access to sanitary latrines were Kerek District (94.75%), Grabagan District (94.53%), and Singgahan District (88.99%), particularly Tingkis Village in Singgahan District. The participation rate of farmers in the village population reached 80%, with the rest being laborers, private employees, and others. ODF-related socialization in Singgahan District went well, marked by an increase in the construction of affordable sanitary latrines. The hope is for progress in the construction of permanent or semi-permanent sanitary facilities to achieve ODF status.

Ideally, an area is considered ODF after undergoing a behavior change from open defecation to total sanitation, requiring continuous monitoring, verification, and evaluation. The lack of public knowledge about the importance of latrines and the unsupportive attitudes towards open defecation are challenges that need to be addressed. Research by Hasanah et al. (2022) showed that knowledge, attitudes, and the availability of clean water are not determinants of high rates of Open Defecation, but the type of latrine plays a crucial role.

Ahmadi et al. (2021) found no relationship between land availability and economic status with ODF status. Therefore, other approaches such as advocacy to local governments to accelerate the construction of communal latrines, as well as approaches to families to increase environmental awareness, are needed. Research by Parmawati, (2018) concluded that the commitment of village-level stakeholders influences the achievement of ODF status, emphasizing that open defecation behavior is a collective issue that requires community cooperation and participation. This study aims to analyze the factors influencing the unachieved ODF status in Tingkis Village.

METHODS

The research method used is a cross-sectional survey, aimed at investigating the relationship between risk factors and effects simultaneously at a specific point in time. The cross-sectional research design is employed to analyze the factors contributing to the failure to achieve ODF status in Desa Tingkis, Kecamatan Singgahan. Population refers to a group of objects or subjects with specific qualities and characteristics defined by the researcher for study and conclusion drawing. In this study, the population consists of the community of Desa Tingkis, Kecamatan Singgahan, Kabupaten Tuban, totaling 950 households (HH). Samples are a subset of the population with the same characteristics. Samples consist of households (HH) or family members in Desa Tingkis, Kecamatan Singgahan, Kabupaten Tuban. The sample size is determined using the appropriate formula. The sampling technique used is probability sampling with simple random sampling, where every member of the population has an equal chance of

being selected as a sample. A total of 282 households are randomly selected as a representation of the studied population.

The inclusion criteria in this study are household heads or family members aged 18 years and above, individuals who can communicate effectively, and individuals who are native residents. Meanwhile, the exclusion criteria are elderly household heads, individuals who do not complete the questionnaire, and individuals who are newcomers.

The analysis is conducted descriptively and inferentially. Descriptive analysis involves data processing in the form of tables and narratives to identify knowledge, attitudes, economic status, ownership of healthy latrines, village-level stakeholder commitment, and the failure to achieve ODF status. Inferential analysis employs multiple logistic regression with a confidence level of 95% ($p < 0.05$) to determine the factors influencing the failure to achieve ODF status in Desa Tingkis, Kecamatan Singgahan.

This research has obtained an Ethical Clearance Certificate from the Research Ethics Commission of the Faculty of Health, Universitas Muhammadiyah Gresik, with Certificate Number: 231/KET/II.3.UMG/KEP/A/2023, to protect the rights and welfare of research subjects.

The limitations of this study include the use of quantitative methods, which do not allow for an in-depth understanding of the reasons for the failure to achieve ODF status, especially concerning families without latrines and practicing open defecation. Additionally, this research is limited to the scope of Desa Tingkis.

RESULTS

Table 1. Frequency Distribution by Age, Gender, Education and Occupation of the Community of Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023

Age of Community	Frequency (n)	Percentage (%)
25-34 years old	22	7,8
35-44 years old	62	22,0
45-54 years old	78	27,7
> 54 years old	120	42,6
Total	282	100
Gender of Community	Frequency (n)	Percentage (%)
Male	234	83,0
Female	48	17,0
Total	282	100
Education of Community	Frequency (n)	Percentage (%)
Elementary	211	74,8
Junior High	33	11,7
High School	31	11,0
Bachelor	7	2,5
Total	150	100
Community Occupation	Frequency (n)	Percentage (%)
Not Working	31	11,0
Housewife	43	15,2
Laborer	88	31,2
Private Employee	72	25,5
Self-employed	43	15,2
Civil Servant	4	1,4
Military/Police	1	0,4
Total	150	100

Based on Table 1, it is known that of the 282 households or family members in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023, almost half are more than 54 years old (retirement age), namely 42.6%. Table 1 also shows that out of 282 heads of households (HH) or family members in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023, almost all of them are male, 83.0%.

Table 1 shows that out of 282 households or family members in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023, most of them graduated from primary school,

74.8%. Table 1 also shows that of the 282 households or family members in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023, almost half were employed as laborers, 31.2%.

Table 2. Community knowledge, Attitude, Economic Status, Healthy Latrine Ownership, Stakeholder Commitment about stopping open defecation

Community Knowledge	Frequency (n)	Percentage (%)
Less	157	55,7
Enough	14	5,0
Good	111	39,4
Total	282	100
Community Attitude	Frequency (n)	Percentage (%)
Negative	167	59,2
Positive	115	40,8
Total	282	100
Economic Status of the Community	Frequency (n)	Percentage (%)
Low (<Rp 1,500,000/month)	196	69,5
Medium (Rp 1,500,000-Rp 2,500,000/month)	72	25,5
High (Rp 2,500,000-Rp 3,500,000/month)	13	4,6
Very High (>Rp 3,500,000/month)	1	0,4
Total	282	100
Healthy Latrine Ownership	Frequency (n)	Percentage (%)
Not good	161	57,1
Good	121	42,9
Total	282	100
Stakeholder Commitment	Frequency (n)	Percentage (%)
Not fulfilled	163	57,8
Fulfilled	119	42,2
Total	282	100
ODF Status Not Yet Achieved	Frequency (n)	Percentage (%)
No Access to Healthy Latrines	171	60,6
Access to Healthy Latrine	111	39,4
Total	282	100

Based on Table 2, the knowledge of the community in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023 about stopping open defecation is mostly lacking, namely 55.7%. Table 2 shows that the attitude of the community in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023 towards stopping open defecation is mostly negative, at 59.2%.

Based on Table 2, the economic status of the community in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023 is mostly low (<Rp 1,500,000/month), namely 69.5%. Table 2 shows that ownership of healthy latrines in the community of Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023 was mostly unfavorable, at 57.1%.

Table 2 also shows that the commitment of village-level stakeholders in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023 is mostly unfulfilled, at 57.8%. Table 2 also shows that the majority of people in Tingkis Village, Singgahan Sub-district, Tuban District in 2023 did not have access to healthy latrines, 60.6%.

Table 3. Cross-tabulation of Knowledge with Not Achieving ODF Status in Tingkis Village, Singgahan Sub-district, Tuban District, 2023

Education	Unachieved ODF Status				Total	p-Value	
	No Access to a Healthy Latrine		Access to Healthy Latrine				
	f	%	f	%			
Less	156	91,2	1	0,9	157	55,7	0,000

Enough	9	5,3	5	4,5	14	5,0
Good	6	3,5	105	94,6	111	39,4
Total	171	100	111	100	282	100

Based on Table 3, it can be seen that people with poor knowledge had the highest ODF status with no access to healthy latrines, namely 91.2% compared to ODF status with access to healthy latrines, namely 0.9%. Moderate knowledge has the highest ODF status with no access to healthy latrines, which is 5.3% compared to ODF status with access to healthy latrines, which is 4.5%. Good knowledge had the highest ODF status with access to healthy latrines at 94.6% compared to ODF status with no access to healthy latrines at 3.5%.

The results of inferential testing in Table 3 using multiple Logistic Regression analysis showed a $p=0.000 < 0.05$ so H1 is accepted. This means that there is an influence of knowledge on the achievement of ODF status in Tingkis Village, Singgahan Subdistrict.

Table 4. Cross-tabulation of Attitude with Not Achieving ODF Status in Tingkis Village, Singgahan Sub-district, Tuban District, 2023

Attitude	Unachieved ODF Status				Total	<i>p-Value</i>
	No Access to a Healthy Latrine		Access to Healthy Latrine			
	f	%	f	%		
Negative	160	93,6	7	6,3	167	59,2
Positive	11	6,4	104	93,7	115	40,8
Total	171	100	111	100	282	100

Table 4 shows that the negative attitude of the community is mostly ODF status with no access to healthy latrines, namely 93.6% compared to ODF status with access to healthy latrines, namely 6.3%. The positive attitude of most ODF status with access to healthy latrines is 93.7% compared to ODF status with no access to healthy latrines is 6.4%.

The results of inferential testing in Table 4 using multiple Logistic Regression analysis showed a $p=0.033 < 0.05$ so H1 is accepted. This means that there is an influence of attitude with the unachievement of ODF status in Tingkis Village, Singgahan Subdistrict.

Table 5. Cross-tabulation of Economic Status with Not Achieving ODF Status in Tingkis Village, Singgahan Sub-district, Tuban District in 2023

Economic Status	Unachieved ODF Status				Total	<i>p-Value</i>
	No Access to a Healthy Latrine		Access to Healthy Latrine			
	f	%	f	%		
Low	140	81,9	56	50,5	196	69,5
Medium	28	16,4	44	39,6	72	25,5
High	3	1,8	10	9,0	13	4,6
Very High	0	0,0	1	0,9	1	0,4
Total	171	100	111	100	282	100

Table 5 shows that the low economic status of the community has the highest ODF status with no access to healthy latrines, 81.9% compared to ODF status with access to healthy latrines, 50.5%. Medium economic status has the highest ODF status with access to healthy latrines at 39.6% compared to ODF status with no access to healthy latrines at 16.4%. High economic status had the highest number of ODF with access to healthy latrines, 9.0%, compared to 1.8% without access to healthy latrines. Very high economic status had the highest ODF status with access to healthy latrines at 0.9% compared to ODF status with no access to healthy latrines at 0.0%.

The results of inferential testing in Table 5 using multiple Logistic Regression analysis showed a $p=0.025 < 0.05$ so H1 is accepted. This means that there is an influence of economic status with the unachievement of ODF status in Tingkis Village, Singgahan Subdistrict.

Table 6. Cross tabulation of ownership of healthy latrines with not achieving ODF status in Tingkis Village, Singgahan Sub-district, Tuban District, 2023

Ownership of Healthy Latrines	Unachieved ODF Status				Total	<i>p-Value</i>
	No Access to a Healthy Latrine		Access to Healthy Latrine			
	f	%	f	%		
Not so good	160	93,6	1	0,9	161	57,1
Good	11	6,4	110	99,1	121	42,9
Total	171	100	111	100	282	100

Based on Table 6, shows that ownership of a healthy latrine is not good, with the most ODF status not accessing a healthy latrine at 93.6% compared to ODF status accessing a healthy latrine at 0.9%. Ownership of a healthy latrine was 99.1% of ODF status with access to a healthy latrine compared to 6.4% of ODF status with no access to a healthy latrine.

The results of inferential testing in Table 6 using multiple Logistic Regression analysis showed a p -value of $0.016 < 0.05$ so H_1 is accepted. This means that there is an influence of ownership of healthy latrines with the unachievement of ODF status in Tingkis Village, Singgahan Subdistrict.

Table 7. Cross-tabulation of Village Level Stakeholder Commitment with Unachieved ODF Status in Tingkis Village, Singgahan Sub-district, Tuban District in 2023

Village-Level Stakeholder Commitment	Unachieved ODF Status				Total	<i>p-Value</i>
	No Access to a Healthy Latrine		Access to Healthy Latrine			
	f	%	f	%		
Not fulfilled	161	94,2	2	1,8	163	57,8
Fulfilled	10	5,8	109	98,2	119	42,2
Total	171	100	111	100	282	100

$N=282$; $Wald=7,485$; $\alpha=0,05$ (5%)

Table 7 shows that the commitment of village-level stakeholders that was not fulfilled was highest for ODF status with no access to healthy latrines, 94.2%, compared to ODF status with access to healthy latrines, 1.8%. The commitment of village-level stakeholders that was fulfilled was 98.2% of ODF status with access to healthy latrines compared to 5.8% of ODF status without access to healthy latrines.

The results of inferential testing in Table 7 using multiple Logistic Regression analysis showed a $p=0.003 < 0.05$ so H_1 is accepted. This means that there is an influence of village-level stakeholder commitment on the achievement of ODF status in Tingkis Village, Singgahan Sub-district.

Table 8. Most Dominant Factors Affecting the Unachievement of ODF Status in Tingkis Village, Singgahan Subdistrict, Tuban District in 2023

Independent Variable	Exp(B) Value	<i>p-Value</i>
Knowledge	34,198	0,000
Attitude	0,014	0,033
Economic Status	0,306	0,025
Healthy Latrine Ownership	18,242	0,016
Village-Level Stakeholder Commitment	17,390	0,003

The results of inferential testing in Table 4.16 using multiple Logistic Regression analysis show that the knowledge variable has the highest Exp(B) value (34.198) compared to other variables. This means that community knowledge has a 34.198 percent influence on not achieving ODF status in Tingkis Village, Singgahan Subdistrict, Tuban Regency in 2023.

1. Knowledge of the people of Tingkis Village, Singgahan Subdistrict, Tuban Regency about Stop Open Defecation

The results of the study showed that the knowledge of the community of Tingkis Village, Singgahan Subdistrict, Tuban District in 2023 related to stopping open defecation in the sufficient category was only 14 people or 5.0% and most of the categories were lacking, namely 157 people or 55.7%, so that the community's knowledge about stopping open defecation which is lacking will be a problem in achieving ODF status. The knowledge of the community in Tingkis Village, Singgahan Subdistrict, Tuban Regency regarding stopping open defecation is known through a questionnaire consisting of 10 questions with 2 answer responses, namely 0 = "False", and 1 = "True". Knowledge questions about stopping open defecation include understanding, consequences, characteristics of healthy latrines, uses, and maintenance.

Knowledge is defined as the result of human sensing or the result of someone knowing objects through their senses (eyes, ears, nose, and so on), by itself at the time of sensing to produce knowledge, it is greatly influenced by the intensity of attention and perception of the object (Tuhuteru, 2020). Knowledge about Open Defecation Free (ODF) in this study is information known or understanding of the community regarding the success factors of ODF status which include: the definition of open defecation, the right and healthy place to defecate, the characteristics of healthy latrines, healthy latrine maintenance, the adverse effects and diseases that arise from open defecation behavior, and the importance of healthy sanitation, the community can think, then realize and leave the habit of open defecation effectively in breaking the chain of disease transmission (Parmawati, 2018; Tuhuteru, 2020).

Based on the results of this study, researchers assume that most people have low knowledge, this is because there is no willingness from the head of the family to learn to find out something that is not yet known. Most of the people with the last education of elementary school (74.8%) and work as laborers every morning go to work and return in the afternoon sometimes until night, then at night, they use it for rest, and so on life, they live so that according to them there is no time for the head of the family to find out the problem of stopping open defecation, or the community already knows but only knows, not yet able to implement.

2. The Attitude of the Community of Tingkis Village, Singgahan District, Tuban Regency, Regarding the Stop of Open Defecation

The research results revealed that the attitude of the community of Tingkis Village, Singgahan District, Tuban Regency, in 2023 regarding the stop of open defecation showed that only 115 people or 40.8% had a positive attitude, while the majority, 167 people or 59.2%, had a negative attitude. Thus, the negative attitude of the community towards open defecation will lead to a tendency for the community to continue the practice of open defecation. The attitude of the community of Tingkis Village, Singgahan District, Tuban Regency, regarding the stop of open defecation, was assessed through a questionnaire consisting of 10 questions with 4 response options: 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Agree", and 4 = "Strongly Agree". The attitude questions about the stop of open defecation included obligations, habits, feelings of shame, and comfort.

Attitude is a tendency to act, a willingness to react or behave toward something in society, showing forms, directions, and characteristics that are impulses, responses, and reflections of stimuli (Delfirman et al., 2020). Azwar, (2022) explains that attitudes can be influenced by factors such as personal experience, the influence of important others, cultural influences, educational institutions and religious institutions, and emotional factors.

Based on the results of this research, the researcher assumes that the negative attitudes of household heads are barriers to achieving ODF status. Negative attitudes towards open defecation can be influenced by facilitating factors such as lack of community knowledge, supporting factors such as the availability of latrines and septic tanks, and reinforcing factors such as support and examples from community figures (village chiefs, neighborhood heads, and community health center officers).

3. Economic Status of the Community in Tingkis Village, Singgahan District, Tuban Regency

The research results indicate that the economic status of the community in Tingkis Village, Singgahan District, Tuban Regency in 2023 was categorized as very high (>Rp 3,500,000/month) for only 1 person or 0.4%, with the majority falling into the low category (<Rp 1,500,000/month), comprising 196 people or 69.5%. Consequently, this low income among the community will pose a barrier to meeting daily needs. The economic status of the community in Tingkis Village, Singgahan District, Tuban Regency was determined through a closed questionnaire regarding the monthly income of the community.

Economic status refers to an individual's or family's position in society based on monthly income, and factors such as level of education, type of employment, and income level can influence one's economic status (Nisa et al., 2022). An individual's income level to meet living needs or achieve good economic status will affect the facilities obtained or sought. If the income level is good, then their healthcare facilities, especially within their homes, will be ensured, for example, the provision of family latrines (Heranita et al., 2019).

Based on the findings of this research, the researcher assumes that family income determines the availability and affordability of healthcare facilities. Income is a determining factor for the quality and quantity of healthcare facilities in a household. An individual's income level to meet living needs or achieve good economic status will affect the facilities obtained or sought.

4. Ownership of Healthy Latrines in the Community of Tingkis Village, Singgahan District, Tuban Regency

The research results indicate that the ownership of healthy latrines among the community in Tingkis Village, Singgahan District, Tuban Regency in 2023 was categorized as good for only 121 people or 42.9%, with the majority categorized as less satisfactory, comprising 161 people or 57.1%. Thus, the ownership of less satisfactory latrines is closely related to community health. The ownership of healthy latrines among the community in Tingkis Village, Singgahan District, Tuban Regency was determined through a questionnaire consisting of 10 questions with 2 response options: 0 = "No", and 1 = "Yes". The questions regarding ownership of healthy latrines included: not polluting sources of drinking water, no odor of feces/urine, availability of clean water, wastewater not polluting surrounding soil, minimum size of 1x1 meter and flat, tilted towards the toilet, easy to clean, safe to use, with walls and a roof, sufficient lighting/air circulation, and cleaning equipment available.

According to (Janah et al., 2019), a healthy latrine is a place for human waste disposal consisting of a squatting area and a disposal channel such as a septic tank, with a standard distance of approximately 7 meters between the septic tank and clean water source. A latrine is not considered healthy if the final disposal is directed to a ditch or river. Such practices still constitute open defecation, as the waste can still cause environmental pollution even if not directly deposited into a river using a bucket. Ownership of healthy latrines, where this ownership entails the presence or absence of fecal disposal facilities owned by each household. Having a latrine at home enables individuals to engage in healthy behavior as it allows every family member to use the latrine (Dasi & Putri, 2021).

Based on the findings of this research, the researcher assumes that the ownership of less satisfactory latrines is due to insufficient funds to build personal or ideal latrines in their homes, besides economic factors, there is also a lack of community awareness about hygiene and sanitation, as well as the community's dependence on government assistance in latrine construction.

5. Stakeholder Commitment at the Village Level in Tingkis Village, Singgahan District, Tuban Regency

The research results reveal that the stakeholder commitment at the village level in Tingkis Village, Singgahan District, Tuban Regency in 2023 was categorized as fulfilled for only 119 people or 42.2%, with the majority being unfulfilled, comprising 163 people or 57.8%. Therefore, the unfulfilled stakeholder commitment at the village level will hinder the implementation of good environmental health programs. The stakeholder commitment at the

village level in Tingkis Village, Singgahan District, Tuban Regency was assessed through an observation sheet of rural sanitation development programs consisting of 10 questions with 2 response options: 0 = "No", and 1 = "Yes".

Stakeholder commitment at the village level involves providing technical guidance for the implementation of the Community-Based Total Sanitation (STBM) program starting from planning, triggering activities, monitoring or supervision, mentoring, and advocacy. This program becomes a collective commitment to achieve better community health (Parmawati Nuri, 2018). The Minister of Health Regulation of the Republic of Indonesia Number 3 of 2014 concerning Community-Based Total Sanitation, explains that creating a conducive environment by developing a collective commitment to institutionalize rural sanitation development programs will result in village-level stakeholder commitment to provide resources in implementing the STBM program, the formation of coordinating bodies that prioritize the sanitation sector, increased regional sanitation budgets, the availability of facilitators, STBM trainers, capacity-building programs, and the establishment of a monitoring system for program performance and learning processes.

Based on the findings of this research, the researcher assumes that unfulfilled stakeholder commitment at the village level will result in many implementation problems that impact the failure to achieve ODF status and the high incidence of Open Defecation.

6. Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency

The research results indicate that the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023 was categorized as having access to healthy latrines for only 111 people or 39.4%, with the majority lacking access to latrines, comprising 171 people or 60.6%. Therefore, the low ODF status achieved will lead to an increased health risk due to environmental factors, including diarrhea. The failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency was determined through a verification checklist of ODF in the community consisting of 4 questions with 2 response options: 0 = "No", and 1 = "Yes".

ODF or open defecation-free is a condition where every individual in the community does not engage in open defecation, followed by the utilization of sanitation facilities such as healthy latrines (Fadilla, 2022). ODF or Stop Open Defecation (SOD) is a condition where every individual in a community no longer engages in the behavior of open defecation that could potentially spread diseases (Diastiningsih et al., 2022). According to Rozi et al., (2020), achieving ODF status in a community or village/neighborhood occurs when 100% of the population in that village has access to healthy latrines. Meanwhile, an ODF village/neighborhood is one where 100% of its population uses healthy latrines, achieving collective behavior change related to Pillar 1 of the 5 pillars of Community-Led Total Sanitation.

Based on the findings of this research, the researcher assumes that the failure to achieve ODF status, as indicated by the high number of households lacking access to healthy latrines and the absence of behavior change in Pillar 1, where there are no longer individuals practicing open defecation in a community, necessitates the use of healthy latrines.

7. The Influence of Knowledge on the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

The bivariate analysis results using the Logistic Regression test yielded a significant value or probability (0.000) smaller than the standard significance level of 0.05 or ($p < 0.05$). Therefore, there is an influence of knowledge on the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding aligns with Melati's research (2019), which showed a significant influence between knowledge and open defecation behavior. Heranita et al. (2019) found that the binary logistic regression test for knowledge had a significance value of $0.005 < 0.05$, indicating that knowledge influences family behavior in utilizing latrines and achieving ODF status.

According to Ahmadi et al. (2021), areas that have not achieved ODF status have a higher prevalence of diarrhea, which consequently affects the social health welfare development in a region. Lack of knowledge among the population regarding the importance of

using latrines for defecation is one of the factors contributing to the failure to achieve ODF status. Some individuals still do not understand the consequences or diseases that may arise from defecating in open areas (Rozi et al., 2020).

Based on this research, it can be concluded that knowledge is a crucial domain in shaping individual actions. If the knowledge acquired is beneficial for health, it will be reflected in the community's behavioral patterns. Heads of households with insufficient knowledge about stopping open defecation are typically those with lower education levels. This is because individuals with lower education levels find it more challenging to comprehend and correctly apply known objects in their daily lives.

8. The Influence of Attitude on the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

The bivariate analysis results using the Logistic Regression test yielded a significant value or probability (0.033) smaller than the standard significance level of 0.05 or ($p < 0.05$). Therefore, there is an influence of attitude on the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding aligns with Rozi et al.'s research (2020), which showed a significant influence between knowledge and open defecation-free status. However, Hasanah et al. (2022) found that knowledge, attitude, and availability of clean water are not determinants of high rates of open defecation, except for the type of latrine, which is a determinant factor.

Nurlia & Nurhaeda, (2021) analyzed human behavior from a health perspective, stating that behavior itself is determined and shaped by three factors: predisposing factors manifested in knowledge, attitudes, beliefs, values, and so on; enabling factors manifested in the physical environment, the availability or unavailability of health facilities or resources such as health centers, medicines, latrines, etc.; and lastly, reinforcing factors, such as attitudes and behaviors of health workers or other personnel, who are the reference group for community behavior. According to Rozi et al. (2020), unfavorable attitudes towards defecation practices in the community also contribute to the challenge of achieving ODF status.

Based on this research, it can be concluded that attitude is a predisposing factor that shapes actions or behaviors. Inconsistency between an individual's behavior and their attitude can cause psychological problems for the individuals involved, leading them to attempt to change their attitude or behavior. Positive attitude changes will influence increased community participation, which is the main asset for the success of health programs.

9. The Influence of Economic Status on the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

The bivariate analysis results using the Logistic Regression test yielded a significant value or probability (0.025) smaller than the standard significance level of 0.05 or ($p < 0.05$). Therefore, there is an influence of economic status on the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding aligns with the research by Heranita et al. (2019), which concluded that the binary logistic regression test for economic status had a significance value of $0.033 < 0.05$, meaning that economic status influences family behavior in utilizing latrines and achieving ODF status. However, Ahmadi et al. (2021) found no relationship between land availability and economic status on ODF status.

Economic status refers to an individual's or family's position in society based on monthly income, and factors such as education level, occupation type, and income amount can affect an individual's economic status (Nisa et al., 2022). An individual's income level to meet living needs or good economic status will affect the facilities obtained or sought. If the income level is good, then their healthcare facilities, especially within their homes, will be guaranteed, such as providing family latrines (Heranita et al., 2019).

Based on this research, it can be concluded that low economic factors cause communities to be unable to afford to build latrines that meet healthy latrine criteria. Families with low incomes have less participation in environmental health because, for them, survival is more important than taking new, uncertain steps. However, among the communities that do not utilize latrines according to health requirements, there are those with high family incomes. This can happen because even though these respondents have relatively high incomes, their lack of

awareness about the importance of basic sanitation facilities makes them unwilling to improve their family's health status.

10. The Influence of Latrine Ownership on the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

The bivariate analysis results using the Logistic Regression test yielded a significant value or probability (0.016) smaller than the standard significance level of 0.05 or ($p < 0.05$). Therefore, there is an influence of owning healthy latrines on the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding aligns with the research by Hasanah et al. (2022), which found that owning healthy latrines is a determinant factor in high rates of Open Defecation. Rozi et al. (2020) found a relationship between owning healthy latrines and ODF status in Ratu Agung District, Bengkulu City, with a p-value of $0.000 < 0.05$.

Healthy latrines are effective waste disposal facilities for breaking the chain of disease transmission (Sinambela, 2021). Owning healthy latrines, where ownership of healthy latrines refers to the presence or absence of fecal disposal facilities owned by each household. Having a latrine at home enables individuals to engage in healthy behaviors because latrines allow every family member to use them (Dasi & Putri, 2021). Owning healthy latrines is a success factor for ODF, but some communities are still reluctant to use healthy latrines due to perceived costliness and lack of land (Rozi et al., 2020).

Based on this research, it can be concluded that owning healthy latrines will affect the health status in an area. Latrine ownership significantly influences latrine usage by a family. Defecation behavior is highly dependent on the available facilities and infrastructure such as latrines, so owning healthy latrines is closely related to defecation behavior.

11. The Influence of Village-Level Stakeholder Commitment on the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

The bivariate analysis results using the Logistic Regression test yielded a significant value or probability (0.003) smaller than the standard significance level of 0.05 or ($p < 0.05$). Therefore, there is an influence of village-level stakeholder commitment on the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding aligns with Parmawati's research (2018), which concluded that there is an influence of village-level stakeholder commitment on achieving ODF status. The achievement of ODF status is determined by awareness, behavior, and habits; therefore, open defecation behavior is a shared problem that must be resolved through synergy and community participation. According to Ahmadi et al. (2021), their research found no relationship between land availability and economic status on ODF status, so other approaches are needed by the local Health Department, such as advocating the local government to expedite the construction of communal latrines and approaching families to be environmentally conscious, transforming coastal areas into tourist destinations to discourage open defecation, and mobilizing community leaders to implement written policies agreed upon by the local community to prevent open defecation.

According to Fadilla, (2022), triggering is divided into pre-triggering stages such as observation and discussions with the community to gather information, and triggering stages such as creating simple sanitation maps done by the community themselves, including women, men, and young people facilitated by Triggering Teams. The map should contain information about hamlet boundaries, houses with and without latrines, roads, rivers, sources of drinking water, bathing and washing, and existing sanitation problems, to identify key areas of open defecation behavior. Then there will be a joint agreement-making process representing the community's commitment to change and when they will realize their desire for change. This triggering process is highly effective in driving community behavior change. The Indonesian Ministry of Health (2021) explains that ideally, an area is considered ODF if it has gone through a series of behavioral changes from open defecation to total sanitation, requiring continuous monitoring, verification, and evaluation (Kementerian Kesehatan Republik Indonesia, (2021). This can be seen from the community's behavior of not practicing open defecation, marked by a feces-free environment, enforcement of regulations or other efforts by the community to

prevent open defecation incidents, and the presence of a public monitoring mechanism established by the community.

Based on this research, it can be concluded that village-level stakeholder commitment, whether in the form of policies, resources, funds, advice, facilitation, participation in activities, or other forms appropriate to the situation and atmosphere, is a persuasive effort covering awareness-raising and rationalization activities towards communities deemed to influence the success of a program or activity.

12. Dominant Factors in the Failure to Achieve ODF Status in Tingkis Village, Singgahan District, Tuban Regency in 2023

Logistic Regression analysis results show that the knowledge variable has the highest Exp(B) value (34.198) compared to other variables. Therefore, knowledge is the most dominant factor influencing the failure to achieve ODF status in Tingkis Village, Singgahan District, Tuban Regency in 2023. This finding is consistent with Heranita et al.'s (2019) research, which found that the binary logistic regression test for knowledge had a significance value of $0.005 < 0.05$, indicating that knowledge has the strongest influence on family behavior in utilizing latrines and achieving ODF status.

Knowledge about Open Defecation Free (ODF) is information known or understood by the community regarding the success factors of ODF status, including the definition of open defecation, proper and healthy places for defecation, characteristics of healthy latrines, latrine maintenance, negative impacts and diseases arising from open defecation behavior, and the importance of healthy sanitation. When people understand and become aware of these aspects, they are more likely to abandon the habit of open defecation, effectively breaking the chain of disease transmission (Parmawati, 2018; Tuhuteru, 2020).

Based on this research, it can be concluded that good knowledge allows for positive actions regarding ODF behavior, thus achieving ODF status. The higher an individual's knowledge about stopping open defecation, the better their access to healthy latrines will be.

CONCLUSION

Based on the findings of the research, several significant conclusions have emerged: Firstly, it has been established that knowledge plays a crucial role in the failure to attain ODF status in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023. The statistical analysis revealed a p-value of 0.000, indicating a substantial impact, as it falls below the threshold of 0.05. Secondly, attitudes also significantly contribute to the inability to achieve ODF status in the same area during the same period. The obtained p-value of 0.033 further supports this assertion, meeting the criteria for significance. Moreover, economic status emerged as another influential factor affecting the failure to reach ODF status in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023. With a p-value of 0.025, the statistical analysis confirms the significance of this relationship. Additionally, ownership of healthy latrines has been identified as a significant determinant of ODF status achievement in the aforementioned area and period. The obtained p-value of 0.016 underscores the importance of this factor in influencing ODF outcomes. Furthermore, village-level stakeholder commitment has been found to play a significant role in the inability to achieve ODF status in Tingkis Village, Singgahan Sub-district, Tuban Regency in 2023. The statistical analysis yielded a p-value of 0.003, providing strong evidence of this association. Finally, it is noteworthy that knowledge emerges as the most dominant factor influencing the failure to attain ODF status in Tingkis Village, Singgahan Sub-district, and Tuban Regency in 2023. This is evidenced by the Exp(B) value of 34.198, indicating its substantial impact compared to other factors.

In light of these findings, there is a pressing need for future research to broaden its scope, potentially encompassing provincial or national levels, to further explore the determinants of ODF status success. Additionally, considering other variables and items beyond those examined in this study could provide a more comprehensive understanding of the factors influencing ODF outcomes.

REFERENCES

- Ahmadi, A., & Saputra, R. (2021). Status analysis open defecation free (ODF) of land availability and economic status in Sagulung district, Batam city. *Jurnal Kesehatan Ibnu Sina (J-KIS)*, 2(01), 1-7.
- Azwar, S. (2022). *Sikap Manusia Teori dan Pengukurannya* (Edisi 3). Pustaka Pelajar.
- Badan Pusat Statistik Kabupaten Tuban (BPS Kab. Tuban). (2023). *Kabupaten Tuban Dalam Angka 2023*. Kabupaten Tuban Provinsi Jawa Timur.
- Dasi, S. M., & Ramadhani, P. N. (2021). Analisis Perbedaan Faktor Enabling Praktik Buang Air Besar Desa ODF dan Belum ODF Kota Surabaya. *Media Gizi Kesmas*, 10(1), 106–112.
- Delfirman, D., Erwinsyah, R. G., & As' adhanayadi, B. (2020). *Sikap dan Persepsi Masyarakat Berpendapat Rendah Terhadap Imbauan Jaga Jarak*. Pusat Penelitian dan Pengembangan Kesejahteraan Sosial.
- Diastiningsih, Y, Andi, R.A., Anisa, T., Budi, K., Muhammad, I., Indrayana, Mita, P.K., Nabella, Naili, S., Radyan, R.P., Theresia, S., Sagala, Zakianis, Madiana, S., & Siti, M.R. (2022). Faktor-faktor yang Mempengaruhi Perilaku Open Defecation Free (ODF). *Jurnal Pengabdian Kesehatan Masyarakat: Pengmaskesmas*, 2(1), 41–49.
- Dinas Kesehatan Kabupaten Tuban (Dinkes Kab. Tuban). (2020). *Profil Kesehatan Kabupaten Tuban Tahun 2020*. Dinas Kesehatan Kabupaten Tuban Provinsi Jawa Timur.
- Dinas Kesehatan Kabupaten Tuban P2KB (Dinkes P2KB Tuban). (2022). *Kabupaten Tuban Targetkan 100 Persen ODF Tuntas 2024*. Dinas Kesehatan Kabupaten Tuban Provinsi Jawa Timur.
- Fadilla, T. (2022). *Peran Stakeholders Dalam Memberikan Dukungan Sosial Terhadap Pencapaian Desa Open Defecation Free (ODF) di Pekon Teba, Kecamatan Kota Agung Timur, Kabupaten Tanggamus* [Skripsi]. Universitas Lampung.
- Hasanah, U., & Suryono, H. (2022). Faktor Determinan Kasus Open Defecation Free (Odf) Di Desa Dingil Kecamatan Jatirogo Kabupaten Tuban Tahun 2020. *Jurnal Hygiene Sanitasi*, 2(1), 5-11.
- Heranita, L., Lubis, N. L., & Moriza, T. (2019). Faktor yang Mempengaruhi Perilaku Keluarga dalam Pemanfaatan Jamban di Pemukiman Desa Air Pinang, Kecamatan Simeulue Timur, Kabupaten Simeulue Tahun 2018. *Jurnal Kesehatan Cehadum*, 1(3), 15-27.
- Janah, F., Latif, R. V. N., & Priharwanti, A. Kajian kualitatif ODF (Open Defecation Free) di Wilayah Rob Kota Pekalongan. *Prosiding Konstelasi Ilmiah Mahasiswa Unissula (KIMU) Klaster Kesehatan*.
- Kementerian Kesehatan Republik Indonesia (Kemenkes RI). (2021). *Monitoring dan Evaluasi STBM*. Kementerian Kesehatan Republik Indonesia. Jakarta.
- Melati, B.F. (2019). *Hubungan Faktor-faktor Budaya dengan Open Defecation di Desa Mangunrejo Wilayah Puskesmas Kajoran 2 Kabupaten Magelang Tahun 2019* [Skripsi]. Universitas Muhammadiyah Magelang.
- Nisa, I. S., Ariestiningsih, E. S., & Sholikhah, D. M. (2022). Gambaran Sosial Ekonomi, Pendidikan Ibu Dan Pola Pemberian Makan Balita Stunting Di Wilayah Kerja Puskesmas Dapet Kecamatan Balongpanggung. *Ghidza Media Jurnal*, 3(2), 245-252.
- Nurlia, N., & Nurhaeda R. (2021). Implementasi Pengawasan Pemerintah Kelurahan Dalam Pelaksanaan Open Defecation Free (ODF) di Kelurahan Mallawa, Kecamatan Mallusetasi, Kabupaten Barru. *Meraja Journal*, 4(2), 121–141.
- Parmawati, N. (2018). *Analisis Pencapaian Keberhasilan Verifikasi Open Defecation Free (ODF) di Desa Karangbangun Kecamatan Jumapolo Kabupaten Karanganyar* [Skripsi]. Universitas Veteran Bangun Nusantara.
- Rozi, V. F., Selviana, M., & Eryani, S. (2020). Analisis Faktor Yang Berhubungan Dengan Status Open Defecation Free Di Kota Bengkulu. *Jurnal Kesehatan*, 11, 284-287.
- Sinambela, R. G. H. (2022). Determinan Perilaku Buang Air Besar Sembarangan (Babs) Di Desa Simangulampe Kecamatan Baktiraja Kabupaten Humbang Hasundutan Tahun 2021. *Journal Of Healthcare technology and medicine*, 7(2), 1-10.
- Tuhuteru, M.D.K. (2020). *Faktor-faktor yang Mempengaruhi Tingkat Keberhasilan ODF (Open Defecation Free) di RW 15 Kelurahan Madyopuro Kecamatan Kedungkandang Kota Malang* [Skripsi]. STIKes Widyagama Husada.