FACTOR-FACTOR WHAT INFLUENCES OPEN DEFECATION BEHAVIOR

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ABSTRAK : FAKTOR-FAKTOR YANG MEMPENGARUHI PERILAKU BUANG AIR BESAR DI TEMPAT TERBUKA

Latar Belakang: Buang Air Besar Sembarangan (BASS) merupakan masalah kesehatan lingkungan yang masih umum terjadi di Indonesia dan berdampak pada penyebaran penyakit menular, terutama diare.

Tujuan: Studi ini bertujuan untuk menganalisis faktor-faktor yang mempengaruhi Perilaku Buang Air Besar Sembarangan di Desa Tegalrejo, Kecamatan Dringu, Kabupaten Probolinggo.

Metode: Studi ini menggunakan desain analitis observasional dengan pendekatan cross-sectional, melibatkan 1.015 rumah tangga di Desa Tegalrejo, dengan 225 responden yang dipilih melalui sampling acak proporsional. Data dikumpulkan menggunakan kuesioner terstruktur dan dianalisis melalui uji univariat, bivariat (uji Chi-Square), dan multivariat (regresi logistik).

Hasil: Hasil penelitian menunjukkan bahwa variabel yang secara signifikan terkait dengan perilaku Buang Air Besar di tempat terbuka meliputi tingkat pendidikan, pengetahuan, sikap, pekerjaan, usia, pendapatan, kepemilikan jamban, ketersediaan air bersih, peran tenaga kesehatan, dan dukungan dari pemimpin masyarakat. Faktor dominan yang mempengaruhi perilaku Buang Air Besar di tempat terbuka adalah kepemilikan jamban dan tingkat pengetahuan responden.

Kesimpulan: Temuan ini menunjukkan pentingnya intervensi berbasis komunitas yang mencakup pendidikan kesehatan lingkungan, peningkatan akses ke sanitasi dasar, dan keterlibatan aktif pemimpin komunitas dan tenaga kesehatan dalam mendukung program Stop BABS menuju pencapaian desa bebas Buang Air Besar Sembarangan (BABS).

Saran: Pemerintah daerah dan Dinas Kesehatan perlu meningkatkan intervensi promotif dan preventif dengan memperkuat program Sanitasi Total Berbasis Masyarakat (STBM), khususnya pilar pertama (Stop Buang Air Besar Sembarangan). Pendekatan berbasis komunitas dan keterlibatan lintas sektor perlu diperluas untuk meningkatkan akses ke toilet yang sehat.

Kata kunci: Buang Air Besar Sembarangan (BABS), Kepemilikan Toilet, Pengetahuan, Perilaku, Sanitasi.

ABSTRACT

Background:Open Defecation is an environmental health problem that is still common in Indonesia and has an impact on the spread of infectious diseases, especially diarrhea.

Objective:This study aims to analyze the factors that influence open defecation behavior in Tegalrejo Village, Dringu District, Probolinggo Regency.

Method:This study employed an observational analytical design with a cross-sectional approach, involving 1,015 households in Tegalrejo Village, resulting in 225 respondents selected through proportional random sampling. Data were collected using a structured questionnaire and analyzed through univariate, bivariate (Chi-Square test), and multivariate (logistic regression) tests.

Results:The results of the study showed that variables significantly associated with defecation behavior included education level, knowledge, attitude, occupation, age, income, latrine ownership, clean water availability, the role of health workers, and support from community leaders. The dominant factors influencing defecation behavior were latrine ownership and respondents' level of knowledge.

Conclusion:These findings indicate the importance of community-based interventions that include environmental health education, increasing access to basic sanitation, and actively involving community leaders and health workers in supporting the Stop BABS program towards achieving Open Defecation Free (ODF) villages.

Suggestion:Regional governments and the Health Department should increase promotive and preventive interventions by strengthening the STBM program, particularly the first pillar (Stop Open Defecation).

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Community-based approaches and cross-sectoral engagement need to be expanded to increase access to healthy latrines.

Keywords: Behavior, Knowledge, Open Defecation, Sanitation, Toilet Ownership

INTRODUCTION

Hygienic practices and clean and healthy living standards play a significant role in improving community well-being, influencing daily comfort, lifestyle, and environmental conditions in residential areas. In developing countries like Indonesia, sanitation issues pose a significant challenge to achieving optimal hygiene and health. One major issue is the tendency for people to defecate in the open (Pertiwi & Sari, 2022).

Data shows that more than 370 toddlers in Indonesia die from this practice. The WHO notes that 88% of diarrheal deaths are caused by difficulties accessing clean water and adequate sanitation, infections transmitted through fecal contamination, which can lead to death. Contamination from open defecation can hinder children's physical growth and cause malnutrition, which has long-term impacts on development (Pertiwi & Sari, 2022; Tetrianti, 2025). The percentage of villages that have stopped open defecation (SBS) in Probolinggo Regency has not yet reached the target of 40% (Dinas Kesehatan Probolinggo, 2020).

The percentage of Open Defecation Free (ODF) STBM, the first pillar in the working area of the Dringu Health Center, including Tegalrejo village, has not yet achieved the target of 100% ODF. Tegalrejo Village, Dringu District is one of the villages in the working area of the Dringu Regency Health Office and has a total of 189 families. Households that have JSP are 89 families (47%), those who are still sharing (sharing) are 44 families (23%), those who still defecate in the open are 56 families (30%). Tegalrejo Village has received the Stop BABS program which is the first pillar of STBM. However, some village residents still do not have a strong awareness to maintain the health of their environment.

Low educational attainment, with an average junior high school graduate, also makes it difficult for low-educated people to understand the importance of environmental health. Furthermore, information received regarding proper waste disposal practices that maintain cleanliness and prevent environmental pollution is difficult to understand and accept (Hayati et al., 2021). Distance from the house to the river: the closer the house is to the river, the greater the likelihood of defecating. Latrines: residents without latrines are 3.6 times more likely to defecate than those with latrines. Knowledge enhancement can influence defecation behavior (Marlina et al., 2018).

The availability of clean water can influence open defecation behavior. Health workers can be involved in several areas, such as resource preparation and the organization's identification of human resource needs, allowing the organization to determine the steps necessary to achieve its goals. Health workers can also assess the condition of facilities and infrastructure to ensure that the quantity and quality are adequate to meet needs. Furthermore, health workers can play a role in planning budgets, determining SBTM targets, and determining technical implementation. Health workers can also provide education or health promotion regarding environmental sanitation (Pertiwi & Sari, 2022). Based on research conducted by (Sinambela, 2022), there is a relationship between attitudes and defecation behavior. Research (Agustyaningsih et al., 2020), found that education is related to defecation behavior. According to research conducted by (Annashr et al., 2019), economic status has a significant relationship with defecation. Encourage active community participation in identifying and addressing defecation behavior through participatory methods. Increase access to healthy latrines through latrines and community empowerment programs (Sonia & Fajrina Hidayati, 2023).

RESEARCH METHODS

This study used an observational analytical study to examine the relationship between one variable and two or more other variables. The research design was cross-sectional.The independent variable of this study is. individual factors (knowledge, education, attitude, occupation, age, socio-economic), facility factors (ownership of toilets, availability of clean water), officer role factors (role of health officers, support from community leaders/officials), whileThe dependent variable in this study is BABS behavior.This research was conducted in Tegalrejo village, Dringu Health Center Working Area, Dringu District, Probolinggo Regency, East Java Province and the time of this research was between January 2025.

With a population of 1,015 families in Tegalrejo Village, with this population it can be seen that the research sample was taken using the Technique*proportional random sampling*with 225 respondents.Primary data is data collected through interviews and direct observation of respondents, while secondary data is obtained from second parties, namely from the Tegalrejo Village Head's office regarding population data and from the Dringu Health Center.The tools used were questionnaires and observation sheets. Bivariate analysis used the chi-square test, while multivariate analysis used logistic regression.

RESEARCH RESULT

General Data Characteristics

Table 1
Frequency Distribution of General Data Characteristics

Variables	Frequency (f)	Percentage (%)
Gender		
Man	172	76.4
Woman	53	23.6
Age		
Late Adolescence (17-25 years)	1	0.4
Early Adulthood (26-35 years)	84	37.3
Late Adulthood (36-45 years)	42	18.7
Pre-Elderly (>46)	98	43.6

Table 1 explains thatAlmost all of the research respondents in Tegalrejo Village, Dringu District, were male, amounting to 172 respondents (76.4%). Furthermore, almost half of the research respondents were pre-elderly, with an age range of >46 years, amounting to 98 respondents (43.6%).

Special Data Characteristics

Table 2 explains that respondents who practice open defecation are male –manas many as 7 respondents (70.0%). And also almost all of those who did not defecate were male, as many as 165 respondents (76.7%). The results of the chi-square test showed a p-value of 0.623 where the results showed a number above 0.05 (0.623 > 0.05), so from the test it can be concluded that there is no influence of gender on the incidence of defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 2
The Influence of Gender on the Incident of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Gender	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Man	7	70.0	165	76.7	172	76.4	0.623
Woman	3	30.0	50	23.3	53	23.6	

Table 3
The Influence of Age on the Incidence of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Age	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Late Teenagers	0	0	1	0.5	1	0.5	0.503
Early Adulthood	6	60.0	78	36.3	84	37.3	
Late Adulthood	1	10.0	41	19.1	42	18.7	
Pre-Elderly	3	30.0	95	44.2	98	43.6	

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Table 3 explains that the majority of respondents who practice open defecation are in early adulthood (26-45 years), namely 6 respondents (60.0%). And also almost half of those who do not practice open defecation are from the pre-elderly age (45-59 years), namely 95 respondents (44.2%). The results of the chi-square test show a p-value of 0.503 where the results show a number above 0.05 (0.503 > 0.05), so from this test it can be concluded that there is no influence of age on the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 4
The Influence of Work on the Incident of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Work	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Civil servant	0	0	26	12.1	26	11.6	0.076
Private sector employee	2	20.0	81	37.7	83	36.9	
Laborer	0	0	31	14.4	31	13.8	
Farmer	4	40.0	32	14.9	36	16.0	
Fisherman	1	10.0	5	2.3	6	2.7	
Housewife	3	30.0	40	18.6	43	19.1	

Table 4 explains that almost half of the respondents who practice open defecation work as farmers, namely 4 respondents (40.0%). And also almost half who do not practice open defecation work as private employees, namely 81 respondents (37.7%). The results of the chi-square test show a p-value of 0.076 where the results show a number above 0.05 (0.076 > 0.05), so from this test it can be concluded that there is no influence of work on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 5
The Influence of Education on the Incidence of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Education	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Base	7	70.0	43	20.0	50	22.2	0.001
Intermediate	2	20.0	108	50.2	110	48.9	
Tall	1	10.0	64	29.8	65	28.9	

Table 5 explains that the majority of respondents who practice open defecation have an elementary school education (SD), namely 7 respondents (70.0%). And also half of the respondents who do not open defecation have secondary education (SMP - SMA), namely 108 respondents (50.2%). The results of the chi-square test show a p-value of 0.001 where the results show a number below 0.05 (0.001 < 0.05), so from this test it can be concluded that there is an influence of education on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 6
The Effect of Income on the Incidence of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Income	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Below the minimum wage	10	100.0	189	87.9	199	88.4	0.242
Above the minimum wage	0	0	26	12.1	26	11.6	

Table 6 explains that all respondents who practice open defecation have incomes below the Probolinggo Regency UMK (<Rp. 2,989,407) namely 10 respondents (100.0%). Meanwhile, almost all respondents who do not open defecation have salaries below the Probolinggo Regency UMK (<Rp. 2,989,407) also namely 189 respondents (87.9%). The results of the chi-square test show a p-value of 0.242 where the results show a number above 0.05 (0.242 > 0.05), so from this test it can be concluded that there is no influence of income on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 7
The Effect of Toilet Ownership on the Incident of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Toilet Ownership	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
There is	0	0	214	99.5	214	95.1	0.000
There isn't any	10	100.0	1	0.5	11	4.9	

Table 7 explains that all respondents who defecate in the open (10 respondents) do not have access to a toilet, namely 10 respondents (100.0%). Meanwhile, almost all respondents who do not defecate have access to a good toilet, namely 214 respondents (99.5%). The results of the chi-square test show a p-value of 0.000 where the results show a number below 0.05 (0.000 < 0.05), so from this test it can be concluded that there is an influence of toilet ownership on the incidence of defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 8
The Effect of Clean Water Availability on Open Defecation Incidents (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Availability of Clean Water	Chapter		No BABS		Total		
	f	%	f	%	f	%	
There is	9	90.0	212	98.6	221	98.2	0.044
There isn't any	1	10.0	3	1.4	4	1.8	

Table 8 explains that almost all respondents who defecate in the open do not have access to clean water, namely 9 respondents (90.0%). Meanwhile, almost all respondents who do not defecate have good access to clean water, namely 212 respondents (98.6%). The results of the chi-square test show a p-value of 0.044 where the results show a number below 0.05 (0.044 < 0.05), so from this test it can be concluded that there is an influence of the availability of clean water with the incidence of defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 9
The Influence of Community Leaders' Support on Open Defecation Incidents in Tegalrejo Village, Dringu District, Probolinggo Regency

Support from Community Leaders	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
There is	5	50.0	215	100.0	220	97.8	0.000
There isn't any	5	50.0	0	0	5	2.2	

Table 9 explains that half of the respondents who practice open defecation have support and there is no support from community leaders, namely 5 respondents each (50.0%). Meanwhile, all respondents who do not open defecation have good support from community leaders, namely 215 respondents (100.0%). The results of the chi-square test show a p-value of 0.000 where the results show a number below 0.05 (0.000 <0.05), so from this test it can be concluded that there is an influence of support from community leaders on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

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Table 10
The Influence of Attitudes on the Incident of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Attitude	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Positive	0	0	215	100.0	215	95.6	0.000
Negative	10	100.0	0	0	10	4.4	

Table 10 explains that all respondents who engaged in open defecation had a negative attitude, namely 10 respondents (100.0%). Meanwhile, all respondents who did not open defecation had a positive attitude, namely 215 respondents (100.0%). The results of the chi-square test showed a p-value of 0.000 where the results showed a number below 0.05 (0.000 < 0.05), so from this test it can be concluded that there is an influence of attitudes on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 11
The Influence of Knowledge on the Incidence of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Knowledge	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
Good	5	50.0	215	100.0	220	97.8	0.000
Bad	5	50.0	0	0	5	2.2	

Table 11 explains that all respondents who practice open defecation have good and bad knowledge, namely 5 respondents each (50.0%). Meanwhile, all respondents who do not practice open defecation have good knowledge, namely 215 respondents (100.0%). The results of the chi-square test show a p-value of 0.000 where the results show a number below 0.05 (0.000 < 0.05), so from this test it can be concluded that there is an influence of knowledge on the occurrence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 12
The Influence of the Role of Health Workers on the Incident of Open Defecation (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

The Role of Health Workers	Chapter		No BABS		Total		P - Value
	f	%	f	%	f	%	
There is	9	90.0	214	99.5	223	99.1	0.002
There isn't any	1	10.0	1	0.5	2	0.9	

Table 12 explains that almost all respondents who practice open defecation have a role as a health worker as many as 9 respondents (90.0%). Meanwhile, almost all respondents who do not open defecation have a role as a health worker as well, as many as 214 respondents (99.5%). The results of the chi-square test show a p-value of 0.002 where the results show a number below 0.05 (0.002 < 0.05), so from this test it can be concluded that there is an influence of the role of health workers on the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Table 13 explains that after conducting a multivariate logistic regression test, it can be concluded that almost all variables have a p-value below (<0.05). The highest scores are for attitude and then latrine ownership. The most dominant factors influencing open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency are attitude and latrine ownership.

Table 13
Most Influential Factors on Open Defecation Incidents (BABS) in Tegalejo Village, Dringu District, Probolinggo Regency

Variables	df	P – Value	Score
Gender	1	0.623	0.241
Age	1	0.208	1,586
Work	1	0.031	4,661
Education	1	0.002	9,180
Income	1	0.242	1,367
Toilet Ownership	1	0.000	203,594
Availability of Clean Water	1	0.044	4,052
Support from Community Leaders	1	0.000	109,943
Attitude	1	0.000	225,000
Knowledge	1	0.000	109,943
The Role of Health Workers	1	0.002	9,861

DISCUSSION

The Influence of Individual Factors (education, knowledge, attitude, occupation, age, socio-economic) on BABS Behavior

The influence of gender on defecation behavior

The results of the chi-square test show a p-value of 0.623 where the results show a figure above 0.05 (0.623 > 0.05), so from this test it can be concluded that there is no influence of gender on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency..

The results of this study confirm that both men and women are sensitive to privacy and equally understand the importance of using a toilet to prevent diseases caused by open defecation. Therefore, gender is not a primary determinant of this behavior. Gender is mentioned as a factor unrelated to open defecation behavior, unlike other factors such as age, occupation, education, knowledge, attitude, and toilet ownership, which have been shown to have a significant influence(Lestari, 2020).

Although women generally tend to feel more embarrassed about defecating in the open due to concerns about modesty, this study found no significant difference in the likelihood of defecating between men and women. The more influential factor influencing defecation behavior is socioeconomic status, not gender(Tandilimbong et al., 2024).

The Influence of Education on Defecation Behavior

The results of the chi-square test show a p-value of 0.001 where the results show a figure below 0.05 (0.001 < 0.05), so from this test there is an influence of education on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency.

Education facilitates individuals' acceptance of new information that can build awareness and change behavior. Although not always directly related to toilet use, education is an important predisposing factor in efforts to reduce open defecation through appropriate counseling and teaching. Educational approaches must be accompanied by environmental support, such as the availability of toilets and clean water, for effective behavior change (Alfian, 2023).

Several similar studies have demonstrated a significant relationship between education level and open defecation behavior. Individuals with low levels of education are at a higher risk of engaging in open defecation compared to those with higher education. For example, research in Beriwit Village showed that respondents with low levels of education were 4.23 times more likely to engage in open defecation than those with higher education (Fadilla, 2022).

The Influence of Knowledge on Defecation Behavior

The results of the chi-square test show a p-value of 0.000, where the results are...showthe figure is below 0.05 (0.000 < 0.05), then from the test it is clear that there is an influence of knowledge on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency.

Knowledge and attitudes also influence open defecation behavior. Good knowledge increases the likelihood of someone not practicing open defecation, and positive attitudes are associated with better sanitation practices. Knowledge of open defecation significantly influences the practice of open defecation in the community. This study shows that respondents with poor knowledge tend

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to engage in higher levels of open defecation than those with good knowledge (Mangansuhe, 2025).

Good knowledge can reduce the risk of defecating in the open because individuals better understand the negative impacts of defecation on health and the environment. Knowledge is the result of sensing obtained through experience and information received, thus increasing awareness of the importance of defecating in a toilet.

The Influence of Attitudes on Defecation Behavior

The results of the chi-square test show a p-value of 0.000 where the results show a figure below 0.05 (0.000 < 0.05), so from this test, there is an influence of attitudes on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency. Attitudes toward open defecation (OPD) significantly influence its practice. Research shows that positive community attitudes are associated with a decrease in open defecation, while negative attitudes tend to support the practice.

The results of this study are the same as the study (Azizah et al., 2023) in the working area of the Pademangan Barat II Village Health Center, 54.2% of respondents had a positive attitude regarding open defecation and this attitude was significantly related to their behavior (p=0.003). Negative attitudes are more related to groups with low education, who also tend to practice open defecation.

Other studies have found a significant relationship between attitudes and defecation behavior. For example, research in Kamal Village showed a p-value of 0.003, indicating a significant relationship between attitudes and defecation behavior. Multivariate analysis in several regions showed attitudes as the dominant factor influencing defecation behavior, with a highly significant p-value (p=0.000) (Decci, 2024).

The influence of work on defecation behavior

The results of the chi-square test show a p-value of 0.076, where the results areshowThe figure is above 0.05 (0.076 > 0.05), so from this test it can be concluded that there is no influence of work on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency..

The results of this study are similar to those of (Aulia et al., 2021), which showed no relationship between education, occupation, and attitudes with defecation behavior (p>0.05). Meanwhile, research by Lisa, 2025, showed a relationship between occupation and defecation behavior. A 2023 study in Simpang Empat Village, within the Kertak Hanyar Community Health Center (UPTD), Banjar Regency, found a significant relationship between occupation (formal vs. informal) and defecation behavior (p-value = 0.010). Respondents with informal jobs tended to engage in more defecation than those with formal jobs.

The influence of occupation on defecation behavior can be influenced by other factors such as the environment, education, and toilet ownership in the local community. Therefore, it is necessary to examine the context and research findings in specific locations to determine whether occupation influences defecation behavior (Tenricapa et al., 2023).

The influence of age on defecation behavior

The results of the p-value analysis were 0.503, which shows thatnumberabove 0.05 (0.503 > 0.05), then from this test it can be concluded that there is no influence of age on the incidence of BABSinTegalrejo Village, Dringu District, Probolinggo Regency.

Several studies in Indonesia have found that age does not significantly influence open defecation (OD) behavior. Statistical tests in several studies showed a p-value > 0.05, indicating no significant relationship between age and ODD behavior. The statistical test results showed p = 0.695 (>0.05), thus concluding that there is no relationship between age and ODD behavior (Yazid et al., 2023).

Factors thatrelateRather, it is education, knowledge, attitudes, and habits. The results of the study (W. S. . Amelia et al., 2022) statistical test yielded p = 0.251, also indicating no significant relationship between age and defecation behavior.

Socio-economic influences on defecation behavior

The results of the chi-square test show a p-value of 0.242, where the results show a figure above 0.05 (0.242 > 0.05), thenfromThe test concluded that there was no influence of income on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency.

The socioeconomic influence on open defecation (OD) behavior is very significant and plays an important role in determining this habit.economyLow incomes prevent families from building toilets that meet health standards due to limited funds, leading them to engage in open defecation. Research (R. Amelia et al., 2021) a significant relationship between socioeconomic status and family toilet ownership; lower-income families are more likely to lack healthy toilets and engage in open defecation.

Research (Azizah et al., 2023), Kiritana Village, most of the people with incomes below the

District Minimum Wage (UMK) stillbehaveOpen defecation is common because their income is only sufficient for daily needs, and building a toilet is expensive. Other research has also found a significant relationship between income and open defecation, with low income increasing the risk of open defecation due to limited resources, such as private toilets (Maharani, 2022).

The Influence of Facility Factors (ownership of toilets, availability of clean water, land area) on Defecation Behavior

The Influence of Toilet Ownership on Defecation Behavior

The results of the chi-square test show a p-value of 0.000 where the results show a figure below 0.05 (0.000 < 0.05), so from this test it can be concluded that there is an influence of toilet ownership on the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.

Toilet ownership has been shown to have a very significant relationship with open defecation (BABS) behavior. Several studiesinVarious regions in Indonesia show that people who do not have latrines are at much greater risk of defecating in the open compared to those who have latrines (Maharani, 2022).

Respondents in Drigu village have latrines, but many still defecate openly. This is due to several factors, including a lack of public awareness about using latrines even though they already have them, as well as obstacles such as difficult access to clean water, making them impractical or uncomfortable. Those who own latrines sometimes don't use them due to long-standing habits or a lack of understanding of the importance of good sanitation. As a result, latrines that have been built can be neglected, and people continue to defecate in open spaces such as rivers, bushes, or streams.

The Influence of Clean Water Availability on Open Defecation Behavior

The results of the chi-square test show a p-value of 0.044, where the results are...showthe figure is below 0.05 (0.044 < 0.05), then from this test it can be concluded that there is an influence of the availability of clean water on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency.

The availability of clean water is significantly associated with open defecation (OD). Communities without access to or availability of clean water are more likely to engage in open defecation than those with access. In Kamal Village, Brebes, there was a significant relationship between the availability of clean water and ODS (p=0.013) (Aulia et al., 2021).

Open defecation was more common in groups without clean water. In Wainlabat Village, Sorong, test results also showed an effect of clean water availability on open defecation (ρ-value = 0.005). All respondents without clean water engaged in open defecation, while in the group with clean water, open defecation was lower (Talakua et al., 2020).

The Influence of Land Area on Defecation Behavior

The results of the chi-square test show a p-value of 0.044, where these results indicate a significant number.under0.05 (0.044 < 0.05), then from the testthethat there is an influence of land area on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency

Land area or geographic conditions play a significant role in open defecation (ODF) practices. Research shows that people living in areas with large tracts of land, particularly in rural areas, tend to have easier access to open areas such as fields, rivers, or forests for defecation (Maharani, 2022).

Geographical conditions such as soil structure, the presence of rivers, and the distance from a house to a water source also influence this behavior. If a house is close to a river or open area, people prefer open defecation because it is considered more practical than building or using a toilet. In areas with large land areas and limited access to toilets, open defecation tends to be higher because people perceive open space as readily available and easily accessible (Setyobudihono et al., 2024).

The Influence of the Role of Officers (the role of health officers, support from community leaders/officials) on Defecation Behavior

The Influence of the Role of Health Workers on Defecating Behavior

The results of the chi-square test show a p-value of 0.002. Where the resultsshows a figure below 0.05 (0.002 < 0.05), then from this test it can be concluded that there is an influence of the role of health workers on the incidence of BABS in Tegalrejo Village, Dringu District, Probolinggo Regency.

The role of health workers is crucial in influencing open defecation behavior. Health workers play a role in providing education, monitoring, and triggering efforts to stop defecation behavior BABS in the community. Research shows that the role of officershealthGood role can reduce

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the risk of defecating, while less than optimal role can increase this behavior up to 3 times (Aulia et al., 2021)

Health workers provide education on the importance of using healthy latrines and good sanitation, and provide information through health promotion media such as leaflets or banners in public places to increase public awareness. Obstacles such as a lack of monitoring and data collection on families without access to clean water or healthy latrines have been identified, so the role of workers needs to be enhanced to effectively change defecation behavior (Arisandi, 2025).

The role of health workers includes: (1) Education and increasing community knowledge about sanitation and healthy latrines, (2) Monitoring and data collection of families who do not have sanitation facilities, (3) Triggering and campaigning to stop open defecation behavior. Collaboration with community leaders and village officials to support behavioral change (Ikhtiar et al., 2023).

The Influence of Community Leaders' Support on Open Defecation Behavior

The results of the chi-square test show a p-value of 0.000, where the results show a figure below 0.05 (0.000 < 0.05), so from this test it can beconcludedthat there is an influence of support from community leaders on the BABS incident in Tegalrejo Village, District Dringu Probolinggo Regency.

The support of community leaders plays a crucial role and significantly influences open defecation (OD) behavior. Research in various regions shows that when community leaders provide support in the form of education, regulations, sanctions, and mentoring, open defecation tends to decrease, and people are more encouraged to use healthy latrines or septic tanks. Minimal or ineffective support from community leaders, such as a lack of direct outreach, the absence of written regulations, and a lack of community participation, can slow down behavioral change toward stopping ODD. Community leaders, as role models, play a role in providing examples and information that can motivate the community to adopt healthy behaviors, including toilet use and maintaining environmental cleanliness (Pertiwi & Sari, 2022).

Support from community leaders and awareness of the importance of sanitation also play an important role in changing attitudes and behavior. Changes in attitudes through educational programs or triggers are also effective in reducing open defecation behavior in the community (Ikhtiar et al., 2023).

The Most Influential Factors on Open Defecation Incidents (BABS) in Tegalrejo Village, Dringu District, Probolinggo Regency

Nearly all variables had p-values below (<0.05). The highest scores came from attitude and then latrine ownership. The most dominant factors influencing open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency were attitude and latrine ownership.

Research shows a significant relationship between public attitudes and open defecation practices. Respondents with negative attitudes toward proper defecation were 4.5 times more likely to engage in open defecation than those with positive attitudes. Toilet ownership significantly influences and is a major risk factor for open defecation. Respondents without toilets were at a very high risk of open defecation, with a very high odds ratio (OR), for example, an OR of 117 times greater risk for open defecation for those without toilets compared to those with toilets (Aulia et al., 2021)

In Drigu Village, Probolinggo Regency, community leaders are key figures. They play a crucial role in shaping and changing community behavior regarding open defecation. Community leaders can provide emotional support, appreciation, direct assistance, and information in the form of highly influential advice, counsel, and guidance.

Respondent attitudes are a person's predisposition or mental readiness to respond to an object or situation, including open defecation. Individuals with positive attitudes toward sanitation are less likely to engage in open defecation, while negative attitudes increase the risk of open defecation. Knowledge about the dangers of open defecation and the importance of good sanitation significantly influences community behavior. Good knowledge is obtained through education, information from health workers, and adequate media access.

Support from community leaders, attitudes, and knowledge have been shown to significantly influence open defecation behavior. Behavior change efforts must involve community leaders, increase knowledge, and foster positive attitudes through cross-sector education and advocacy.

CONCLUSION

There is an influence of education, knowledge, ownership of toilets, availability of clean water, support from community leaders, the role of

health workers on the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency, while there is no influence of gender, occupation, age, income on the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency.. For the most dominant factorFactors that influence the incidence of open defecation in Tegalrejo Village, Dringu District, Probolinggo Regency are attitude factors and toilet ownership factors.

SUGGESTION

Community health centers (Puskesmas) need to conduct intensive and ongoing outreach to increase public awareness of the negative impacts of open defecation, the importance of good sanitation, and the benefits of using latrines. Support from community leaders, attitudes, and knowledge have been shown to significantly influence open defecation behavior. Behavior change efforts must involve community leaders, increase knowledge, and foster positive attitudes through cross-sector education and advocacy.

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