

Determinants of Factors Associated with Community Latrine Ownership in The Working Area of Serang City Public Health Center

Ratu Fitrianingrat Istiqomah¹, Lukman Waris¹, Prihayati¹

¹ Faculty of Health Sciences, Universitas Faletehan, Indonesia

Correspondence should be addressed to:
prihayati575859@gmail.com

Abstract:

Open defecation behavior is a serious threat to public health and the environment, making it an important problem in Indonesia. This figure makes Indonesia one of the three countries with the highest level of open defecation behavior in the world, namely India 12.9%, Indonesia 4.5% and China 1.3%. In Banten Province, access to sanitation is 86.45% as of August 2023, where there are still 458,717 heads of families out of a total of 3,274,172 heads of families who have not been able to access proper sanitation. Serang City occupies the 4th lowest position in terms of its people's ability to access proper sanitation with a percentage of 92.54%. This research aims to determine the relationship between determinants that influence latrine ownership in the community in the Serang City Health Center Work Area in 2023. The research uses a cross-sectional research design. This research aims to study the dynamics of the correlation between the independent variables, namely public perception about open defecation, socio-economic status and availability of facilities with the dependent variable, namely latrine ownership. This research uses an approach, observation and data collection taken at the same time at a certain time. The research was carried out in December 2023-January 2024 in the working area of the Serang City Health Center, namely Sukawana Village, Serang City, Banten Province.

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INTRODUCTION

The degree of health is one of the factors that greatly influences the quality of human resources. In 2020, the poor sanitary conditions of human waste disposal sites cannot be separated from the aspect of ownership of the facilities used (Anggita et al., 2023). This condition will have a negative impact on various aspects of life, starting from a decline in the quality of the community's living environment, contamination of drinking water sources for the community, an increase in the number of diarrhea incidents, and the emergence of several diseases. Waterborne diseases and hygiene sanitary way fecal-oral (by mouth) are still public health problems and cause outbreaks (extraordinary events), one of which is open defecation (Fauziyah & Siwiendrawati, 2023). This can also influence the individual's perception of health, which is in accordance with the health belief model theory, which states that health behavior has an impact on healthy lifestyles (Nuzula et al., 2023).

Defecation behavior is a serious threat to public health and the environment, making it an important problem in Indonesia. The United Nations Children's Fund (UNICEF) and WHO are of the opinion that in 2017, as many as 892 million people in the world still had defecation behavior, and only 13% of the global population, namely 0.9 billion people, used latrines (Restu et al., 2022). Data from the 2018 national socio-economic survey shows that the national prevalence rate for

defecation behavior is 9%, which means that defecation behavior is still practiced by more than 20 million people in Indonesia. This figure makes Indonesia one of the three countries with the highest level of defecation behavior in the world: India 12.9%, Indonesia 4.5%, and China 1.3% (Defita, 2018).

Defecation behavior is one of the factors that contributes greatly to child mortality in Indonesia (Riskesdas, 2018). This can be proven by the fact that 1 in 10 children under five in Indonesia suffer from diarrhea, where diarrhea is the main cause of death among children under five in Indonesia, exceeding the death rate due to ISPA, fever, malaria, and so on. Worm infections or Soil Transmitted Helminth (STH). WHO predicts that 1 in 4 people worldwide are infected with STH. STH spreads through STH eggs in the feces of STH sufferers, which then contaminate the soil (Junias et al., 2024; Kurniawan et al., 2023). Apart from that, it can also influence a healthy lifestyle so that it can have an impact on daily life, for example, with clean and healthy living behavior by diligently washing your hands with soap before carrying out activities (Afandi et al., 2022; Afandi et al., 2023).

Basic Health Research (RIKESDAS) results in 2018 show that a proportion of the population aged ≥ 3 years, as much as 88.2% in Indonesia, have used healthy latrines. However, there are still 11.8% of the population who do not have healthy toilets, and there is still the opportunity to defecate in rivers or open areas. Based on 2023 Ministry of Health data presented at the Banten Province STBM Acceleration Coordination Meeting, sanitation access in Indonesia reached 91.86%, while sanitation access in Banten Province was 86.45% as of August 2023 where there were still 458,717 heads of families out of a total of 3,274,172 heads of families who have not been able to access adequate sanitation (Paramatsya and Wulandari, 2023).

Banten Province has eight regencies/cities and Serang City still occupies the 4th lowest position in terms of its people's ability to access proper sanitation with a percentage of 92.54%. This number indicates that there are still 7.46% or 10,925 heads of families who have yet to access a healthy toilet and have the opportunity to practice defecation. Meanwhile, sub-districts in Serang City that have stopped open defecation (SBS) or ODF (Open Defecation Free) have only reached 41% of 67 sub-districts, so around 27 sub-districts in Serang City have not been declared SBS or ODF (Serang City Health Service, 2022).

According to Lawrence Green et al. (1980), defecation behavior is influenced by several factors related to latrine ownership. There are three factors, including predisposing factors regarding knowledge, attitudes, education, work, and socioeconomics, supported by research (Lado et al., 2024). Enabling factors regarding the availability of clean water facilities and land availability is supported by research (Aulia et al., 2021). As well as other enabling factors, namely the local community's perception (Suryati et al., 2023). The factors influence the fulfillment of the facilities obtained, namely ownership of a latrine, the availability of facilities, and the range of tools and materials used to have a healthy latrine at home, including the availability of clean water and the availability of land.

Apart from the above aspects, the factors that influence latrine ownership are reinforcing factors, including the public's perception of open defecation behavior. Public perception about good open defecation behavior arises from public awareness of defecating in latrines. The role of this factor is very important in latrine ownership because it is not only influenced by the availability of physical and material factors but also by a person's personal encouragement to live a clean life by creating healthy latrine facilities (Suriati et al., 2023).

Based on data from the Serang City Health Center in 2022, there are 3 sub-districts in the work area: Sumur Pecung Subdistrict, Cipare Subdistrict, and Sukawana Subdistrict. Of the three sub-districts, Sukawana Sub-District has the lowest coverage of family latrine ownership; as many

as 102 families do not have a latrine and still practice defecation in gardens, rice fields, and rivers, so they are declared not ODF (Open Defecation Free). Meanwhile, this sub-district area has access to the sub-district capital in just 10 minutes with a distance of 3 kilometers. Therefore, this research aims to determine the relationship between determinants that influence latrine ownership in the Serang City Health Center Work Area community in 2023. Researchers think that socio-economic status, community perception about defecation, and the availability of facilities influence latrine ownership.

METHOD

The type of research is observational analytical, quantitative research with a cross-sectional research design. This research is to study the dynamics of the correlation between the independent variables, namely public perception about defecation, socio-economic status, and availability of facilities with the dependent variable, namely latrine ownership. This research uses an observation and data collection approach taken simultaneously at a certain time. The research was conducted in December 2023-January 2024, located in the working area of the Serang City Health Center, namely Sukawana Village, Serang City, Banten Province.

RESULT

Univariate Analysis

Table 1. Frequency Distribution of Determinants that Influence Toilet Ownership in Communities in the Working Area of Serang City Health Center in 2023

Variable	Frequency (f)	Percentage (%)
Toilet Ownership		
Has a toilet	78	78
Doesn't have a toilet	22	22
Public perception about open defecation		
Good	54	54
Not good	46	46
Socioeconomic status		
High income	55	55
Low income	45	45
Availability of facilities		
Available	78	78
Not available	22	22

Based on the table above, it can be seen that of the 100 respondents in Sukawana Village, 78 people (78%) have toilets and 22 people (22%) do not have toilets. Respondents who had a good perception about defecation were 54 people (54%) and respondents who had an unfavorable perception were 46 people (46%). Respondents with high socio-economic status were 55 people (55%) and respondents with low income were 45 people (45%). Respondents who had the availability of clean water facilities and land were 78 people (78%) and respondents who did not have the availability of clean water facilities or land were 22 people (22%).

Bivariate Analysis

Table 2. Determinants Analysis that Influences Toilet Ownership in Communities in the Working Area of Serang City Health Center in 2023

Variable	Toilet Ownership				Total		p-value	OR	CI (95%)
	Have		Do not have						
	N	%	N	%	N	%			
Public Perceptions About Defecation									
Good perception	51	94.4	3	5.6	54	100	0.000	11.963	3.247-44.069
Not good perception	27	58.7	19	41.3	46	100			
Socioeconomic Status									
High income	54	98.2	1	1.8	55	100	0.000	47.150	6.005-371.80
Low income	24	53.3	21	46.7	45	100			
Availability of Facilities									
Facilities Available	60	98.4	1	1.6	61	100	0.000	70	8.797-557.0
No Facilities Available	18	46.2	21	53.8	39	100			

The results of the analysis showed that out of 100 respondents with good perceptions, 51 (94.4%) respondents had toilets and 3 (5.6%) respondents with good perceptions did not have toilets. Meanwhile, 27 (58.7%) respondents with unfavorable perceptions had toilets and 19 (41.3%) respondents with unfavorable perceptions did not. The results of bivariate analysis using chi-square obtained $p\text{-value}=0.000$ so that it can be concluded statistically at $\alpha=5\%$ proves that there is a significant relationship between people's perception of defecation and latrine ownership in the community in the Serang City Health Center Work Area in 2023. The OR value obtained = 11,963 means that people with good perceptions have 11,963 times greater chances than people who have good perceptions. not good.

Based on the results table above, it is known that out of 100 respondents with socio-economic status characterized by high income, 54 (98.2%) respondents had a latrine and 1 (1.8%) respondent with a high income did not have a latrine. Meanwhile, 24 (53.3%) respondents with low incomes had toilets and 45 (41.3%) respondents with low incomes did not. Bivariate analysis results using chi-square obtained 0.000, then it can be concluded statistically at $\alpha=5\%$ that there is a significant relationship between socio-economic status and latrine ownership in the community in the Serang City Health Center Working Area in 2023. The OR value obtained = 47,250 means that people with high incomes have a 47,250 times greater chance of owning a latrine compared to people with low incomes.

The results of the analysis show that out of 100 respondents with available facilities that have toilets there are 60 (98.4%) respondents and respondents with available facilities that do not have toilets are 1 (1.6%) respondent. Meanwhile, there were 18 (46.2%) respondents who did not have facilities that had toilets and 21 (53.8%) respondents who did not have facilities that did not have toilets. Bivariate analysis results using chi-square obtained 0.000, then it can be concluded statistically at $\alpha=5\%$, there is a significant relationship between the availability of facilities and ownership of toilets in the community in the Serang City Health Center Work Area in 2023. The OR value = 70,000 means that communities with the availability of facilities have a 70 times greater chance of having a toilet compared to communities that do not have the availability of facilities.

DISCUSSION

Frequency Distribution of Toilet Ownership in Communities in the Serang City Health Center Working Area in 2023

This research shows that 78 people (78%) had access to a latrine, greater than 22 people (22%) who did not have a latrine. This data shows that most respondents already have their own toilets built inside or outside the house. This research is in line with the results of research conducted by Rahman (2022), it was found that the majority of respondents had a latrine, 48 (60.8%) and 31 (39.2%) respondents who did not have a latrine in Lukbayur Tabalong Village. Respondents who own toilets are influenced by information about the importance of using toilets, especially regarding STBM (Community-Based Total Sanitation) from local health workers, apart from that, ownership of toilets owned by some respondents comes from government assistance in building family toilets.

The Relationship Between Community Perceptions About Defecation and Toilet Ownership in the Community in the Serang City Health Center Work Area in 2023

Based on the results of this research, it shows that There is a significant relationship between public perception about defecation and latrine ownership Pvalue 0.000 and the OR value = 11.963, meaning that the public's perception of good defecation has a 11.963 times greater chance of having a latrine compared to the public's perception of bad defecation. This research is in line with Sherly (2022), who states that there is a significant relationship between knowledge, attitudes, and perceptions of latrine ownership and Pvalue 0,000.

This is in line with Wirayuni's research in 2023, there is a significant relationship between knowledge, attitudes and perceptions of latrine ownership with Pvalue=0.000. Public perception about good open defecation behavior arises from public awareness of defecating in latrines. This perception arises and is influenced by the respondent's knowledge, attitudes and behavior. This is in line with Lawrence Green's theory, which states that behavior is based on 3 factors, namely predisposition, enabler, and supporter or reinforcer. This community perception factor is a reinforcing factor of predisposing factors that arise from themselves which are influenced by the environment, namely knowledge and attitudes, giving rise to community behavior in throwing waste in the toilet.

Good public perception of open defecation behavior outside the home arises from public awareness of defecation in the latrine. This perception arises and is influenced by the respondent's knowledge, attitudes, and behavior. This is in accordance with Lawrence Green's theory which states that behavior is based on three factors, namely predisposing factors, enabling factors and reinforcing factors. These community perception factors are predisposing factors that arise naturally and are influenced by the environment and reinforcing factors in the form of knowledge and attitudes that lead to people's defecation behavior in toilets.

Based on the explanation above, most of the good perceptions are those who have latrines, so researchers assume that good perceptions will influence the level of people's desire to build and have latrines because people already know the risk of disease transmission from feces and the relationship with environmental health due to feces not being properly collected.

The Relationship Between Socio-Economic Status and Toilet Ownership in Communities in the Serang City Health Center Working Area in 2023

Based on the results of this research show that There is a significant relationship between socio-economic status and latrine ownership and Pvalue=0.000 with a value of OR=47,250,

meaning that people with high incomes have a 47,250 times greater chance of having a latrine compared to people with low incomes. The research above results are supported by Amelia et al. (2021), which shows a relationship between socioeconomic status and latrine ownership and p-value <0.005 .

The results of this research are also similar to research conducted by Haikal et al in 2021, namely the relationship between socio-economic status and latrine ownership with a P value <0.005 . A person's socio-economic status can be seen from the level of a person's income to meet living needs or the economic status received by workers as compensation and will influence the facilities obtained. If the income level is high, a family's health facilities, especially in the house, will be guaranteed, for example, by providing a family toilet. The average job for people in Sukawana Village is as self-employed/convection entrepreneurs and laborers so convection entrepreneurs and laborers make their income uncertain every month.

Respondents with low incomes in their community use it for daily necessities and necessities which are still not enough because respondents who have income must be able to support 2-4 families in the house, which means that 1 house can accommodate as many as 9-14 residents, especially for household needs. building a latrine requires a lot of money, people prefer to fulfill their basic living needs rather than building and owning a latrine so that income greatly influences a person's situation.

According to Law Number 13 of 2003, it is stated that the level of income in a family is a result for workers in the form of wages so that the level of income in the form of wages for a person influences his ability to meet the costs of living and his economic status. A higher income level ensures that the family has adequate health facilities, such as providing household toilets. Low income is an obstacle to people's access to a healthy home toilet.

Income will influence a person's desire and willingness to own something. Therefore, income is related to work and education, the higher the person's education, the more opportunities they will have to work with high income so that they have a high social status compared to people with basic education, so they will have the desire and ability to build and own own toilet.

The Relationship Between Facilities Availability and Toilet Ownership in Communities in the Serang City Health Center Working Area in 2023

Based on the results of this research it shows that there is a significant relationship between the availability of facilities with ownership of toilets in the community in the Serang City Health Center Working Area in 2023 with a value of $OR=1617$, meaning that communities with availability of facilities have a 1617 times greater chance of owning a toilet compared to communities that do not have the availability of facilities for access to healthy toilets. The results of this research are supported by research by Kuewa et al. (2021) that there is a relationship between the availability of facilities and ownership of a latrine with a p-value <0.005 .

The results of the research above are supported by research by Junias et al. (2024); there is a relationship between socio-economic status and latrine ownership with a P value <0.005 . Availability of Facilities is a respondent who has the availability of clean water facilities and land to build a latrine. The availability of facilities includes the readiness of all the tools and materials used to have a healthy latrine at home, including clean water and land.

This is in accordance with Lawrence Green's theory, which states that the availability of clean water is an enabling factor for healthy behavior because the availability of clean water will make it easier for family members to maintain personal hygiene. Sukawana Village has clean water for activities, hygiene, and sanitation, namely SGL (dug well) plus the better-known electric pump jet pump for as many as 86 (86%) people and PDAM pipes for as many as 14 (14%) people.

The availability of clean water is an enabling factor for healthy behavior because the availability of clean water will make it easier for family members to maintain personal hygiene and cleanliness around the toilet. Meanwhile, the availability of land with latrine ownership means that if someone needs more land, they think it will be difficult to build their own latrine because they need land to use. septic tank, so they choose to defecate in rivers or other places. Meanwhile, people who have sufficient land, if they already have a habit of defecating in the open, will still be reluctant to build their own toilets because they feel that it is common for them to defecate in rice fields, gardens, or rivers.

The availability of facilities (clean water and land) greatly influences latrine ownership because by having clean water and their own land, a person will be free to use water and build whatever is on their land without fear of anyone getting in the way, likewise by building a latrine someone who has a latrine will You are free to build a toilet in its entirety, large or small depending on your wishes because the availability of land supports it.

This is in accordance with Lawrence Green's theory, which states that access to clean water supports people's healthy behavior because it makes it easier for families to maintain personal hygiene. Access to clean water is an important component of healthy behavior because it makes it easier for families to maintain personal hygiene and cleanliness around the toilet. The availability of land with access to latrine ownership means that people who do not have enough land will find it difficult to build their own latrine because they need land to build their own latrine. septic tank. People who have enough land and are used to defecating in the open may be hesitant to build their own toilets because they think that defecating in fields, gardens, rivers, etc., is normal.

CONCLUSION

The results of research on determinants related to latrine ownership in the community in the Serang City Health Center Work Area in 2023 show that latrine ownership in Sukawana sub-district is 78%. The analysis results prove a significant relationship between community perception, availability of facilities, and socio-economic conditions with latrine ownership.

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