



The Relationship Between Knowledge, Attitudes, and the Role of Officers with the Management of Household Wastewater Disposal (SPAL) in Hamlet II Teluk Mengkudu Serdang Bedagai

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ABSTRACT

SPAL has several negative impacts that are not in line with health standards. When household wastewater seeps into the stream and ends up at ground level where it is discharged, the first thing to notice is to block the view. In addition, wastewater can also emit an unpleasant odor that makes it less comfortable for the community, especially those who are active indoors. In the coastal area of Dusun II, Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai, the purpose of this study is to determine the relationship between knowledge, attitudes, and the role of health workers with the management of home wastewater drains. This study uses a cross-sectional quantitative research method. The sample was 53 respondents, representing 386 households and 1200 individuals. The research was conducted in Teluk Mengkudu, Serdang Bedagai, in Hamlet II, Sialang Buah Village. Random Sampling is a method used for sampling. The conclusion of the analysis shows that although knowledge and home SPAL are not related, the role and attitude of the officer are related to the household SPAL. To prevent the occurrence of diseases caused by wastewater sewers, it is hoped that the residents of Hamlet II, Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai will further strengthen their awareness, attitudes, and activities regarding the correct household wastewater sewer (SPAL).

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INTRODUCTION

According to the Regulation of the Ministry of Health of the Republic of Indonesia (2004), sanitation is a basic effort in improving human health by providing health criteria that are met in a healthy environment. In the surrounding environment, basic sanitation initiatives include waste management, wastewater disposal lines, clean water supply, and hygienic latrines. Many factors, especially those related to home hygiene, have an impact on health. Ahyawati (2023). Wastewater Sewers (SPAL) are used to dispose of and contain wastewater from latrines, kitchens, and bathrooms for villages. This allows wastewater to seep into the soil thereby preventing disease outbreaks and pollution of the surrounding residential environment (Utami, 2020).

WHO/UNICEF reports that 60% of rural people in Indonesia do not have access to SPAL at home, which allows liquid waste from households to be dumped into rivers and soil. (Balebu's Disclosure, 2023). Based on the findings of Basic Health Research (Riskesmas), most Indonesians who dispose of their household wastewater still do so down the sewer at around 51.0% while a smaller percentage—about 18.9% do it directly into the ground without any protection. . In addition, as many as 18.8% of respondents used closed shelters equipped with SPAL in their yards, and 11.2% of respondents used open shelters (Samosir, 2022).

The way wastewater is disposed of includes age, income, occupation, education, knowledge, attitude, and involvement of health professionals. The main purpose of this study is to find out how the role of health workers in managing household wastewater and their knowledge and attitudes are related to each other. Aiming to find out the relationship between the duties, knowledge, and attitudes of health workers about the management of house wastewater sewers in the coastal area of Hamlet II, Sialang Buah Village, Teluk

Mengkudu, Serdang Bedagai, this study is motivated by this background.

The majority of people do not have wastewater disposal facilities; Instead, they dispose of household waste in rivers, seas, and other open spaces without first treating it. There are also many wastewater sewers in the form of excavated holes that obstruct the flow of water, causing foul air to accumulate and pollute the surrounding environment so that it becomes a nest for mosquitoes and flies. This finding is based on observations made by researchers in Hamlet II Sialang Buah, Teluk Mengkudu. The belief of coastal communities is that sand and water can immediately absorb household wastewater to prevent this from happening. This causes a lack of public awareness about the adverse impact of improper household wastewater management on health. SPAL facilities in Hamlet II Sialang Buah, Teluk Mengkudu are not widely available because the community considers it not very necessary. In the coastal community of Dusun II Sialang Buah, Teluk Mengkudu, Serdang Bedagai, the purpose of this study is to determine the relationship between knowledge, attitudes, and the role of health workers with wastewater drainage management.

METHODOLOGY

A cross-sectional quantitative research methodology was used in this study. Questionnaires are used in data collection. Out of a total of 1,200 residents, there are a total of 386 families. 53 samples were collected using the Lameshow formula. approach to random sampling. Respondents were observed and interviewed to collect data. The Chi-Square test is then used to assess the data. A significance limit (confidence level) of 0.05 is used to assess the importance of statistical computational findings. If the p-value is less than 0.05, it indicates a significant relationship and the hypothesis is rejected (HO is rejected). On the other hand, if the p-value is greater than 0.05, it means that there is no significant relationship (HO is not rejected).

RESULTS

Analysis of information collected from surveys notified to respondents. A total of 53 people from Hamlet II, Sialang Buah Village, Teluk Mengkudu, and Serdang Bedagai became respondents.

Table 1. In Hamlet II of Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai

Variab el	Distribution	
	n	%
Gender		
Woman	31	58,5
Man	22	41,6
Age	n	%
0-20	10	18
21-50	30	55
51 and above	13	24
Education	N	%
Not Finishing School	1	1,9
SD	9	17,0
JUNIOR	12	22,6
SMA	25	47,2
PT	6	11,3
Total	53	100

The gender distribution can be seen in Table 1, namely 22 male respondents and 31 female respondents representing 58.5% and 41.6% of the sample, respectively.

Regarding the age, the respondents who had the most age were 21-50 and above with a total of 30 respondents and a percentage of 55%. For the age of 51 and above with the second highest number with 13 respondents with a percentage of 24%. And for the age of the respondents who have the least age, namely in the vulnerable age of 0-20 with a total of 10 respondents and a percentage of 18%.

Regarding education, the respondents who had the most education were at the high school level with the number of respondents being 25 respondents and a percentage of 47.2%. For respondents who have the least education, there are 1 person at the level of not finishing school, which is 1.9%.

Table 2. Univariate Data

Variable	Number (n)	Frequency (f)
Good Knowledge	39	73.6
Bad	14	26,4
Good and Bad Attitude	23	43,4
	30	56,6
The Role of Good Officers	25	52,8
Bad	28	47,2
Household SPAL Management Qualify	20	37,8
Not eligible	33	62.2

In table 2. The data showed that most of the respondents (39 or 73.6% of the total) had good knowledge, while a small number of respondents (14 or 26.4% of the total) had bad knowledge. Regarding attitudes, respondents with a bad attitude were obtained with the number of respondents as many as 30 and the percentage of 56.6%. For respondents who have a good attitude with the number of respondents as many as 23 and the percentage is 43.4%. For public understanding of the functions and training of health workers, the percentage was good as 25 respondents (52.8%), while the percentage was low as 28 respondents (47.2%). Meanwhile, 33 people (62.2%) did not meet the standards for the management of home SPAL, while 20 people (37.8) met the standards.

Table 3. Bivariate Data

Variable	Spal Management				Pvalue/OR
	Meet		Not Compliant		
	n	%	N	%	
Knowledge					
Good	31	79,5	8	20,5	0,093/0,185
Bad	14	100	0	0	
Attitude					
Good	15	65,2	8	34,8	0,001/0,120
Bad	30	100	0	0	
Role of Officers					
Good	17	68,0	8	32,2	0,004/0,120
Bad	28	100	0	0	

In table 3. Showing the management of SPAL, in the table above it is known that there are 31 respondents with a percentage of 79.5% who have good knowledge while 14 respondents with a percentage of 100% are poor. There was a P value of $0.0093 > 0.05$ for negative findings that showed no relationship between knowledge and household SPAL management. Of the respondents, there were 8 people whose percentage of 20.5% did not meet good results, while the remaining 0 people whose percentage was 0%.

Regarding attitudes, it is known that there are 15 respondents with a percentage of 65.2% who have a good attitude while 30 respondents with a percentage of 100% are bad. There is a considerable relationship between attitudes and household SPAL management. Of the respondents, 8 people had a percentage of 34.8% who did not meet good results, and 0 people had a percentage of 0% with a P value of $0.001 < 0.05$ for poor respondents.

Regarding the role of health and education workers, it is known that there are 17 respondents with a percentage of 68.0% who are good while 28 respondents with a percentage of 100% are poor. There were 8 respondents with a percentage of 32.2% who did not meet the good results, and 0 respondents with

a percentage of 0% and a P value of $0.004 < 0.05$ who did not meet the bad results. These results show that there is a strong relationship between the role of the officer and the maintenance of the home SPAL.

DISCUSSION

The Relationship Between Knowledge and Management of Household SPAL in Hamlet II Teluk Mengkudu

The findings of the study showed that there was a significant relationship between knowledge and the management of household SPAL in Hamlet II, Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai, with a P value of $0.014 < 0.05$. This shows that there is a relationship between knowledge and the management of household SPAL in the location. In addition, the data showed an odds ratio (OR) value of 0.185 ($OR > 1$), which showed that respondents with lower knowledge were more likely to fail to meet their home requirements than respondents with more knowledge.

Lack of public understanding is one of the factors that cause the management of SPAL houses not to meet standards. With a P value of 0.000 from 127 respondents, research conducted by Fera Meliyanti in 2018 revealed the relationship between knowledge and household SPAL management. This is because knowledge is obtained from the process of a person using his senses such as sight, hearing, and smell to detect objects outside of him. Consequently, this process involves individuals noting, seeing, and appreciating stimuli or objects outside of themselves.

The Relationship Between Attitude and Management of Household SPAL in Hamlet II Teluk Mengnoni

The results of the study showed that in Hamlet II of Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai, there was a significant relationship between attitudes and household SPAL management. The relationship has a P value of $0.000 < 0.05$ which shows that there is a relationship between attitude and household SPAL management in Sialang Buah Village, Teluk Mengkudu, Serdang Bedagai. In addition, the odds ratio (OR) value of 0.120 ($OR > 1$) shows that respondents who have a negative attitude are more likely than respondents who have a positive attitude to meet the requirements of household SPAL.

The attitude that is embedded in a person since childhood plays a big role in controlling SPAL at home. Sebtian Sarwoko's research in 2021 showed that the attitude and management of household SPAL was significantly correlated, with a P value value of 0.000 in respondents who had good control over SPAL ownership, higher than 9.9% of respondents who had poor control over SPAL ownership.

The Relationship Between the Role of Health Workers and the Management of Household SPAL in Hamlet II Teluk Mengkudu

Based on the findings of the study, the P value of 0.000 for the management of house SPAL in Hamlet II, Sialang Buah Village, Teluk Mengkudu District has a significant relationship with the function of health workers. Serdang Bedagai and showed an Odds Ratio (OR) value of 0.120 ($OR > 1$), which indicates that health workers who do not participate are more likely to not meet SPAL standards at home than those who play a role.

Increasing awareness, ability, knowledge, and willingness in individuals, families, and communities is the goal of the role of health workers which is a form of community empowerment. They also actively participate in the planning of all health-related activities. The main goal is to prevent disease, improve health degrees, and create a healthy environment. In carrying out empowerment, you must pay attention to all current circumstances, especially the local socio-culture.

CONCLUSION

There was no significant relationship between knowledge and household SPAL management, which was shown by a P value of $0.093 > 0.05$ and a value (OR) of 0.185.

Attitudes and management of household SPAL were significantly correlated, with a P value of $0.001 < 0.05$ and a value (OR) of 0.120.

The function of officers and the management of SPAL houses were significantly correlated, with a P value of $0.004 < 0.05$ and a value (OR) of 0.120.

It can be concluded that knowledge provides an information base, attitudes form motivation and awareness, and actions are practical applications of both elements in effective and responsible household waste management.

SUGGESTION

It is hoped that residents of Hamlet II Kel, Teluk Mengkudu District, Sialang Buah Village. To prevent the occurrence of diseases caused by wastewater drainage channels (SPAL), Serdang Bedagai strives to further improve understanding, attitudes, and behaviors about the proper home SPAL drainage channels.

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