

Effect of Implementation of Stop Defecate Carelessly Behavior on Diarrhea Occurrence in the Deli Watershed Medan Maimun District of Medan City in 2021

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ABSTRACT

Diarrhea is the third leading cause of death in children under five, with a 17% proportional mortality rate. In the same year, diarrhea was the third most significant death cause in children under five in Southeast Asia, with an 18% proportional mortality rate. Only half of Indonesia's population, and only 1/3 of those in villages, have access to adequate sanitation. To analyze the effect of the implementation of stopping defecating carelessly on the diarrhea occurrence in the Deli watershed in the Medan Maimun District of Medan City. This research was an analytic survey with a cross-sectional study design. The sample was 90 houses with random sampling techniques in the Deli River watershed. Data analysis was univariate, bivariate, and multivariate using logistic regression analysis tests. The study results showed that there was no significant effect between the respondents' characteristics to the diarrhea occurrence, both in terms of age, education level, and economic status. Based on the respondent's behavior, namely knowledge and attitude, it was found that there was a significant effect between knowledge and diarrhea occurrence with a value of $p=0.016$. There was a significant effect between attitudes with occurrence with a value of $p=0.001$. Thus, stop defecation carelessly can prevent the diarrhea occurrence. There is the effect of stop defecation carelessly can prevent the occurrence of diarrhea.

Keywords: Stop Defecation Carelessly, Diarrhea Occurrence

INTRODUCTION

Diarrhea is a bowel movement that occurs more than three times a day, has the consistency of liquid feces, and is accompanied by blood and mucous. Diarrheal diseases can be transmitted by food, drink, and other causes. Diarrhea generally lasts a few days (acute), but it might last for weeks (chronic) in certain situations. Diarrhea is caused by viruses, bacteria, or parasites in food and drink (Kemenkes RI, 2018).

Diarrhea is the third leading cause of death in children under five, with a 17% proportional mortality rate. In the same year, diarrhea was the third most significant cause of death in children under five in Southeast Asia, with an 18% proportional mortality rate. Only half of Indonesia's population, and only a quarter of those in villages, have access to adequate sanitation. According to the World Health Organization (WHO, 2015), This leaves children vulnerable to diarrhea and waterborne diseases.

Diarrheal disease is still a public health problem in developing countries like Indonesia due to its morbidity and mortality. A Morbidity survey conducted by Subdit Diarrhea, Ministry of Health, from 2018 to 2019 saw the trend of occurrence rise.

According to Riske Primary school 2018 data, diarrhea occurrence and prevalence periods in Indonesia were 3.5% and 7.0%. In 2014, based on the recapitulation of diarrhea cases, the Ministry of Health of the Republic of Indonesia recorded 2,549 cases in 5 provinces, with the number of deaths at 29, and diarrhea is still the leading cause of death under five years (Ministry of Health, 2018).

Medan Maimun District is one of the sub-districts that still have problems with sanitation and clean and healthy living behavior. Access to new latrines reached 68.78% and still found people who defecate carelessly. People who have not accessed healthy latrines in the subdistrict partly perform defecate carelessly by draining feces from the latrines into the river or defecating directly into the river. The geographical condition of the Maimun Medan subdistrict, which is partly in the form of river flow, creates alternative residents who do not have bathrooms to defecate in the river. Changes in the hue of the environment also resulted in flooding on people's homes around the river. That makes the risk of pollution more widespread from feces carried by river flow and flooding. Improvement efforts are made through the STBM program of the first pillar of stop defecation carelessly with triggering methods.

Based on the initial survey with in-person interviews with people in Medan Maimun District, as many as 20 houses visited in deli watershed, Hamdan village, 12 houses did not have a bathroom. They did bath, washing, outhouses in the river on the edge of their place. People there also had personal hygiene and poor sanitation seen from not washing hands with soap after defecating. Also, the community was unable to create its bathroom due to cost. And the land to make the bathroom did not exist, because the people's house there was partly only one and two rooms only, the room and kitchen become one and can cause disease transmission to be high-speed. The interview revealed that diarrheal diseases

had affected every home, particularly children. Data on diarrheal illnesses were from the Kampung Baru Health Center. Diarrheal diseases are among the top ten most common diseases, and their prevalence is rising every year. Information obtained at the Kampung Baru Health Center that the first pillar STBM activities Stop defecation carelessly are being implemented so that researchers are interested in raising the issue for research.

Based on the background of the problem presented, the following problem is the effect of the implementation of stop defecating carelessly on the diarrhea occurrence in the Medan Maimun District of Medan City.

The purpose of the research to analyze the effect of the implementation of stopping to defecate carelessly on diarrhea occurrence in the watershed of Deli in the Medan Maimun District of Medan City.

Specific Purpose

1. To know the characteristics of respondents (age, education, economic status) is a factor that affects defecating carelessly to the diarrhea occurrence.
2. To analyze the effect of community behavior that affects defecating carelessly on the diarrhea occurrence.
3. To analyze the effect of respondents' characteristics on the diarrhea occurrence.

RESEARCH METHODS

This study was an analytical survey study. The research method used was logistic regression analysis using the SPSS program. The samples in this study consisted of 90 houses located with random sampling techniques on the Deli River banks in the Medan Maimun District of Medan City.

This research was in the Deli watershed of the Kampung Baru Health Center working area in Medan Maimon District of Medan City. The reason for choosing this location as a research place is because:

1. The working area of Kampung Baru Health Center, Medan Maimon District, is near the Deli river's flow, with many people who live on the edge of the river.
2. People in the working area of Kampung Baru Health Center, Medan Maimon District, still belong to the lower middle class, so knowledge about health, hygiene, and sanitation are still low.

From direct observation at the research site, many people in the region still defecate carelessly into the river. The study was conducted in August 2021.

Primary data was obtained from direct observations in the field using questionnaires. While secondary data obtained from Kampung Baru Health Center

Data obtained from direct observation results in the field using questionnaires was obtained using univariate, bivariate, and multivariate analysis. Those to see significant results with the SPSS program.

RESULT AND DISCUSSION

Medan Maimun District is part of the city government area of Medan, where the territorial area of Medan Maimun District is 334.5 km² (3.34 Ha), consisting of 6 villages and 66 neighborhoods. Respondents to this study were people in the Medan Maimun District of Medan City whose homes are on the Deli River. The sample was 90 households. Respondents' characteristics included age, education level, and economic status.

The Distribution of Respondents' Characteristics by Age Group

The study results can be seen in Table 1 below, showing the results that most of the age of respondents is less than 40 years old, which is 58 people (64.4%).

Table 1: The Distribution of Respondents' Characteristics by Age Group

Age	N	%
<=40 Years	58	64.4
>=40 Years	32	35.6
Total	90	100.0%

The Distribution of Respondents' Characteristics by Education Level

From Table 2 below, it can be seen that the characteristics of respondents based on education level, most at the junior high school level, which is as many as 32 people (35.6%), and there is only one respondent whose level of education to higher education is 1.1%.

Table 2: The Distribution of Respondents' Characteristics by Education Level

Education Level	N	%
Unschooling	7	7.8
Primary School	19	21.1
Junior High School	32	35.6
High School	31	34.4
Higher Education	1	1.1
Total	90	100.0

The Distribution of Respondents' Characteristics by Economic Status

From Table 3 below, it can be seen that the characteristics of respondents based on economic status are mostly low or less than Rp3,200,000 per month, which is 80%.

Table 3: The Distribution of Respondents' Characteristics by Economic Status

Economic Status	N	%
Low (<Rp3,200,000)	72	80.0
High (>Rp3,200,000)	18	20.0
Total	90	100.0

Analysis of the Effect of Respondents' Characteristics on Diarrhea Occurrence

Researchers conducted the respondent's character survey. The survey was by interviewing one of the household members whose house is on the banks of the Deli River in Medan Maimun Subdistrict using a questionnaire that has been prepared. Respondents' characteristics included age, education level, and economic status. In Table 4, it can be seen that the distribution of respondents' characteristics, namely the age of respondents to the diarrhea occurrence at the age of <=40 years, is 39.7%. Based on respondents' level of education to the diarrhea occurrence, the most junior high school level is 59.4%. Based on the economic status of respondents to the diarrhea occurrence, the most people in low economic status are 40.3%.

Table 4: The Distribution of Respondents' Characteristics to Diarrhea Occurrence

Respondents' Characteristics		Diarrhea Occurrence			
		Yes		No	
		n	%	n	%
Age Group	<=40 years	23	39.7	35	60.3
	>40 years	12	37.5	20	62.5
Education Level	Unschooling	2	28.6	5	71.4
	Primary school	6	31.6	13	68.4
	Junior high school	19	59.4	13	40.6
	High school	8	25.8	23	74.2
	Higher education	0	0	1	100
Economic Status	Low	29	40.3	43	59.7
	High	6	33.3	12	66.7

Then the data was analyzed using logistic regression test to determine the effect of respondents' characteristics on the diarrhea occurrence. From Table 5, the significance value for the effect of respondents' age on the diarrhea occurrence is $0.609 > 0.05$, and the t count value is $0.513 < t_{table} 1.993$. The sig value for education level is $0.237 > 0.05$ and the t count value $-1.192 < t_{table} 1.993$. The sig value for economic status is $0.438 > 0.05$ and the t count value is $-0.779 < t_{table} 1.993$. So, it can be concluded that there is no characteristic effect of respondents on diarrhea occurrence.

Table 5: Multiple Regression Analysis of Respondents' Characteristics of Diarrhea Occurrence

Respondents' Characteristics	T	Sig
Respondents' Age	0.513	0.609
Education Level	-1.192	0.237
Economic Status	-0.779	0.438

The Distribution of Respondents' Behavior

Respondent's behavior was viewed based on knowledge and attitude. The distribution of respondents' behavior is based on knowledge. From Table 6 below, it can be seen that the behavior of respondents based on knowledge, most of the categories are good as many as 80 people (88.9%), and there are 10 respondents whose knowledge is bad category, which is 11.1%.

Table 6: The Distribution of Respondents' Behavior Based on Knowledge

Knowledge	N	%
Bad	10	11.1
Good	80	88.9
Total	90	100.0

The Distribution of Respondents' Behavior is Based on Attitude

From Table 7 below, it can be seen that the behavior of respondents based on attitude, most of the categories are good, namely as many as 85 people (94.4%), and there are 5 respondents whose knowledge of the category is bad, which is 5.6%.

Table 7: Distribution of Respondents' Behavior Based on Attitude

Attitude	N	%
Bad	5	5.6
Good	85	94.4
Total	90	100.0

Analysis of the Effect of Respondents' Behavior on Diarrhea Occurrence

Researchers surveyed respondents' behavior. The survey was by interviewing one of the household members whose house is on the banks of the Deli River in Medan Maimun Subdistrict using a questionnaire that has been prepared. Respondents' behavior included knowledge and attitudes. The Table 8 shows that the distribution of respondents' behavior, namely the respondent's knowledge of the diarrhea occurrence, was obtained with the result that all respondents who had bad knowledge had experienced the diarrhea occurrence, which was 100%. The knowledge of respondents in good categories had experienced a diarrhea occurrence by 31.3%. The respondents' attitudes towards the diarrhea occurrence found that respondents who had a bad attitude had all experienced the diarrhea occurrence, which was 100%. The attitude of good-category respondents who had experienced a diarrhea occurrence was 35.3%.

Table 8: Distribution of Respondents' Behavior toward the Diarrhea Occurrence

Respondents' Behavior		Kd			
		Yes		No	
		N	%	n	%
Knowledge	Bad	10	100	0	0
	Good	25	31.3	55	68.8
Attitude	Bad	5	100	0	0
	Good	30	35.5	55	64.7

Then the data was analyzed using the Multiple Regression test to determine the effect of respondents' behavior on the diarrhea occurrence. From Table 9, sig values for the effect of respondents' knowledge on diarrhea occurrence are $0.016 < 0.05$ and t calculated values $-2.466 > t_{table} 1.993$, sig values for respondents' attitudes $0.001 < 0.05$ and t count values $-3.348 > t_{table} 1.993$. So, it can be concluded that there is an effect of respondent behavior on the diarrhea occurrence.

Table 9: Multiple Regression Analysis of Respondents' Behavior on Diarrhea Occurrence

Respondents' Behavior	T	Sig
Knowledge	-2.466	0.016
Attitude	-3.348	0.001

Overview of Stop Defecation Carelessly

From Table 10 below, it can be seen that respondents who do Stop defecation carelessly, mostly in the good category, are 82.2% and the bad category by 17.8%.

Table 10: Distribution of Stop Defecation Carelessly

Stop Defecation Carelessly	N	%
Bad	16	17.8
Good	74	82.2
Total	90	100.0

Analysis of the Effect of Stop Defecation Carelessly on Diarrhea Occurrence

Researchers surveyed Stop defecation carelessly (not defecate carelessly) by interviewing and observing one of the household members whose house is on the banks of the Deli River in Medan Maimun Subdistrict using a questionnaire that has been prepared. In Table 11, it can be seen that the distribution of stop defecation carelessly on the diarrhea occurrence is such that respondents who defecate carelessly almost entirely have experienced the diarrhea occurrence, which is 93.8%. Respondents who defecate in the

appropriate place have experienced diarrhea occurrence, which is 27%.

Table 11: Distribution of Stop Defecation Carelessly On Diarrhea Occurrence

Stop Defecation Carelessly	Diarrhea Occurrence			
	Yes		No	
	N	%	n	%
Bad	15	93.8	1	6.3
Good	20	27.0	54	78.0

Then the data was analyzed using the multiple regression test to determine the effect of stop defecation carelessly on the diarrhea occurrence. From the results of statistical tests, it is known that the sig value for the effect of Stop defecation carelessly on the diarrhea occurrence is $0.002 < 0.05$, and the t count value is $-3.142 > t_{table} 1.993$. So, it can be concluded that there is stop defecation carelessly effect on the diarrhea occurrence.

CONCLUSION AND SUGGESTION

Based on the characteristics of respondents, namely age, education level, and economic status, it is known that more respondents with ≤ 40 years of age were 64.4% than the age of > 40 years. Based on the data, the most respondents whose education level was at junior high school was 35.6%, and there were only 1.1% of respondents whose education level was higher education. Based on the economic status of most respondents, who have low incomes or less than Rp3,200,000 per month, which was 80%. The respondents' characteristics distribution to the diarrhea occurrence was the age of respondents who have experienced the most diarrhea occurrence at ≤ 40 years by 39.7%. Based on the level of education experienced, the most frequent diarrhea occurrence was at the junior high school level, at 59.4%. Based on the economic status of respondents who have experienced diarrhea occurrence, most have a low economic status of 40.3%. The results of the multiple linear regression test of characteristics of respondents showed that there was no significant effect between the characteristics of respondents to the diarrhea occurrence,

both in terms of age, education level, and economic status.

Based on the respondent's behavior, knowledge and attitudes were known that most of the respondent's knowledge was good, 88.9%, and 11.1% of bad category knowledge. Respondents' behavior based on attitudes of most good categories was 88.9%, and 5.6% bad category attitudes. The distribution of respondents' behavior towards the diarrhea occurrence was the knowledge that respondents who have bad knowledge, all have experienced the diarrhea occurrence which was 100%. The knowledge of good-category respondents who had experienced diarrhea occurrence was 31.3%. The respondents' attitudes towards the diarrhea occurrence found that respondents who had a bad attitude had all experienced the diarrhea occurrence, which was 100%. The attitude of good category respondents who had experienced a diarrhea occurrence was 35.3%. The results of the multiple linear regression test of respondents' behavior showed a significant effect between knowledge and diarrhea occurrence with a value of $p=0.016$. There was a significant effect between attitude with diarrhea occurrence with a p -value=0.001.

From the results of statistical tests, it is known that the value of significance for the influence of respondent characteristics, respondent behavior, availability of sanitation facilities, and stopping defecation carelessly simultaneously on the diarrhea occurrence was $0.00 < 0.05$, and the value of F count $18,489 > F_{table} 2.17$. So, it can be concluded that there is an influence on the characteristics of respondents, respondent behavior, the availability of sanitation facilities, and the practice of stopping defecation carelessly simultaneously on the diarrhea occurrence. It is also known as the value of R Square of 0.612. It means that the influence of respondent characteristic variables, respondent behavior, availability of sanitation facilities, and stopping defecation carelessly simultaneously on the variable diarrhea occurrence was 61.2%.

It is recommended that the government, especially in Medan Maimun District, Medan City, continue educating by providing counseling and implementing the stop defecation carelessly programs. Such as trying to make public toilets that can be used together, especially for people who do not have a bathroom. So that the public can avoid various infectious diseases, one of which is diarrhea and increasing public knowledge about the dangers of polluted rivers for public health. It is expected that the community will further improve clean and healthy living behaviors, especially to prevent diarrhea, such as washing hands before eating with soap. And do not get used to defecating anywhere.

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