

Various Factors Affecting Community Defecation Behavior in Kenyaran Sub District of Gayo Lues District in 2017

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Abstract: Health can be achieved by changing unhealthy behavior into healthy one. The importance of good access to sanitation especially for rural communities is increasingly urgent and calls forth immediate solution. Based on the results of interviews with 11 communities in Kenyaran village, seven people had latrines and four of them were accustomed to defecating in the river, garden, or fields. The purpose of this study was to investigate various factors related to community defecation behavior. This research was descriptive analysis with cross sectional design. The sample in this study was 70 heads of family in Kenyaran village. These subjects were interviewed from 7 to 28 December 2017. Data analysis employed univariate and bivariate analysis. The statistical test results indicated that knowledge and community defecation behavior was strongly related (P-value 0.002). The analysis also corroborated the relationship between facilities and community defecation behavior (P-value 0.008). In addition, the relationship between cultures Open defecation with community defecation behavior (P-value 0.015) in Kenyaran village, Pantan Cuaca district, Gayo Lues district in 2017. The study has concluded that there is a relationship of knowledge, availability of defecation facilities, and culture of open defecation with community defecation behavior. The community is recommended to increase their knowledge and change culture or open defecation habits. Public Health Center officers are required to improve services and provide counseling about clean and healthy behavior. Department of Health Affairs can encourage the availability of healthy latrines in the community.

Keywords: Behavior, Latrine, Environment

1. Background

Health can be achieved by changing unhealthy behavior into healthy behavior and creating a healthy environment in households. Health needs to be maintained and improved by every household member and supported by all parties. In order to actualize an increasing public health status, all community members, including individuals, family members, school environment, work environment, have to behave well. Also, each of these parties needs to be able to reach high-quality, fair, and equitable health services and reach the highest health status. To realize this public health improvement, the government has created a program called Clean and Healthy Life Behavior. From various indicators, one indicator of Clean and Healthy Behavior is the access to healthy latrines (1).

The importance of access to proper sanitation, especially for rural communities, both in Indonesia and in other countries is increasingly urgent. This has triggered the United Nations to establish sanitation as human right in 2010. The importance of access to sanitation has proven that improper sanitation is a contributing factor to various diseases such as diarrhea, cholera, dysentery, hepatitis A, typhus, polio and stunted growth in toddlers (2). Community-Based Total Sanitation (CBTS) are guided by five pillars, which involve 1) Open Defecation, 2) Washing hands with soap, 3) Managing drinking water and household food, 4) Safeguarding household waste, and 5) Safeguarding household wastewater (3).

Information obtained from various districts demonstrates rural areas grappled with the crucial problem of open defecation. This behavior poses direct and indirect impact on

the contamination of drinking water sources as well as the recontamination on water sources and food consumed at home. The practice of open defecation means to defecate anywhere. Even though sanitation and healthy living behavior will reduce the incidence of water-borne diseases, and provide significant social, environmental, and economic benefits (4).

Related research was conducted in South Buton, entitled Determinants of Definition of Behavior among Coastal Communities in the District of South Buton. The results showed that there was a relationship with the value of p-value = 0.0117; PR = 0.635 and availability of facilities with p-value = 0.0002; PR = 1,876 with defecation (5).

The World Health Organization (WHO) has reported deaths caused by water borne disease reaching 3,400,000 people/year and the largest recorded deaths reaching 1,400,000 people/year (6). The problem of sanitation development is a socio-cultural challenge. The cause is the behavior of people who are accustomed to defecating in the open area. UNICEF reports that 44.5% of the total Indonesia populations do not have access to proper feces disposal and 24% of Indonesians are accustomed to open defecating (7).

At present, Indonesia still faces challenges to complete the target of the 2015-2019 National Medium-Term Development Plan, which stipulates the achievement of 100% universal access to drinking water, 0% slum settlements, and 100% Stop Open Defecation. Based on data released by the STBM (Public-based Total Sanitation) secretariat, up to 2015 62 million or 53% of the rural population still did not have the access to proper sanitation. 34 million of them still practice open defecation. Significant

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acceleration is required to achieve the target of Indonesia Open Defecation in 2019 (2).

Based on data obtained from Aceh Provincial Health Office, the population who had access to decent sanitation in Aceh in 2014 was 1,804,894 (36.8%). In 2015 the number of population who had access to proper sanitation facility was 2,073,814 (41%). By contrast, the number of people who had access to healthy latrines in 2014 was (22%). In 2015, 30% of the whole population had it, while the number of people who applied Stop Defecation was 194 (3%) and that of STBM villages was 922 (14%) (8).

The population of Gayo Lues district according to The Department of Population and Civil Registration is 107,508 people, comprising of 53,773 men and 53,735 women distributed across 29,670 households. The number of defecation facilities in the Gayo Lues district which meet the requirements is 5,813 units out of 10,754 available defecation facilities, consisting of communal, goose neck, *plesengan*, and *cemplung* (9).

Based on data obtained from Pantan Cuaca district, the total population is 11,168 people, with 2,792 houses. Only 2,662 houses are built with latrines consisting, while the other 2,020 houses have proper latrines. What is more, 642 have improper latrines. 130 houses are accustomed to open defecation (10).

Based on the results of interviews with 11 people living in the Kenyaran village, only four out of seven people have latrines in each of the four people including defecating in the river, garden or in the fields, the latrine is not suitable for use anymore, another reason has become the habit of hereditary defecation in rivers, rice fields and gardens. The reason for not using public latrines is because the public latrines are not maintained, dirty and smelly.

From the background, the researcher aimed to see the relationship between knowledge, availability of facilities, and socio-culture circumstance with community defecation behavior in Kenyaran village of Pantan Cuaca sub-district, Gayo Lues district in 2017.

2. Research Methodology

This research was descriptive analytic and applied cross sectional research design. The data concerning independent and dependent variables were taken at the same time to determine the factors associated with public defecation. The population in this study were all communities in the Kenyaran sub-district of Pantan Cuaca district, including 225 households. The sample in this study were 70 people,

each of whom were part of the population obtained based on the calculation results using the Slovin formula.

Data was collected by purposive sampling from December 7 to 28, 2017. The respondents were determined on the basis of the following considerations: aged from 17 to 55 years, willing to be sampled, available in the research site, and able to read and write). The data obtained from the interviews were analyzed by univariate and bivariate analysis with the chi square test. The valuation equation was as follows. If $p \text{ value} \leq 0.05$, it is concluded that there is a relationship between the independent variable and the dependent variable. If $p \text{ value} > 0.05$, it is concluded that there is no relationship between the independent variable and the dependent variable.

3. Results

Geography and Demography

The Gayo Lues area is divided into 11 sub-districts, one of which is Pantan Cuaca sub-district. One of the villages from the sub-district is Kenyaran village encompassing an area of 156 Ha and consisting of 40 Ha settlements (26%), 3.50 Ha farms (4%), plantation area of 110 ha (71%). Most of the people in this village work in gardening. The village of Kenyaran had a population of 778 people in 2017, including 311 males and 467 females residents, and 213 heads of households.

Univariate Analysis

Based on the results analysis, the statistical analysis generated the following results.

Table 1: Univariate Analysis Results on Various Factors Contributing to Defecation Behaviors

Variable	Category	f	%
Perilaku Buang Air Besar	Appropriate	38	54,3
	Inappropriate	32	45,7
Knowledge	High	37	52,9
	Low	33	47,1
The availability of defecation facilities	Available	35	50
	Unavailable	35	50
Culture of open defecation	Available	34	48,6
	Unavailable	36	51,4

Source: Primary Data 2017

Based on Table 1, it is clear that, out of 70 respondents, 45,7% are accustomed to improper defecation, 47,1% of the respondents have low knowledge, 50% of them have no defecation facility, and 48,6% are used to open defecation.

Bivariate Analysis

The result of bivariate analysis is presented in the following table.

Table 2: Various Factors Contributing to Defecation Behavior

No	Variables	Category	Defecation behavior				Total		P value	α
			Proper		Improper		f	%		
			F	%	f	%				
1	Knowledge	High	27	73,0	10	27,0	37	42,8	0,002	0,05
		Low	11	33,3	22	66,7	33	57,2		
Total			38		32		70			
2	Facility availability	Available	25	71,4	10	28,6	35	50	0,008	
		Unavailable	13	37,1	22	62,9	35	50		

Total		38		32		70			
3	Culture of Open Defecation	Present	24	70,6	10	29,4	34	45,7	0,015
		Absent	14	38,9	22	61,1	36	54,3	
Total		38		32		70			

Source: Primary Data 2017

Based on Table 2, it can be concluded that of the 37 respondents who showed that the community behaved in a defective manner, 27 respondents (73%) were highly knowledgeable, and 33 of the community respondents had a defective behavior that was not as big as 22 respondents low. Based on statistical tests using the chi-square test obtained P. Value of 0.002 then H_a is accepted. This shows that there is a relationship between knowledge and behavior of defecation in the reality village of Gayo Lues sub-district, Pantan Cuaca district in 2017.

Table 2 shows that from 35 respondents the community behaves accordingly, then 25 respondents (71.4%) have defecation facilities, and from 35 respondents who behave in defective behavior, they are 22 respondents (62.9%) does not have a defecation facility. Based on the statistical test, the P. Value is obtained at 0.008, then H_a is accepted. This shows the relationship between the facilities and the behavior of defecation in the community in the Village Kenyaran Pantan Cuaca sub-district, Gayo Lues district in 2017.

Based on Table 2, it is concluded that out of 34 respondents the community behaved accordingly, then 24 respondents (70.6%) had a culture of open defecation, and from 36 respondents who behaved defectively, there were 22 respondents (61.1%) does not have a culture of open defecation. Based on statistical tests, a P. value is obtained for 0.015, so H_a is accepted. This shows the existence of cultural relations with the behavior of defecation in the community in the Kenyaran village, Pantan Cuaca sub-district, Gayo Lues district in 2017.

4. Discussion

1. The Relationship between Knowledge and Defecation Behavior

Knowledge is the result of knowing and this happens after people observe a certain object. Knowledge generally results from experience and can also be obtained from information conveyed by others, books, or mass media and electronics. Knowledge can be very important for the formation of behavior. Knowledge resulting from experience will be more lasting than behavior that is not based on knowledge (11).

It can be concluded that the better defecation behavior leads to higher community's knowledge of defecation. Conversely, poorer defecation behavior is related to lower community's knowledge of defecation.

Related research conducted on defecation in Kerjokidul sub-district, Wonogiri district indicated that the public defecation behavior was poor. There was 97.4% of the community members with poor defecation behavior, and 2.6% of students had positive defecation behavior (12). Other related research was also conducted on defecation in

Gunai sub-district. This study showed that there was a significant relationship between defecation behavior and public knowledge with a P value of 0.003 (11).

According to the researcher's assumptions, knowledge can be improved through counseling, both individually and in groups. However, so far counseling related to defecation has rarely been held in the community. Counseling is carried out to achieve changes in behavior of individuals, families, and communities in an effort to achieve optimal health, such as proper defecation.

2. Relationship between Facility Availability and Defecation Behavior

Facilities are all types of equipment that function as the main tool in carrying out work, and also in the framework of interests that are currently associated with work organizations. Latrines are a means of defecation. It is imperative that latrine be closed, meaning that the latrine is protected from heat and rain. Therefore, other animals are protected from the views of people and so on. Toilet building should have strong floor and strong foothold. The toilet building is placed as far as possible in a location that does not cause visual distraction, odor, and other distractions. It is imperative to provide cleaning equipment, such as water or toilet brush (13).

To conclude, family latrines or landfills are buildings used to dispose of feces or human waste. Latrines have to satisfy the requirements of healthy or good latrines. The benefits of family latrines are to prevent the transmission of diseases and human feces.

This research is in line with what was done in 2015, particularly concerning defecation behavior. The result has demonstrated that there is a significant relationship as indicated by P value = 0.0037 and Alpha of 0.05. These figures indicate that there is a significant relationship between defecation behavior and the means for defecation community, in Gucialit sub-district of Lumajang district (14). Similar study was also conducted in Gunai Talang Sub-district, Lahat district in South Sumatra Province. This study delved into community behavior about open defecation in villages which were given or not given Community Based Total Sanitation (STBM) intervention. The results indicated that there was a relationship between defecation behavior and community behavior, proven by P value of 0.021 (11).

According to the researcher, the presence of community defecation facilities, the surrounding environment or residence will be healthy and free of bacteria and disease. Most of the available facilities are not utilized properly. This is because of the community behavior, which is the reluctance to clean water closet after using it. Thus, some people are not used properly.

3. Relationship between Defecation Culture and Defecation Behavior

Cultural aspects can affect a person's health through the influence of tradition on health behavior and health status. There are several community cultures that can negatively affect public health. These detrimental cultures include the influence of fatality attitudes on behavior and health status, the influence of ethnocentric attitudes towards health behavior, the effect of feeling proud of its status on health behavior, and the influence of norms/values on health behavior (15).

Therefore, society and human culture are constantly changing incessantly. In this case, the rural people often and always are seen defecating in a place. Socio-cultural changes that occur in society can be divided into several forms, comprising of changes that occur slowly and quickly, changes that have little effect and changes that have a large effect, and planned or unplanned changes. One of these examples is defecation behavior that will exert impacts on other community environments.

This study reveals the same findings as those unearthed in another work on the behavior that affects defecation in Kerjokidul sub-district, Wonogiri district. The research results have showed that there is a relationship between culture and community defecation behavior so that the value of P. Value = 0.002 (12).

According to the researchers' assumptions, the behavior that has been entrenched is open defecation, which occurs due to the reluctance to clean water closet after defecating. Others therefore disgusted when defecating after other people. On the other hand, the public does not want to be bothered, making it easy to defecate in rivers or other places that are more practical.

5. Conclusions and Recommendations

From the research results and discussion, the study has concluded that there is a relationship among knowledge (0,002), availability of defecation facilities (0,008), and open defecation culture (0,015) with the community defecation behavior in Kenyaran village, Pantan sub-district of Gayo Lues district in 2017.

From the research results, it is expected that the community will increase their knowledge and change their hereditary culture of defecation in their respective households. In addition, it is expected that Public Health Center officers can improve services and counseling on Clean and Healthy Lifestyle (PHBS). As a corollary, the current community culture can be eliminated. For the Department of Health Affairs in the sub-district, it is imperative that they encourage the availability of healthy latrines in the community.

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