

Factors Related to Open Defecation Behavior in Kenagarian Koto Rawang, Iv Jurai, Pesisir Selatan Regency the Year 2020

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ABSTRACT

Kenagarian Koto Rawang is located in the Salido Public Health Center's working area, IV Jurai, Pesisir Selatan Regency. Based on the Community-Based Total Sanitation Program (STBM) Report, Nagari Koto Rawang is the village with the lowest access to latrines at 43.15% in Pesisir Selatan. Koto Rawang is the highest (1.9%) village in the incidence of diarrhea than other villages in the Working Area of Salido Health Care. The goal of this research was to identify the characteristics that are linked with open defecation behavior in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency. This study employed analytic research with a cross-sectional design. There were 77 families as samples and the samples were chosen using basic random sampling. The data was processed by Chi-Square statistical test using the SPSS program. The results of the study were found that the population who had open defecation behavior was 64.9%, the population with a lack of knowledge was 70.1%, the population with a bad defecation attitude was 54.5%, the population with low motivation was 61.0%, the role of health workers who less supportive 51.9%, low level of education 70.2% and 41,56% of the population who do not have a latrine. The findings revealed that there was a link between open defecation performance with knowledge ($p = 0.011$), attitude ($p = 0.021$), motivation ($p = 0.000$), education ($p = 0.02$), latrine ownership ($p = 0.02$), as well as the involvement of health workers ($p=0.015$).

Keywords: open defecation, behavior, knowledge, attitude, latrine

1. INTRODUCTION

Environmental problems that are still not controlled, cause environmental-based diseases and deaths to remain high[1][2]. Based on WHO data, deaths caused by waterborne disease reach 3,400,000 people per year, and diarrheal diseases are the biggest cause of death, namely 1,400,000 people per year[3]. Open defecation/open defecation is one of the behaviors that pollute the environment and cause the occurrence of waterborne diseases. Of all these deaths the cause is rooted in poor sanitation and polluted water quality[4], [5].

WHO data in 2010 showed that there were about 1.1 billion individuals (about 17% of the global population) still defecate in open areas, from the data above, 81% of the population had open defecation in 10 countries. Indonesia has the world's second-largest open defecation

population after India (58%) and Indonesia (5%). Currently, Indonesia, according to the 2017 Joint Monitoring Program (JMP) report, stated that the total population of open defecation in Indonesia is 31 million people[6][7].

According to data from RIKESDAS in 2018, 23,54 % of the population have open defecated behaviors[8]. According to the 2019 Pesisir Selatan Community-Based Total Sanitation Program (STBM) report, 182 Nagari in Pesisir Selatan Regency, Nagari Koto Rawang, IV Jurai in the Salido Health Center area, had the lowest access to open defecation at 43.15%. Diarrhea case in this location as much as 1.9% and is the highest case compared to other Nagari[9]. These conditions can cause diseases that occur because of open defecation, like cholera, typhoid, paratyphoid, dysentery, diarrhea, worm disease, hepatitis and a variety of other gastrointestinal infectious illnesses,

as well as parasitic infestations. The disease is not only a burden on the community but also a barrier to achieving progress in the social and economic fields[5][10].

The behavior of open defecation can be influenced, by several factors such as age, education, occupation, knowledge, attitude, motivation, availability of facilities and affordability of facilities, health workers, family support, support from community leaders, religious leaders, and formal policies[11]. Based on this, a study was conducted on factors related to Open defecation behavior in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency.

2. MATERIALS AND METHODS

The descriptive-analytic design with a cross-sectional study approach was used in this study, between the experimental variables (Dependent and Independent) and therefore the variables were measured at the same time. The research take place in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency on September 2020 until April 2021. The research population was 343 head families in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency. To Determination of the number of samples, was used the Slovin formula[11]. As many 77 household heads or housewife as representatives of the head of the family be the respondent. Simple random sampling was used to determine who will be the respondents from the entire population. Data validity and reliability tests have been carried out for each research variable, namely the independent variable (level of knowledge, motivation, attitudes, and, the role of health workers, education, and clean water facilities) and the dependent variable (open defecation behavior) with an r table value.

The data is processed through univariate analysis and presented in a frequency distribution table of all variables, both dependent and independent variables. Furthermore, bivariate analysis was carried out, which aims to find out the relationship between each independent variable and the dependent variable. It was processed by a computerized system using chi-square test analysis using a 95% significance value. It may be deduced from the analysis findings that seen that there was a relationship between the independent variable and the dependent if the p-value <0.05, on the contrary, if the p-value > of 0.05 means that there is no relationship between the independent variable and the dependent[11].

3. RESULTS AND DISCUSSION

3.1 Results

The results of univariate data analysis from 77 respondents who live in Nagari Koto Rawang IV Jurai Sub-District, Pesisir Selatan Regency are presented in the following frequency distribution table

3.1.1 Univariate Analysis

Table 1. Respondent Characteristics Frequency Distribution in Nagari Koto Rawang IV Jurai Sub-District, Pesisir Selatan District

| Characteristics of Respondents | | <i>f</i> | % |
|--------------------------------|-------------------------------|----------|------|
| Status | husband | 58 | 75,3 |
| | wife | 19 | 24,9 |
| Age | Early adulthood (26-35 years) | 21 | 27,3 |
| | Late adulthood (36-45 years) | 23 | 29,9 |
| | Early old age (46-55 years) | 18 | 23,4 |
| | Old age (56-65 yrs) | 8 | 10,4 |
| | Late old age (+65 years) | 7 | 9,1 |
| Occupation | Farme | 63 | 81,8 |
| | Entrepreneur | 10 | 13 |
| | Civil servant | 1 | 1,3 |
| | Housewife | 3 | 3,9 |

The table above showed that most of the respondents are heads of household (75.3%), the proportion of respondents' age, most of them in the early and late adult age groups (56.2%), and most work as farmers (81, 8%) in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency.

Table 2. Frequency Distribution of Variables in Nagari Koto Rawang IV Jurai, Pesisir Selatan Regency

| No | Variable | <i>f</i> | % |
|----|---------------------------|----------|------|
| 1. | Open Defecation Behaviour | | |
| | Open Defecation | 27 | 35,1 |
| | Non Open Defecation | 50 | 64,9 |
| 2. | Knowledge | | |
| | High | 23 | 29,9 |
| | Low | 54 | 70,1 |
| 3. | Attitude | | |
| | Good | 42 | 54,5 |
| | Bad | 35 | 45,5 |
| 4 | Motivation | | |

| | | | |
|---|--|----|-------|
| | Hight | 30 | 39,0 |
| | Low | 47 | 61,0 |
| 5 | The Role of Health Workers | | |
| 6 | More supportive | 37 | 48,1 |
| | Low Supportive Education Level | 40 | 51,9 |
| | Low (Junior High School graduated and below) | 54 | 70,13 |
| 7 | Hight (Senior High School Graduated and above) | 23 | 29,87 |
| | Ownership of Latrine Have Latrine | 32 | 41,56 |
| | None | 45 | 58,44 |

From table 3.2 above showed more than half of 64.9% of respondents have poor open defecation behavior, 70.1% of respondents have low knowledge, and 54.5% of respondents have a disapproving attitude towards open defecation behavior. The table showed 61.0% of respondents

Table 3. The relationship between knowledge, attitude, motivation, education level, hygienic water facilities, as well as the involvement of health professionals, with open defecation (BABS) behavior in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency.

have poor motivation, 51.9% of respondents stated that officers did not play a role in improving open defecation behavior, most of the respondents had Junior High School education and below (70.2%), and 41.56% of the population who do not have the latrine in Nagari Koto Rawang IV Jurai, Pesisir Selatan Regency.

3.1.2 Bivariate Analysis

Based on bivariate data analysis findings to show the relationship between independent and dependent variables as in Table 3.3 above. It is known that the p-value of each variable, is knowledge ($p = 0.011$), attitude ($p = 0.021$), motivation ($p = 0.000$), education ($p = 0.02$), Ownership of Latrine ($p = 0.00$), as well as the involvement of health professionals ($p=0.015$). The data showed that all of the p-value < 0.05 . It resources H_a accepted, there is a significant relationship among the independent variables and dependent variables in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency.

| Variable | | Open Defecation Behaviour | | | | Total | | P-value |
|----------------------------|-----------------|---------------------------|-------|---------------------|-------|-------|-------|---------|
| | | Open Defecation | | Non-Open Defecation | | f | % | |
| | | f | % | f | % | | | |
| Knowledge | High | 10 | 20.0 | 13 | 48.1 | 23 | 29.9 | 0.001 |
| | Low | 40 | 80.0 | 14 | 51.9 | 54 | 70.1 | |
| | Total | 50 | 100.0 | 27 | 100.0 | 77 | 100.0 | |
| Attitude | Good | 18 | 36.0 | 17 | 63.0 | 35 | 67.5 | 0.021 |
| | Bad | 32 | 64.0 | 10 | 37.0 | 42 | 32.5 | |
| | Total | 50 | 100.0 | 27 | 100.0 | 77 | 100.0 | |
| Motivation | Hight | 12 | 34.8 | 18 | 74.1 | 30 | 39.0 | 0.00 |
| | Low | 38 | 65.2 | 9 | 25.9 | 47 | 61.0 | |
| | Total | 50 | 100.0 | 27 | 100.0 | 77 | 100.0 | |
| The Role of Health Workers | More supportive | 19 | 38.0 | 18 | 66.7 | 37 | 48.1 | 0.015 |
| | Low Supportive | 31 | 62.0 | 9 | 33.3 | 40 | 51.9 | |
| | Total | 50 | 100.0 | 27 | 100.0 | 77 | 100.0 | |
| Education level | Low | 41 | 82.0 | 13 | 24.07 | 54 | 70.13 | 0.001 |
| | Hight | 9 | 18.0 | 14 | 60.87 | 23 | 29.87 | |
| | Total | 50 | 100.0 | 27 | 100.0 | 77 | 100.0 | |
| Latrine | Have Latrine | 12 | 24.0 | 20 | 74.07 | 32 | 41.56 | 0.02 |
| | None | 38 | 76.0 | 7 | 25.93 | 45 | 58.44 | |
| | Total | 50 | 100.0 | 27 | 100,0 | 77 | 100.0 | |

3.2 Discussion

The relationship between knowledge level and open defecation behavior in Nagari Koto Rawang, IV Jurai Sub-District, Pesisir Selatan Regency

From the results of data analysis, it is known that from 50 respondents who open defecation, 80.0% of them have poor knowledge, and only 20.0% of respondents who have good knowledge practice open defecation. The bivariate analysis yielded a p-value of 0.011 using the Chi-square statistical test ($p < 0.05$), meaning that the level of knowledge is related to open defecation behavior. The findings of this investigation corroborate Sari's findings (2016) that the level of knowledge related to family open defecation behavior in Kerjokidul, Ngadirojo District, Wonogiri Regency (P-value = 0.01)[11]

Knowledge is everything that people know regarding what they show or information heard throughout this life[5]. The knowledge that people obtained, causes a positive impact on a person's behavior if that person uses his knowledge well. 80.52% of respondents do not know the disease that can be transmitted through feces, and 77.92% of respondents do not know how far the disposal of feces is from a clean water source. Lack of information about the impact of open defecation can affect people's behavior. It makes people do not feel worried about defecating openly. Cognitive knowledge is an important domain for the formation of an action. Actions based on knowledge will affect a person's behavior stronger and longer than behavior that is not based on knowledge[12].

The relationship between Attitude and open defecation behavior in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency

From the results of data analysis, it is known that from 50 respondents who open defecation, 64.0% of them have poor attitudes, and 63.0% of respondents who had good attitudes, defecated in the latrine. Based on bivariate analysis result with the chi-square test on the Attitude variable with open defecation behavior obtained p-value = 0.021 ($p < 0.05$). Thus, it had a state that the attitudes have a significant relationship with open defecation behavior. The results of this study are in line with Sari's research (2016) that the attitude related to family open defecation behavior in Kerjokidul, Ngadirojo District, Wonogiri Regency (P-value = 0.01)[11][13].

Attitude is a view or feeling accompanied by a tendency to act that can affect behavior. The manifestation of that attitude cannot be seen directly, but can only be interpreted beforehand from closed behavior. Attitudes are often obtained

from experience, both their own experiences and those of others[11][5].

The existence of a positive attitude and a negative attitude depends on the community's perception of the advantages and disadvantages of open defecation. 71.42% of respondents do not agree to have a family latrine. 75.32% of respondents think that defecation in rice fields, gardens, and rivers is easier and faster than going to latrines. While kindrespondents generally understand the losses due to open defecation and insist on making their latrines, so they must be used. Most of the respondents also do not have the desire to build their latrines because of financial constraints and expect government assistance to provide financial assistance for the construction of latrines.

The relationship between motivation and open defecation behavior in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency

From the results of data analysis, it is known that from 50 respondents who open defecation, 76.0% of them have low motivation. Of 27 respondents who do not do open defecation, 74,1% have high motivation (66.7%) did not do open defecation in Nagari Koto Rawang. District IV Jurai, Pesisir Selatan Regency. The results of statistical analysis stated that motivation related to open defecation behavior with a p-value = 0.00 ($p < 0.05$). The results of this research are closed to Yulda, et al. (2017) research result, which states that family motivation is related to defecation behavior in the latrine (p-value = 0.024)[5]

Motivation will create strength and encouragement for a person, so that feelings and emotions for an act or do something following the needs and desires[11][14] 68.83% of respondents stated, there are no serious impacts caused by open defecation behavior. 71.42% of the community stated that it required a large amount of money to build latrines to prevent open defecation. The lack of knowledge about the impact of open defecation causes the community's low motivation to build family latrines.

The relationship between The Role of Health Workers and Open Defecation Behavior In Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency

From the results of data analysis, we had found that from 50 respondents who had poor defecation behavior, 62.0% stated that health workers did not play a role. Of the 27 respondents who behaved well, 66.7% of respondents had a state that health workers played a role in preventing open defecation behavior in Nagari Koto Rawang District IV Jurai, Pesisir Selatan Regency. The

statistical analysis result had a state, there is a significant relationship between motivation and open defecation, $p\text{-value} = 0.015$ ($p < 0.05$). Health workers have a strategic role in changing people's behavior [13][15]. Health workers are at the forefront of forming a negative mindset by triggering disgust, shame, fear of pain, guilt, and a sense of responsibility when open defecation. Health workers are also in charge of fostering the community, who always monitor and evaluate the development of community behavior. 81.8% of respondents are working as farmers. They do not have free days and opportunities to follow the counseling given by health workers. From the interviews with the community and observations in the field, there is still no media distributed by health care instructors to educate the public to stop open defecation behaviors.

The Relationship Between Education Level And Open Defecation Behavior In Nagari Koto Rawang, IV Jurai, Pesisir Selatan Pesisir Selatan Regency

From the results of data analysis, we had found that from 50 respondents who had poor defecation behavior, 82.0% had a low level of education (junior high school and below). And on the contrary, of the 27 respondents who behaved well, 60.87% had a good level of education (senior high school and above). The statistical analysis result had founded, that level education related to open defecation behavior, we got $p\text{-value} = 0.015$ ($p < 0.05$). It is in line with Pambudi's research (2019) states that education is related to open defecation behavior in Konongorejo, Madiun Regency, $p\text{-value} = 0.003$ [16]

Education can affect a person's knowledge and mindset [14][5]. People with high education levels have been understood the impact of Semarang's large air and have the awareness not to defecate. On the other hand, people with low education are less impact of defecation, so there are no consequences caused by themselves, others, and the environment.

The Relationship Latrine Ownership And Open Defecation Behavior In Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency

From the data analysis result, we had found from 50 respondents who had poor defecation behavior, 76% of respondents did not have latrines. On the contrary, of 27 respondents who did not do open defecation, 60.87% of respondents had latrines. The statistical analysis results had been founded, that latrine ownership has a significant relationship with open defecation behavior, $p\text{-value} = 0.02$ ($p < 0.05$). Aulia et al (2021) got the same result with this research, they state that latrine

ownership is related to open defecation behavior in Kamal village, Brebes Regency with a $p\text{-value} = 0.0001$ [13].

Owning a latrine in every house will reduce the habit of open defecation [17][7][2]. Based on the results of interviews with people who have a habit of open defecation, they stated that they are used to defecating in the river because it is more practical and comfortable. Generally, people refuse to build latrines because they do not have money and half of the respondents said that they did not want to spend a lot of money to build latrines in their houses and wait for assistance from the government. In addition, some people who have latrines only use latrines at night, because during the day people work as farmers and still defecate in the river because they feel far from going home.

4. CONCLUSIONS

From the results of the study in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency, we found that the respondents who had open defecation behavior were 64.9%. The respondents with a lack of knowledge were 70.1%. The respondents with a bad defecation attitude were 54.5%. The respondents with low motivation were 61.0%. 51.9% of respondents state the role of less supportive health workers. Most of the respondents (70.2%) have Low level of education. And 41,56% of the respondents do not have latrines. The results showed that knowledge ($p = 0.011$), attitude ($p = 0.021$), motivation ($p = 0.000$), education ($p = 0.02$), latrine ownership ($p = 0.02$), and the role of health workers ($p = 0.015$) were related to open defecation behaviour in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency.

It was suggested for the community in Nagari Koto Rawang, IV Jurai, Pesisir Selatan Regency, to improve knowledge, attitudes, and motivation by taking time to attend counseling and increase self and family commitment not to defecate indiscriminately. It is suggested to health workers to improve the intensity of counseling and spread promotional media to stop open defecation so that it can be seen and read by the public at any time. And suggested for Health Care Unit can increase cross-sectoral collaboration to obtain latrine construction funds for the community.

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