Determinants of Healthy Latrines Ownership in Working Area at Public Health Center of Suak Tapeh in Banyuasin Regency South Sumatra 2019

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Abstract *- **Family latrine is a building used to dispose of feces for a family that is commonly called the latrine/WC.One of the health efforts made in public is the provision of basic sanitation. One of several basic sanitation facilities in the community is latrine.This study was a quantitative study using analytical survey method with cross sectional study approach to examine the relationship between the independent variables that are knowledge, attitudes, education, habits and income and the dependent variable that is utilization of family latrine. The population in this study is all people resident in the working area at Public Health Center of Suak Tapeh in Banyuasin amounted to 5173 Households with the sample of 99 respondents.Study result showed that of 99 respondents as many as 42 respondents (42.5%)have latrines, and the remaining of 57 respondents (57.6%) do not have latrines. There is a significant relationship between attitude (p value = 0.000), availability of clean water (p value = 0.000), condition latrine (p value = 0.000), habit (p value = 0.000), family income (p value = 0.000) toward healthy latrine ownership. Multivariate analysis result ofattitude variables with OR =8.483 (95% CI: 9.288 - 23.979) is the most dominant factor affecting healthy latrine ownership.***

Keywords: healthy latrine ownership

1. Introduction

Health status is one of the factors that greatly affect the quality of human resources to be more productive and improve the competitiveness of human beings. The problem of environmental conditions of human waste disposal sites can not be separated from the ownership aspect of the facility used.

Based on data from the World Health Organization (WHO) in 2013 is estimated of 1.1 billion people or 17% of the world population still defecatein an open area, from the data, of 81% of the population who still practice defecate in the open area found in 10 countries and Indonesia as the second largest country. The countrieswhere open defecation is most widely practiced namely: India (58%), Indonesia (12.9%), China (4.5%), Ethiopia (4.4%), Pakistan (4.3%), Nigeria (3%), Sudan (1.5%), Nepal (1.3%), Brazil (1.2%) and Nigeria (1.1%) (WHO, 2014).

According to the Indonesia's Department of Health (1991),one of the very important health facilities is the family latrine. Family latrine is a building used to dispose of feces for a family that is commonly called the latrine/WC.One of the health efforts made in public is the provision of basic sanitation.One of several basic sanitation facilities in the community is latrine. Latrine is useful as place to dispose human waste so that bacteria in the dirt does not meet the environment, then the environment will look lovely clean so as to have a good aesthetic value (Soeparmin, 2003).

Certain attitudes that will make public use the family latrine is an act that it is the preferred and selected thing by the community. So that people tend to be positive towards the use of family latrines (Safuddin, 2005).

Clean water and proper sanitation are basic human needs. One of the points in the Sustainable Development Goals (SDGs) in the life environment sector is to ensure the community to achieve the universal access of clean water and basic sanitation that is healthy latrines. The global target of the points is in 2030, the community will have achieved access to sanitation and the adequate and proper hygiene as well as stop the practice of defecate in the open places.

Habit is a practice that has been integrated into a person's behavior that has become part of the action that is difficult to change. Habits form arising from habit in a person.

Income is regarded as one of the factors affecting the level of public knowledge about sanitation, environment and housing. The ability of a household budget as wellaffects the speed to ask for help when family members ill(Widoyono, 2008).

Sanitation efforts based on the Ministry of Health No. 852/Menkes/SK/IX/2008, called as Community Based Total Sanitation, namely: includes not practice the defecation in carelessly way, washing hands with soap, managing drinking water and food secure, managing garbage properly,and managing waste water of household safely(Indonesia's Department of Health, 2010). Based on Basic Health Research in 2015 – 2017, Number of Village/Subdistrictin implementing Community Based Total Sanitation, obtained in 2015 amounted to 32.91%, in 2016 amounted to 42.24% and in 2017 amounted to 49.35% (Indonesia's Department of Health, 2017).

In South Sumatra, Number of Village/Subdistrictin implementing Community Based Total Sanitation that is in 2015 amounted to 32.33%, in 2016 amounted to 42.81% and in 2017 amounted to 52.74% (Indonesia's Department of Health, 2017).In 2018, the percentage of population with access to proper sanitation (healthy latrines) of 5.212.675 people (63.65%). (South Sumatra Provincial Health Office, 2018).

Based on data obtained from the Department of Health of Banyuasin, in 2018 according to the type of latrines, people who use communal latrines as many as 30 pieces, type of latrines with goose neck as many as 108.511 pieces, type of latrineswith trapas many as 14.369 pieces and type of pit latrine as many as 16.281 pieces. Overall population with access to proper sanitation (healthy latrines) as many as 513.692 people (60.00%) (Department of Health of Banyuasin, 2018).

In working area at Public Health Center of Suak Tapeh in Banyuasin in 2018 was recorded of 18.889 people, 5173 households with an average population density of 40 people per km². According to the type of latrines, people in Public Health Center of Suak Tapehare no one using latrines type of communal, latrines type of goose neck as many as 2817 pieces, latrines type of trapas many as 272 pieces and latrines type of pit as many as 235 pieces. Overall population with access to proper sanitation (healthy latrines) amounted to 68.62%. Which means approximately 31.38% of the people in Public Health Center of Suak Tapeh do not have latrines and practice the defecation in improper place (PHC of Suak Tapeh, 2018).

2. Method

This study was a quantitative study using analytical survey method with cross sectional study approach to examine the relationship between the independent variables that are knowledge, attitudes, education, habits and income and the dependent variable that is utilization of family latrine.

The study was conducted in Public Health Center of Suak Tapeh in Banyuasin Regency, South Sumatra Province in February-April 2019. Samples weresome people resident in

Public Health Center of Suak Tapeh in Banyuasin with a total sample of 99 respondents. In Public Health Center of Suak Tapeh, there are 11 village, namely the village of Lubuk Lancang, Sukaraja, Talang Ipuh, Air Singgeris, Durian Daun, Bengkuang, Biyuku, Tanjung Laut, Meranti, Rimba Terap and Sedang. From each village, respondentsinclude 25 respondents of LubukLancang Village, 5 respondents of Sukaraja Village, 7 respondents of TalangIpuh Village, 5 respondents of Air Singgeris Village, 6 respondents of Durian Daun Village, 3 respondents of Bengkuang Village, 4 respondents of Biyuku Village, 11 respondents of TanjungLaut Village, 17 respondents of Meranti Village, 5 respondents of Rimba Terap Village, and 11 respondents of Sedang Village.Primary data collected directly through interviews with respondents. Secondary data were obtained from medical records of PHC of Suak Tapehin Banyuasin, South Sumatra Province.

The data was processed and analyzed through univariate, bivariate and multivariate analyzes. Bivariate analysis used X2 test (Chi Square) while Multivariate analysis of logistic regression, used SPSS.

3. Result

UnivariateAnalysis

As shown in Table 1. Respondents who have latrines as many as 42 respondents (42.5%),while those who do not have latrines as many as 57 respondents (57.6%). Respondents with a positive attitude as many as 35 respondents (35.4%), while those with a negative attitude as many as 64 respondents (64.6%). There are as many as 34 respondents (34.3%) who have access to theavailability of clean water, while as many as 65 respondents (56.7%) who do not have access to availabilityof clean water. Respondents who have healthy latrines as many as 24 respondents (24.2%), while as many of 75 respondents (75.8%) who have unhealthy latrines. Thereare as many as 31 respondents (31.3%) who have good habits, while as many as 68 respondents (68.7%) do nothavegood habits. There are total of 32 respondents (32.3%) of high-income families, while as many as 67 respondents (67.7%) who have low family income.

Table 1. Frequency Distribution

Variables	Category	Total	Percentage (%)
Healthy Latrine Ownership	Yes	42	42.5
	Not	57	57.6
Attitude	Positive	35	35.4
	Negative	64	64.6
Availability of Clean Water	There is	34	34.3
	There is no	65	56.7
Latrine Conditions	Healthy	24	24.2
	Not healthy	75	75.8
Habit	Good	31	31.3
	Not good	68	68.7
Family Income	High	32	32.3
	Low	67	67.7

Bivariate Analysis

Table 2. Bivariate Analysis

Variables	Category	The p-value	OR	95% CI
Attitude	Positive Negative	0.000	23.0	8.5-16.9
Availability of Clean Water	There is There is no	0.000	20.7	3.1-19.8
Latrine Conditions	Healthy Not healthy	0.001	4.1	2.7-6.2
Habit	Good Not good	0.001	14.0	7.3-29.2
Family Income	High Low	0.000	18.7	6.1-57.0

Based on the results of the bivariate analysis, known that all independent variables under study related to the ownership of healthy latrine. Each of these variables can be described in Table 2.

Multivariate Analysis

Table 3. Final Modeling of Multivariate Analysis

No.	Variables	B	Sig.	OR	95%CI
1.	Attitude	4.471	0.000	8.48	9.29-23.98
2.	Habit	3.641	0.003	8.13	3.59-44.30

Multivariate analysis result of five variables obtained final modeling of multivariate thatare attitudes and habits variable have a value of p <0.05, which means that the attitudes and habits have a significant relationship with a healthy latrine ownership. Thus the most dominant variable effect on healthy latrine ownership is the attitude with the relationship strengthof attitudes variables with OR=8.483 (95% CI: 9.288-23.979) than habits with OR =8.131 (95% CI: 3.596-44.300).

4. Discussion

Relationshipbetween Attitudes and HealthyLatrine Ownership

Regarding tothe study result,which was based on statistical test of Chi-Square, it was obtained p value = 0.000 <α = 0.05, which showed that there is a statistically significant relationship between attitude and healthy latrine ownership in the working area atPublic Health Center of Suak Tapeh in Banyuasin in 2019.

From the results of analysis, it was obtained OR = 23.000 PR 95%CI:8.508-16.939, which means that respondents with a positive attitude have the possibility of 23 times to have healthy latrines compared to respondents with a negative attitude.

The study result is consistent with a study conducted by Anggoro, et al (2015), which showed that there is a significant relationship with the utilization of latrines. On the group of respondents who are good in using latrines are the majority of people who have a good attitude. While on the group of respondents who are bad in using latrines are the majority of people who have a bad attitude. The analysis result showed the p-value of 0.000 <0.050.

Muccielli elaborated attitude as a tendency in the soul or feeling that is relatively fixed to a particular category of person object or situation. Krisch mentioned that the attitude describes a collection of beliefs which always includes the evaluative aspect so that attitude can always be measured in terms of good and bad, positive and negative. Someone's attitudes towards an object is a feeling of support or partiality or otherwise. Attitude illustrates like or dislike to a particular object. Someone's attitude is gained from experience or from others who are closest. Certain attitude that will make people use family latrines is an act that it is the preferred and selected thing by the community. So that people tend to be positive towards the use of Family latrines (Saifuddin, 2005).

Something that can affect people's attitudes is knowledge.People need information about healthy latrines, as well as the benefits, losses and effects that may occur and affect it. Therefore, it is such a necessary to have counseling services that can motivate people to make the determination for themselves, make the choice according to the needs of themselves and not take it for granted all of the things that determined by other people for them (Saifuddin, 2015).

Relationship between Clean Water Availability and Healthy Latrine Ownership

Regarding to the study results, which was based onthe statistical test of Chi-Square, it was obtained p value = 0.000 <α = 0.05, which showed that there is a statistically significant relationship between the availability of clean water and healthy latrines ownership in Public Health Center of Suak Tapeh in Banyuasin in 2019.

From the results of analysis result, it was obtained OR = 20.727 PR95% CI:3.140-19.841, which means that respondents who have clean water availability have the possibility of 20 times to have healthy latrines compared to respondents who do not have clean water availability.

The study results is not consistent with a study conducted by Apriyanti, et al (2019), who found that most investigated respondents have the clean water availability and utilizing latrines in good category (79.4%) than those who do not have clean water availability. Statistical test results of Chi-square obtained value of ρ value of 1.000 (ρ> 0.05), this means that there is no relationship between the availability of clean water toward the utilization of family latrines.

The study result is consistent with a study conducted by Ibrahim, et al (2012) who found statistically that proved that there is a significant relationship between the availability of clean water with the utilization of latrines (p = 0.038). Study byAnggoro (2015) showed that there is a significant relationship between the availability of clean water with the utilization of family latrines. Study byNursidik (1997) which showed that there is a significant relationship between the availability of clean water with the utilization of family latrines.

According to Notoatmodjo (2012) that the community in healthy behavior requires infrastructure or health care facilities such as clean water, disposal site of excreta. Facilities and infrastructure arevery supportives to behave in a healthy life. The availability of clean water for flushing dirt or feces that are fulfilled causes a person will tend to use latrines. The availability of clean water supportsthe comfort in the utilization of latrines (Anggoro, et al., 2015). However, some citizens also thought that the defecation should not use the clean water. People will feel comfortable in utilizing the latrine when they are supported by the availability of clean water to clean themselves after defecating (Dahal et al., 2014).

Clean water that is used for bathing, washing, and latrines of 15 liters/person/day (Slamet, 2004). The availability of clean water supportsthe comfort in the utilization of latrines. The water sources should not be too far away, thereby reducing the burden of women and children to bring their own water.

The Relationship between Latrine Condition and Healthy Latrine Ownership

Regarding to the study result, which was based on the statistical test of Chi-Square, it was obtained p value = 0.000 <α = 0.05, which showed that there is a statistically significant relationship between the condition of latrines and the ownership of healthy latrine in Public Health Center of Suak Tapeh in Banyuasin in 2019.

From the results of analysis, it was obtained OR = 4.167 PR95% CI:2.785-6.233, which means that respondents who have healthy latrines conditions have the possibility of 4.167 times to have healthy latrines than respondents who have a bad latrines conditions.

The study result is not in line with the study conducted by Meiridhawati (2012) which stated that there is no the difference between the eligible and in eligible latrines in the utilization of latrines. Based on the satistical test results ofchi square test,it was found that there is no significant relationship between facilities of respondents in the utilization of latrines in the CLTS program. The study conducted by Tarigan (2007) that has done examined the factors that influence participation in the utilization of latrines in the city of Kabanjahe found that there is no the difference between the eligible and ineligible latrine, there is nosignificant relationship between the condition of latrines towardthe family participation.

The study resultis consistent with study conducted byAnggoro, et al (2015),that showed good respondents group in utilizing the latrines are the majority of people who have bad latrine condition. While the group

who badly in utilizing the latrines are all respondents who have bad latrine condition. The analysis result showed p-value of 0.001 <0.050, it can be concluded that the condition of latrines have a significant relationship with the utilization of latrines. Study conducted by Nursidik (1997) which showed that there is a significant relationship between the condition of family latrines with the utilization of family latrines.

According to the Indonesia's Department of Health (2009), the eligible latrine is not contaminate the surrounding soil, easy to be cleaned and safe, equipped with walls and a protective roof, lighting, sufficient ventilation,watertight floor and adequately spacious room, availability of water and purifier, The availability of good facilities cause a person will tend to use these facilities, in this case the availability of healthy latrines tend to be always used. Humans, especially those living in rural areas, will not want to use latrines that cannot be pursued to keep clean. It can be said that the cleanliness of the latrines will influence people to use the latrines.

Relationship between Habits and Healthy LatrineOwnership

Regarding to the results, which was based on the statistical test of Chi-Square, it was obtained p value = 0.000 <α = 0.05, which showed that there is astatisticallysignificant relationship between the habitand healthy latrine ownership in working area at Public Health Center of SUAKTapeh in Banyuasin in 2019.

From the study results, it was obtained OR = 14.000 PR 95% CI:7.357-29.216, which means that respondents with a good habit have the possibility of 14.000 times to have a healthy latrine than respondents with less good habits.

The study result is in line with thestudy conducted by Nur (2013) that of the 76 respondents who do not have latrines in the Village of Donggala, District of Wolo, Regencyof Kolaka in 2013 had a bad habit, supported by a culture of laziness, namely practice the defecation in carelessly way. Habit is a practice that has been integrated into a person's behavior that has become part of the action that is difficult to be changed.

Health behaviors are all forms of experience and individual interaction with the environment, which involves knowledge and attitudes about health and health-related actions. Human behavior tends to be holistic or comprehensive.

Behavior can be defined as the state of the soul (having an opininion, thinking, behaving) to give a response to the situation outside the subject. These responses can be passive (no action) and active (with actions). According Notoatmodjo (2016), operational form of this behavior can be in the form of concrete actionthat means concrete form of action to situations and stimuli from the outside. Humans are part of the environment that has become an integral and inseparable part and have an influence on each other. Therefore, the environmental health experts say that the environment will give birth to the healthy humans,conversely, a healthy person would produce a healthy environment as well. In such a close relationship between humans and the environment, then between them arising out of the transaction, that is the merging between object and influencing factors.

The formation and development of human behavior can be influenced by factors within the man himself that is often referred to as personality, motivation and reactions, the psychiatric symptoms in which a person with a particular behavior. Therefore, to see the innovation ofan individual, ithighly needs an effort from outsideto conduct the health promotion or the delivery of information or messages about an object to an individual, so that the conveyed message can be understood or understandable by the one who is receiving the message.

Changing habits is a difficult thing when it becomes ingrained, but can be changed when

the habit that is considered bad becomes good habits.

Relationship between Family Income and Healthy LatrineOwnership

Regarding to the study result, which wasbased on the statistical test of Chi-Square, it was obtained p value = 0.000 <α = 0.05, which showed that there is a statistically significant relationship between family incomewith ownership of healthy latrine in Public Health Center of Suak Tapeh in Banyuasin in 2019.

From the results of analysis, it was obtained OR = 18.720 PR 95% CI:6.146-57.019, which means that therespondents with the higher family income have a possibility of 18.720 times to have healthy latrines compared to the respondents with low family income.

The study result is consistent with the results of study conducted byAnggoro, et al (2015) which found that the group of respondents whoare bad in the uutilization of latrines are the majority of people who have a low income. The analysis result showed p-value of 0.004 <0.050, it was concluded that there is a significant relationship of income with the utilization of latrines.

This study is not in line with study conducted byApriyanti, et al (2019) who obtained that respondents who do not take advantage of family latrines are more onthe respondents with a low income compared with high income. Based on the results of the statistical test of Chi-Square, it was obtained value of ρ value=1.000 (ρ> 0.05), which means that there is no relationship between families income toward the utilization of family latrines.

Income is the result obtained from the work or effort that has been done. Income will affect a person's lifestyle. People or families with high economic status or income will practice lavish lifestyle, for instance more consumptive because they can afford to buy all that are needed when compared with family with the low economy class (Suparyanto, 2010).

When viewed from the socio-economic factors, the income is one of the factors affecting the level of public knowledge about sanitation, environment and housing. The ability of a household budget as wellaffects the speed to ask for help when there is a sick family member.(Widoyono, 2008).

According to Faturrahman and Mollo (1995),level of income related to the poverty that will affect people's health status. Other factors affecting among other types of work, formal education of head of the family, number of family members and others (Sumiarto, 1993).

Having income for the community have a significant impact on the utilization of family latrinesfor the people who have an income or wage, because they have a greater tendency to pick up and use latrines that meet the health requirements as compared to people who did not have their own income. Income affect the level of the utilization of latrines properly. Soesanto stated that good income and socio-economic will able to create the good environmental sanitation, so as to create the expected family health (Masli, et al (2010). This was due to the family's income was still low, resulting in a lack of attention to the family in the construction or maintenance of latrines. Therefore,latrinescondition which is not in appropriate conditionwill lead the individuals within families are reluctant to use latrines. By looking at the matter, the effort to increase the family income will give good results in the improvingof the utilization of latrines, in this case especially for the provision of the eligible latrine (Anggoro, et al. 2015).

The economic status of a person determines the availability of the necessary facilities for certain activities, so that socio-economic status affects changes in a person's behavior. The level of income related to the economic status of the family that will affect people's health status.

Respondents who have alow income have a tendency to not have eligible excreta disposal facilities, because the respondent used the

environment such as gardens, swamps, rivers/edge of rivers for defecating,so it does not allocate funds for the construction of latrines at home.

Most Dominant Factor Related to Healthy Latrine Ownership

Based on multivariate analysis result, it was obtained that attitudes and habits variable have a value of p <0.05, which means that the attitudes and habits have a significant relationship with a healthy latrine ownership. Thus the most dominant variable that effect on healthy latrine ownership is the attitude with the relationship strength of attitudes variables with OR=8.483 (95% CI: 9.288-23.979) than habits with OR=8.131 (95% CI: 3.596-44.300).

The strength of the relationship between variable of attitude and ownership of healthy latrine is with OR=8.483 (95% CI: 9.288-23.979), which means that the families attitude who have latrines will have the opportunity of 8.483 times to have a healthy latrine than families who do not have latrines.

The strength of relationships between variable of habits and ownership of healthy latrineis with OR=8.131 (95% CI: 3.596-44.300), which means that the habits owned by family who have latrines will have the opportunity of 8 times to utilize the healthy latrines than families who do not have latrines.

5. Conclusion

Healthy latrine ownership in Public Health Center of Suak Tapeh in Banyuasin Regency, South Sumatra Province is affected by attitude, availability of clean water, latrines conditions, habits and income. The most dominant factor that affects the ownership of healthy latrine is the attitude with the relationship strength of attitudes variables with OR =8.483 than habits with OR =8.131

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