



The Effectiveness of KATAJAGA Health Education on the Changes of Knowledge, Attitudes, and Behavior of Defecation of Community in Tambakromo Bojonegoro

Niken Yulia Astuti[✉], Oktavia Woro Kasmini, Dyah Rini Indriyanti

Universitas Negeri Semarang, Indonesia

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Abstract

Practicing open defecation is a health and social problem that needs immediate attention. About 17 percent of households in 2010 or around 41 million people still defecated in the outside rather than in toilet. The purpose of this study was to determine the effectiveness of Total Family Latrine Village (KATAJAGA) health education on the changes of knowledge, attitudes and behavior of defecating in the community in Tambakromo Bojonegoro. This study applied a quantitative research with a quasy experimental research method by using pre-post-test with control group design. The sample in this study consisted of 236 respondents representing the intervention group and the control group conducted by using a purposive sampling technique. The instrument used in this study was a questionnaire and observation sheet. The data collection techniques were interviews, pre-test and post-test. The data analysis in this study was done by using Mann Whitney to determine the differences between the experimental group and the control group. The results of the study showed that there was an effective effect of giving Total Family Latrine Village (KATAJAGA) education on the changes in knowledge ($p = 0,000$), attitudes ($p = 0,000$), and behaviour ($p = 0,000$) of defecation. There were differences between the intervention and control groups in Tambakromo Bojonegoro community, it can be seen from the p value is <0.05 . Efforts to improve the environmental sanitation and basic sanitation conditions in East Java were carried out by using Community-Based Total Sanitation (STBM).

[✉]Correspondent Address:

Kampus Unnes Jl Kelud Utara III, Semarang, 50237, Indonesia
E-mail: dini261092@gmail.com

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INTRODUCTION

Open defecation is a health and social problem that needs immediate attention. About 17 percent of households in 2010 or around 41 million people still defecated in the open space (UNICEF, 2012).

The behavior of open defecation (BABS) and not using the latrine is one of the habits that individuals have as a result of imitating the behavior of the people around them. The most dominant role in a family is the head of the family (Andreas, 2014). It can be proven that many people defecate openly in the open space due to the low ownership of family latrines in the community. The result of low ownership and use of healthy latrines can be seen from the contamination of water channels, soil, irrigation, rivers and water sources by *E. coli* bacteria, which indicates the relationship between human waste and water sources (Kurniawati et al, 2020).

The country of Indonesia is in second place with the largest number of people defecating in open areas after India. There are 63 million Indonesians who still defecate in rivers, lakes, seas, or land. This can lead to various diseases, one of which is diarrhea (Gusmiatu, 2016).

Until November 2017, access to sanitation in East Java Province had reached 82.88%, while those who had reached ODF (Open Defecation Free) reached 2005 villages (25.96%) out of 7724 villages. In an effort to improve environmental sanitation and basic sanitation conditions in East Java, Community Based Total Sanitation (STBM) activities have been carried out (East Java Health Profile, 2017).

In Bojonegoro Regency, the number of basic sanitation facilities examined in 2017 included latrines, trash bins and waste water management. Of the total population of 1,298,253 people who have access to proper sanitation, 1,208,205 people (93.06%). Meanwhile, in 2018, of the projected population of 1,246,927 people, the number of people who have access to proper sanitation is 1,239,542 people (99.41%) (Health Profile of Bojonegoro Regency, 2018).

The high behavior of open defecation in Indonesia can lead to various diseases, one of which is diarrhea. This is caused by several factors, including the lack of drinking water that is suitable for consumption, lack of awareness of hygiene and sanitation and poor nutritional status and community health status (Kumalasari et al., 2020). Health education that can be provided includes basic health education called Total Family Latrine Village (KATAJAGA) which is the ten understandings needed for a family to know what and how intestinal infectious diseases affect them or transmit to others and how to prevent it.

The purpose of this study was to analyze the effectiveness of the basic health education of Total Family Latrine Village (KATAJAGA) science on the changes of knowledge, attitudes, behavior in the community in defecating in Tambakromo, Bojonegoro.

For the community, knowing the importance of early awareness in defecating is proven hygienically beneficial, useful for preventing the emergence of various diseases.

METHOD

This research was conducted using quantitative research using quasi experimental research methods with pre-post-test with control group design. The population in this study was 577 households in Tambakromo Village, Bojonegoro Regency. The minimum sample in this study was obtained by calculating using the Slovin formula and obtained 236 family members representing respondents for the intervention group and the control group.

Knowledge, attitude, and behaviour were the dependent variables, and the independent variable in this study was the health education in the Total Family Latrine Village (KATAJAGA) science. The instrument used in this study were a questionnaire sheet, observation sheet and interviews.

In this study, a bivariate analysis was carried out to determine the differences in the value of the experimental group and the control group by using the Mann Whitney test.

RESULTS AND DISCUSSION

The results of the study carried out in Tambakromo Village, Malo District, Bojonegoro Regency in September 2020, are as follow.

Table 1. Bivariate Analysis of Health Education Knowledge Before and after treatment of changes in knowledge, attitudes and behavior of open defecation.

	Health education knowledge before treatment		Health education knowledge after treatment	
Knowledge	F	Frequency	F	Percentage
Knowledge Low	44	61,9	13	18.3
Knowledge Good	27	38.1	58	81.7
	Attitude of respondents before treatment		Attitude of respondents after treatment	
Attitude	F	Frequency	F	Frequency
Negative	59	83.1	25	35.2
Positive	12	16.9	46	64.8
	Attitude of respondents before treatment		Attitude of respondents after treatment	
Attitude	F	Frequency	F	Frequency
Low	46	64.7	12	16.9
Average	15	21.1	19	26.7
Good	11	14.2	40	56.4

Based on table 1, the results of the study from the aspect of knowledge can be seen, the knowledge of the community in Tambakromo village has increased after the researcher provided education to them where 81.7% of respondents experienced changes for the better and had better knowledge of defecation. Respondents know and understand the definition of open defecation, the benefits of not open defecation, and the dangers of open defecation.

The results of this study are in accordance with the research that conducted by Oktasari (2017), showing that there are 32 people (76.2%) of respondents who have good knowledge of using Total Family Latrine Village (KATAJAGA) science and its impact on the health environment. By providing knowledge and information about KATAJAGA to the people of Tambakromo, Bojonegoro continuously and sustainable following the development of the target (respondent), the community is expected to change from not knowing to knowing, being aware from knowing to being

willing and from being willing to being able to carry out the introduced behavior.

In the results of observations in the field, the researcher saw that the negative attitude aspect was greater than the positive attitude of the community in defecating, it was obtained as much as 83.1% since the community still had an indifferent attitude towards the environment.

The results of this study are in line with the research (Saliani et al., 2016), who had low/negative attitudes as many as 35 people (46.7%) and who had good/ positive attitudes as many as 40 people (53.3%). There is a significant relationship between attitude and open defecation.

Increasing the attitude of the people of Tambakromo, Bojonegoro, which is not balanced with real action, will provide a great opportunity to harm personal health and the environment caused by frequent community behavior. In the field observations, the study looked at the behavioral aspects obtained that all distributed respondents who still behaved less before being given education

about basic health and the science of KATAJAGA were 46 people (64.7%), this is due to the daily habit patterns of the community in defecating. Openly large in the fields, rivers make people feel more comfortable when defecating outside. The results of this study are similar to Osmanu (2019). In general, the community's behavior in using latrines in Ilomangga village, Tabongo sub-district is in the high category with a percentage of 75%, in other words the community always acts positively in using the latrine.

Overall, the attitude of the Tambakromo community members, Bojonegoro, can carry out the correct action or activity in defecating. Public acceptance is good, that is, residents accept happily when they are given education in basic knowledge and practice so that the environment is clean and protected from the disease.

Table 2. Mann Whitney analysis of KATAJAGA science basic health education on the changes of knowledge, attitudes and behavior of open defecation

	Knowledge	Attitude	Behaviour
Mann-Whitney U	746.000	2008.000	1372.000
Wilcoxon W	3302.000	4564.000	3928.000
Z	-7.316	-2.121	-4.917
Asymp. Sig. (2-tailed)	.000	.034	.000

Based on the results of the Mann Withney test above, it can be seen that the p value for knowledge, attitudes and behavior of open defecation <0.05 , so that it can be concluded that there is a difference in the effectiveness of health education in the science of guardianship between the intervention group and the control group on the changes of knowledge, attitudes and the behavior of open defecation.

Based on table 2, knowledge has a p-value of 0,000 which means significant. The results of a

similar study conducted by Oktasari (2017) show that as many as 32 people (76.2%) of respondents have good knowledge of utilizing the importance of family latrines and their impact on the health environment if they defecate in the latrine. The statistical test results obtained by the value of $p = 0.031$, it can be concluded that there is a significant relationship between knowledge and. Another similar study conducted by Anggoro *et al.*, (2015) stated that the higher a person's knowledge of latrines, the better the use of latrines. Knowledge or cognitive is a very important domain for the formation of action. If an action is based on knowledge, then that action will become a habit.

Attitude has a p-value of 0.034 which means it is significant. In a study by Saliani et al (2017), there is also a significant relationship between attitudes and the practice of open defecation in Garuga Village, Mantoh District, Banggai Regency, Central Sulawesi Province. The results showed that the number of respondents who had a low/ negative attitude was 35 people (46.7%) and 40 people (53.3%) who had a good/ positive attitude, the results of this study were similar to the research that did by the researcher that after being given education about KATAJAGA, people who have a negative attitude are reduced and apply the basic KATAJAGA knowledge to themselves and their families with the aim of getting a clean environment and a good sanitary environment. Research conducted by Regita et al., (2018) showed that 54.8% of the total 270 respondents defecated openly even though they had a household toilet, this was influenced by several factors including poor water accessibility and availability, attitudes and personal beliefs, socio-cultural behavior, family dynamics, and a lack of awareness of the health benefits of using the toilet are significantly associated with open defecation.

The behavior has a p-value of 0,000 which means it is significant. Similar research conducted by Osumanu et al (2019) results of research conducted shows that in general the behavior of the community in using latrines in Ilomangga village, Tabongo sub-district is in the high category with a

percentage of 75%, in other words the community always acts positively in using latrines. Another study conducted by Apriyanti et al., (2019) states that negative behavior towards using latrines provides a greater chance of contracting various diseases, compared to people who act positively by always disposing of waste in the latrine. Likewise with the community in Tambakromo, it is necessary to increase behaviour towards a better life style.

Previous research was used as a reference to compare research results based on the observations and findings of the researchers. The difference between this study and previous research is to add several variables, the level of public knowledge about KATAJAGA science, research methods with pre-post-test with control group design. In addition, the location of this research was carried out in Tambakromo Village, Bojonegoro Regency, where similar research had never been carried out before.

CONCLUSION

Based on the results of the study, it can be concluded that the basic health education of KATAJAGA science is significantly effective in changing the knowledge, attitudes and behavior of the community in Tambakromo Bojonegoro in defecating in the open space. Thus, there is the effectiveness of basic health education in KATAJAGA science towards the changes of knowledge, attitudes, and behavior of people in Tambakromo Bojonegoro in defecating in the open space.

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