

Concern for Public Health Education with Hygiene and Clean Water Using Posters and Leaflets

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ABSTRACT

Hives Disease is the most common complaint experienced by the community. The cause of hives is a lack of clean and healthy living habits. Besides that, the main factor for the many hives is that the quality of the water in the village is very bad, the lack of clean water supply is also the reason because almost all residents there bathe with well water where the water is colored, tastes and smells. This study aims to analyze the increase in public knowledge before and after receiving health education. This research is quasi experiment with quantitative methods through observation and interview methods. The sample is 33 people who fit the inclusion criteria. Data analysis using the Wilcoxon Ranks test. The degree of error used is $\alpha = 0.05$. It is known that the $p\text{-value} = 0.205 \geq 0.05$, which means that there is no significant difference between the pre-test and post-test group scores. Based on these results it can be concluded that the increase in knowledge is not significant among the study participants. So even though the increase is not significant, it can be concluded that the community has better knowledge than before, so the education that has been carried out is going according to expectations.

Keywords: Health Education, Hygiene, Clean Water

INTRODUCTION

Healthy living is one of the important elements in efforts to increase Indonesia's Development Index which is determined by environmental conditions and people's behavior. Efforts to change people's behavior to improve their health status can be done through a clean and healthy lifestyle (PHBS) program. The success of the PHBS program is based on 10 indicators of household PHBS, one of which is increasing the availability of clean water in households. Role of water is very important to maintain survival, so humans try to get enough water for themselves. However, it is still common to find water containing pathogens or certain substances that can cause diseases that endanger human survival.^{1,2}

Various efforts must be made to improve the quality of existing clean water and apply Clean and Healthy Behavior (PHBS) to the community. One effort that can be done is health promotion. Health promotion can provide lessons to the community to help them gain knowledge or

understanding, ability, and willingness starting from the individual, family, group, or community level to practice PHBS. Community behavior that is aware of knowledge will be more lasting than behavior that is not based on awareness of knowledge.³

According to WHO, sanitation and hygiene (WASH) are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking-water, irrigation, bathing and household purposes.⁴ Clean water treatment will also be related to sanitation management. Adequate sanitation facilities that meet health standards accompanied by clean and healthy living behaviors are very important elements in improving community health status. Clean water is a type of water-

based resource that is of good quality and is commonly used by humans for consumption or in carrying out their daily activities, including sanitation. Sources of clean water come from seas, lakes, wells which must be processed properly so that it is suitable for consumption. In the Decree of the Minister of Health of the Republic of Indonesia Number 1405/MENKES/SK/XI/2002 concerning Health Requirements for Office and Industrial Work Environments, clean water is defined as water used for daily purposes and its quality meets the health requirements of clean water by statutory regulations. valid and can be drunk when cooked.^{5,6}

The rise in water pollution is a consequence of human activities that lack prudence, leading to a decline in water quality in various water sources. This situation arises when water bodies are burdened with pollution beyond their capacity to handle. The presence of polluted water has severe consequences for ecosystems as living organisms depend on an adequate supply of clean and sustainable water. In coastal regions, groundwater is particularly dynamic and influenced by factors such as proximity to the sea, depth of groundwater, rock porosity, and human activities conducted in those areas.^{7,8}

The degradation of groundwater quality has significant consequences, rendering it unsuitable for consumption by humans and other living organisms in the vicinity. One of the contributors to water pollution by communities is the practice of disposing human feces directly into rivers, mainly due to the lack of toilets in their households. However, toilets serve as crucial facilities for the proper disposal of human waste, thereby breaking the cycle of disease transmission. To ensure a healthy sanitation system, it is necessary for a toilet to have a minimum distance of 10 meters between the toilet hole and the water source.^{9,10}

The trend that is happening now is the reduced availability of natural clean water sources that can be used directly from day to day. This is caused by the influence of increased development so that the holding capacity of water by the soil as a source of groundwater is reduced and the occurrence of industrial waste pollution in rivers as a source of clean water on the surface. The more the population increases in an area, the more the demand for clean water increases which results in a decreasing number of available clean water sources. Water supply from the PDAM as the manager of clean water sources in an area is sometimes still not able to

meet all the needs of the population in that area for clean water in quality and quantity.¹¹

Research by Ministry of Health Regulation No. 907 Year 2002 on Clean Water and Drinking Water Quality Standards. everyone needs drinking water to live 2-3 weeks without food but can only survive 2-3 days without drinking water. Water quality is a very important component of human survival. However, more than 1.5 billion people do not have direct access to drinking water, and if this pattern of consumption continues, at least within the next 20 years, about half of the world's population will live in critical watersheds¹² According to who in Ramadhan (2018) five million people, mostly children, die each year from diseases caused by drinking poor-quality water.¹⁴

Living a clean and healthy life is something that should indeed be applied in everyday life by the community as a way to maintain their health. PHBS is a set of behaviors that are practiced on the basis of awareness as a result of the learning of a person, be it a family, group or community who are able to help themselves in the health aspect and play an active role in realizing public health. Efforts to change people's behavior to improve health status can be through the Clean and Healthy Behavior (PHBS) program. PHBS has the aim of providing learning experiences for individuals, groups, families and communities by opening channels of communication, information and education to increase knowledge, attitudes and behavior so that people are aware, willing and able to practice PHBS.¹⁵

Based on this research, readers can understand the importance of knowledge about PHBS and clean water because it has a significant impact on everyday life. Not only knowledge is concerned, but from this knowledge how can we apply it. The aim of this study is to provide policy recommendations and effective educational strategies to improve community knowledge and encourage better behavior in toilet and overall healthy sanitation practices. With increased knowledge and awareness, it is hoped that the level of water pollution can be reduced and the quality of life of the community in the area can be improved.¹⁶

METHOD

Educational or outreach activities are carried out in RT.06 Desa Satui Barat. The population in this study is the community with a total sample of 33 people with inclusion criteria: Willing to be respondents in this activity, residents who live in Satui Barat Village RT 06

Satui District, one family has fathers, mothers, toddlers, and teenagers. One family is included in the consideration sample criteria (only fathers/only mothers, only teenagers/toddlers only). The design of the research conducted is quantitative. Data collection method used was observation and direct interviews. The data collected in this activity were primary data and secondary data.

The primary quantitative data collected in this study was obtained through interviews using questionnaire. The respondents are Heads of Household and Household Members in Satui Barat village who were visited at their home or through community-level meetings involving predetermined subjects. The collected data was

processed and analyzed using the Wilcoxon Ranks test. The degree of error used is = 0.05 to draw conclusions about the health conditions of the community in RT 06 Satui Barat village, Satui district. The secondary data collected was obtained through document reviews related to analyzing relationships relevant to the research.

RESULT AND DISCUSSION

The results showed that in the PHBS and Clean Water intervention groups, the lowest frequency was in the age group <30 years, namely 10 people (30.3%), and the highest age group was in the age group >30 years, namely 23 people (69.7%) (Table 1).

Table 1. Distribution of Respondents by Age Group in the RT.06 Region of Satui Barat Village, Satui District

No	Category (year)	Frequency	Percentage
1	<30 years	10	30,3%
2	>30 years	23	69,7%
	Total	33	100%

Source: Primary Data, 2022

Table 2. The results of the Pre-test Questionnaire Knowledge of PHBS Counseling and the Quality of clean water in Satui Barat Village, RT. 06

No	Category	Total	Percentage
1.	Good (>70,00)	29	87,9%
2.	Poor (≤70,00)	4	12,1%
	Total	33	100

Source: Primary Data, 2022

From the table we know that the score of the questionnaire answers is categorized into two, which is included in the good category if the score of the respondent's answer is > 70% correct. And it is included in the less category if the respondent's answer score is <70% correct. The table attaches 29 respondents (87.9%) including the good category and 4 people (12.1%) including the poor category, the value limit is taken based on the average post test score. Based on these results it is known that there is an increase in knowledge in the good

category because it has a fixed percentage.

Based on Table 2, it can be seen that as many as 29 respondents (87.9%) before getting counseling material were categorised as having good knowledge and 4 respondents (12.1%) were having poor knowledge, the value limit was taken based on the average value of the pre-test the value limit is taken based on the average pre-test score, namely > 70% correct answers are in the good category and <70% correct answers are in the poor category.

Table 3. The results of the Post-test Questionnaire Knowledge of PHBS Counseling and the Quality of clean water in Satui Barat Village, RT. 06

No	Category	Total	Percentage
1.	Good (>70,00)	29	87,9%
2.	Poor (≤70,00)	4	12,1%
	Total	33	100

Source: Primary Data, 2022

Based on Table 3 The post-test results showed an increase in community knowledge after the counseling was conducted. Counseling is a process of sustainable behavior change, in which the desired change is not solely due to an

increase in knowledge, but is also expected to involve changes in skills as well as a steadfast attitude that leads to better, more productive, and beneficial actions.

Table 5. Decriptive Statistic Pre Post Test

	Descriptive Statistics			
	Minimum	Maximum	Mean	Std. Deviation
Pretest	50.00	100.00	85.1515	11.21417
Posttest	70.00	100.00	88.6364	10.40378

source: Primary Data, 2022

Based on Table 5 it is known that the average value in the pre-test is 85.15 with the lowest value being 50 and the highest value being 100. While in the post-test, the average value is 88.63 with the lowest value being 70 and the highest value being 100. the average difference in the pre and post-test means that there is no increase in knowledge in the community after counseling is carried out but has a fixed value before the post-test is carried out.

Table 6. Wilcoxon Rank Test Results Test Statistics

Posttest – Pretest	
Z	-1.268b
Asymp. Sig. (2-tailed)	.205

Based on table 6 it is known that the p-value = 0.205 \geq 0.05 which means that there is no significant difference between the scores of the pre-test and post-test groups.

Table 7. The Prevalence of Respondents

No	Question	The Prevalence of Respondents Answered Correctly (%)	
		Pre test	Post test
1.	PHBS Stands For	100	100
2.	Definition PHBS	87,9	75,8
3.	Examples Of Phbs In The Household	71,9	81,8
4.	Benefit PHBS	96,9	93,9
5.	Not Include Examples Of Phbs In The Household	33,3	45,5
6.	Itchy Skin Disease Due To Water Quality	93,9	100
7.	Water that is colored, smells and is cloudy is a characteristic of what water	72,7	84,4
8.	Examples of water that is not suitable for drinking	84,8	97
9.	Requirements for water used daily	97	100
10.	One of the standardization of clean water quality	100	100

Based on Table 7 above, It explains several indicators questions on the pre-test and post test. he questions with the most correct answers were answered, namely the questions related to the acronym hygiene, the need for water used, the benefits of hygiene, itchy skin disease due to ir quality, definition of hygiene, and examples of water that are unfatable to drink

categories of questions with correct answers with moderate categories, namely questions related to water characteristics and examples of hygiene in households. for the category of difficult questions, most respondents answered wrongly, ie, for example, not including hygiene in the household. Increased knowledge is beneficial in raising awareness about health and hygiene having

adequate knowledge about health and hygiene, one can better understand the importance of maintaining one's own health and that of the surrounding environment, reducing the risk of disease the risk of various diseases caused by a lack of cleanliness and environmental health.

Implementing clean and healthy living behaviors, one can help break the chain of disease transmission, especially in densely populated environments such as cities or within families. Improving the quality of life by maintaining health and cleanliness, a person can feel healthier and more comfortable in carrying out daily activities, so as to improve the quality of life. Maintaining productivity by maintaining health, a person can maintain an optimal level of productivity, both at work and at home.

Base on Permenkes STBM about regulation issued by the Ministry of Health of the Republic of Indonesia that regulates the Community-Based Total Sanitation (STBM) program. This regulation aims to improve the quality of public health through the improvement of environmental sanitation and clean and healthy living behavior in society. This Permenkes on STBM mentions several things that must be done in implementing the STBM program, including :

1. Improving community access to healthy and proper sanitation facilities such as healthy toilets, handwashing stations, and wastewater management.
2. Improving the knowledge, attitudes, and behaviors of the community in maintaining cleanliness and environmental health, such as cleaning their homes and surrounding areas, managing waste properly, and maintaining personal hygiene.
3. Establishing cooperation between the government, society, and private sectors in implementing the STBM program.
4. Increasing monitoring and evaluation of the STBM program regularly to ensure that the program runs well and achieves its objectives.

Knowledge of hygiene and clear water is important because it can help individuals understand and apply the principles clean and healthy living in their daily lives. By understanding hygiene and clear wter, one can reduce the risk of various diseases caused by poor hygiene and environmental health. In addition, by applying hygiene, one can help break the chain of disease transmission, especially in densely populated environments such as urban

areas or within families. In the workplace, knowledge of hygiene and clean water can also help prevent work accidents and illnesses caused by unhealthy work environments. Therefore, knowledge of hygiene and clear water is essential for maintaining the health of individuals and the community as a whole. hygiene aims to provide learning experiences for individuals, groups, families, and communities by opening channels of communication, information, and education to increase knowledge, attitudes, and behavior so that people are aware, willing, and able to practice phbs through advocacy, social support and empowerment.^{17,18}

The results of the above analysis show that there is a difference in the level of pre-test and post-test knowledge, although not significant because the target of counseling is dominated by the age group >30 years with 23 people and the age group <30 years with 10 people. A suggestion for future interventions would be to provide appropriate learning experiences for the respondents. This can include creating interactive and engaging sessions that cater to different learning styles, providing practical examples that relate to their daily lives, and incorporating hands-on activities that allow them to apply their newfound knowledge and skills. It may also be helpful to regularly assess and adjust the intervention approach based on feedback from the respondents to ensure that their needs and preferences are being met.^{19,20}

The knowledge possessed by humans is the result of efforts made by humans in finding the truth or problem they face. Activities or efforts made by humans to seek truth or problems faced are the nature of humans themselves or better known as desires. The desire possessed by humans will encourage humans themselves to get everything they want. What distinguishes one human from another is the effort that humans make to get what they want. Someone who already knows certain information, then he will be able to determine and make a decision on how he should deal with it. Health behavior is influenced by many factors, including knowledge, perception, emotion, motivation, and environment.^{8,10}

Furthermore, the follow-up plan is carried out as follows:

1. Monitor and evaluate the increase in knowledge and attitudes to the target community by distributing questionnaires to as many residents as 1 week apart after the extension activities. Questionnaires were distributed 3 times for 3 weeks. This

monitoring aims to see whether after the counseling given to the community the extension materials can be applied and increase the community's knowledge and attitudes towards PHBS and the use of clean water quality.

2. Refreshing the knowledge of the target community by holding discussions with the

target community regarding educational materials that have been presented previously. This refresh of the community's knowledge aims to see whether they still remember the material that has been presented and to measure their knowledge regarding Clean and Healthy Behavior, and Clean Water Quality.



Figure 1. Poster and Leaflet



Figure 2. Implementation of Activities

CONCLUSION

Activities were carried out with counseling and measured the level of knowledge pre-post test using questionnaires distributed to counseling participants. The results of the pre-test showed that 16 respondents (48.4%) before getting the counseling material scored in the good category. While the results of the post-test showed that as many as 22 respondents (66.7%) were in a good category, which is included in the good category if the score of the respondent's answer is > 70% correct. And it is included in the less category if the respondent's answer score is <70% correct. This increase can occur because the learners receive more structured and relevant information or training related to the material being taught. The increase in knowledge can also be caused by other factors such as effective learning methods, clear and structured information delivery, and the use of appropriate and engaging technology or learning media. The results of the increase in knowledge obtained from a study or intervention can provide benefits for learners, both in the academic context and in daily life. It is expected the community can implement a clean and healthy life behavior as has been delivered in counseling. It is also hoped that the knowledge obtained by the respondents will not stop with them, but they can educate others in a clean and healthy lifestyle. Other than that, the role of the government is very important for the community. It is expected the provision of adequate facilities such as decent latrines in every home. Using proper latrines is very important to prevent contamination of groundwater and surface water. Healthy latrines can also help reduce the spread of disease. It is also hoped that later the community will be able to form a cadre to encourage other communities to hold clean water reservoirs in the village. The community is also expected not to dispose of garbage and sewage in rivers or other places that can contaminate water.

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