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OVERVIEW OF COMMUNITY-BASED TOTAL SANITATION IN KEDURUS SURABAYA CITY 2024

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Abstract

Environmental sanitation plays an important role in preventing environmental-based diseases such as diarrhea, which has increased significantly in Surabaya from 57.23% (2021), 76.7% (2022), to 92.9% (2023). One solution is the implementation of the program Community Based Total Sanitation (STBM) which consists of five pillars: Stop Defecating Open Defecation, Washing Hands with Soap, Water Management Household Food and Beverage, Household Waste Security, and Security Household Liquid Waste. This study aims to describe the implementation of STBM in Kedurus Village, Karang Pilang District, Surabaya. The study used a quantitative descriptive method with a survey approach on 5,854 heads of families. The results showed that 79.3% of families already had safe toilets, 98% implemented CTPS, and 99.8% managed drinking water and food properly. However, 7.4% of families had not sorted waste, and 35.6% had not managed liquid waste properly. These findings indicate that although the implementation of STBM was quite successful, improvements are still needed in waste and liquid waste management. The active involvement of the government and community as well as the role of STBM cadres need to be increased to support the sustainability of this program.

Keywords: Environmental Sanitation, STBM Pillars, Household Sanitation

Introduction

Environmental sanitation is an effort to manage all physical environmental factors that can cause or have the potential to cause negative impacts on human physical development, health and survival [1]. Article 31 Government Regulation of the Republic of Indonesia Number 66 Year 2014 regarding Environmental Health states that sanitation is carried out on environmental media such as water, air, land, food, and facilities and buildings to ensure a healthy environment and free from pollution that can cause disease. These health efforts include controlling the quality of safe water and air, overcoming soil and food pollution, and maintaining the cleanliness of facilities and buildings so as not to pose a risk to public health [2].

Sanitation efforts according to Permenkes (Minister of Health Regulation) Number 3 of 2014 concerning Community-Based Total Sanitation (STBM) consist of five main pillars, namely: Stop Open Defecation (BABS), washing hands with soap, household drinking water and food management, household waste security and household liquid waste security. In addition, this regulation also provides guidelines and directions for the implementation of sanitation programs based on community involvement in Indonesia, in order to create a healthier environment and support disease prevention efforts. This regulation aims to improve public health by improving access to proper sanitation facilities, as well as encouraging changes in public attitudes in maintaining health and environmental cleanliness.

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Thus, it is hoped that a healthier environment will be created, free from disease, and can support a better quality of life for all members of society [3].

The number of diarrhea cases in Surabaya City has increased significantly from 2021 to 2023. In 2021 it reached 57.23%, in 2022 it reached 76.7% and in 2023 it reached 92.9% [4]. This shows that the sanitation conditions in the city of Surabaya still require serious attention. This is because poor sanitation can contribute to the high incidence of environmental-based diseases such as diarrhea. Although many efforts have been made to improve sanitation conditions, sanitation problems are still one of the main obstacles in the progress of health development, many challenges related to sanitation that must be faced today such as population behavior those who do not maintain cleanliness, where people are often found defecating anywhere, and there are also people who defecate in water bodies where water bodies are often used for washing, bathing or other needs.

The Indonesian government, through the Ministry of Health, has issued Minister of Health Regulation Number 3 of 2014 concerning Sanitation. Community Based Total (STBM). This regulation aims to encourage changes in community behavior regarding sanitation, by emphasizing the importance of good sanitation management, including clean water management, waste processing, and the use of healthy toilets [3]. STBM is expected to reduce the burden of diseases transmitted through poor sanitation, such as diarrhea, and improve the quality of health and environmental cleanliness throughout Indonesia, including Surabaya. These conditions are mostly in a number of sub-districts that have dense settlements, one of which is in the Kedurus sub-district, Karang Pilang sub-district with a population of 27,975 people [5]. Total sanitation program based on public aims to change people's behavior by increasing awareness of the importance of a clean environment and disposing of waste water in the proper place [6].

In this case, it is explained that the roles and responsibilities stakeholders different, such as at the RT/Hamlet/Village level, They are responsible for preparing the community to participate actively. At the village level, they have responsibilities such as forming a team of facilitators. village or trigger cadre STBM which will facilitate community movements. Meanwhile, at the sub-district level, the sub-district government plays a role in coordinating with other government agencies and providing support to STBM trigger cadres.

The purpose of this study is to describe the implementation of the five pillars of Community-Based Total Sanitation (STBM) in Kedurus Village, Karang Pilang District, Surabaya City, which include: stop defecate carelessly, washing hands with soap, drinking water and food management, waste management, and household waste management household, can affect the quality of sanitation in the area. The reason for choosing this topic is related to the increase in diarrhea cases in Surabaya City from 2021 to 2023, which shows that sanitation and clean living behavior problems are still serious challenges. By describing the implementation of STBM in Kedurus Village, it is hoped that it can provide a clearer picture of the role and effectiveness of STBM implementation in overcoming public health problems.

Bacteria and viruses can spread in polluted environments or in substandard sanitation conditions. Like diarrhea, an unhealthy environment due to human waste also causes various skin diseases [7]. This is the background to the importance of conducting research to evaluate the availability of basic sanitation facilities and environmental conditions in the Kedurus Village community.

Method

This research is a quantitative descriptive research with a survey research design that uses observation methods for data collection. The population in this study includes all Family Cards domiciled in Kedurus Village, Karang Pilang District, Surabaya City, totaling 5,854 families because this Village is an area with a larger population. This research was conducted in Kedurus Village, Karang Pilang District, Surabaya City and was conducted for 4 months from March 2024 to June 2024.

The sample in this study includes the entire population willing to be respondents living in Kedurus Village with a total of 5,854 families. This study uses a total sampling technique, where the entire population in Kedurus Village is used as a research sample. The variables examined in this study are the availability of healthy toilets, the availability and provision of clean water, management of drinking and eating water, the availability of waste disposal facilities and the availability of SPAL.

Data collection was carried out univariately by means of a survey to residents' homes and recorded using an observation sheet which was then inputted into the Surabaya Citizens' Love Application (ASW) provided by the Surabaya City government. The inputted data will automatically enter the application output in the form of the STBM 5 Pillars implementation category, from the output data it is then processed using the SPSS application to find out the percentage results of the data.

Results

Table 1 Pillar 1 Stop Open Defecation

No.	Characteristics	Frequency	Percentage (%)
1.	Not yet eligible	2	,0
2.	Sharing	68	1.2
3.	Worthy	1142	19.5
4.	Safe	4642	79.3
	Total	**5854**	**100.0**

As many as 79.3% of families are in the safe category, which means they have personal healthy toilets, goose neck toilets and septic tanks that are sucked out. at least once in 5 years last. As many as 19.5% are in the decent category which means having a private toilet, gooseneck and septic tank that has never been drained or drained for more than 5 years, while 1.2% use shared toilets (sharing) this category means still using public toilets or one toilet is used for several households. These results show significant achievements in Pillar 1, which is in line with the ODF (Open Defecation Free) declaration that has been accepted by the City of Surabaya. However, there are still small groups that require intervention to increase access to private toilets.

Table 2 Pillar 2 Washing Hands with Soap

No.	Characteristics	Frequency	Percentage (%)
	No CTPS	118	2.0
	CTPS	5736	98.0
	Total	**5854**	**100.0**

Most respondents (98%) have implemented CTPS behavior well, especially at important moments such as before eating and after defecating, this is also indicated by the availability of clean water, soap or hand washing facilities. However, 2% of families have not carried out CTPS routinely, generally due to a lack of knowledge about the importance of this practice in preventing infectious diseases. This finding emphasizes the importance of further education and the provision of adequate hand washing facilities in residents' homes.

Table 3 Pillar 3 Management Drinking water and Household Food

No.	Characteristics	Frequency	Percentage (%)
	No PAMM-RT	14	0.2
	PAMMRT	5840	99.8
	Total	5854	100.0

As many as 99.8% of families have managed drinking water and food properly according to the principles of hygiene and sanitation. Only 0.2% have not carried out proper processing, such as not re-boiling drinking water, storing drinking water and food in closed containers or storing food near chemicals. The high implementation of the PAMM-RT principle shows good public awareness of household food and water safety.

Table 4 Pillar 4 Security Household Waste

No.	Characteristics	Frequency	Percentage (%)
	No PS-RT	434	7.4
	PS-RT Sorting	3621	61.9
	PS-RT	1799	30.7
	Total	5854	100.0

In Pillar 4, 61.9% of families sort their waste and place it for collection by officers. 30.7% have implemented further management such as utilizing organic waste for compost and selling inorganic waste to waste banks. However, 7.4% of families still dispose of waste without sorting or burning it, which risks polluting the environment. This shows the need to increase awareness and provide an integrated waste management system.

Table 5 Pillar 5 Security Household Liquid Waste Ladder

No.	Characteristics	Frequency	Percentage (%)
	No PLC-RT	2084	35.6
	PLC-RT	3770	64.4
	Total	5854	100.0

As many as 35.6% of families have the characteristic of not carrying out Liquid Waste Security Household (PLC-RT) like there is a puddle water around the house due to domestic liquid waste, the presence of open household liquid waste drains that do not flow and smell. As many as 64.4% of families have carried out PLC-RT.

Discussion

Knowledge about STBM in society has a big influence on success environmental health implementation in preventing diseases, such as diarrhea, which are caused by by household waste and garbage management is still not optimal [8]. Overall, the implementation of STBM in Kedurus Village shows positive achievements in most pillars, especially Pillars 1 to 3. However, Pillars 4 and 5 still face challenges in the practice of appropriate waste and liquid waste management. This indicates the importance of synergy between the community, STBM cadres, and the government in strengthening education, monitoring, and providing adequate sanitation facilities to support the success of STBM in a sustainable manner.

Surabaya City Government, which recently received an Open Defecation Free (ODF) certificate from the East Java Province ODF Verification Team [9] This is in line with the research being conducted on pillar 1: Providing adequate toilet facilities for the community collectively to prevent contamination

of clean water and other sanitation [10]. Having a healthy toilet is very important to maintain environmental cleanliness and prevent the spread of diseases, especially those transmitted through water and sanitation. A clean and healthy toilet ensures that human waste is disposed of safely, avoiding contamination of the surrounding environment, such as water sources that can cause diarrhea, cholera, and typhoid. In addition, healthy toilets also contribute to improving the quality of life of the community by creating a hygienic environment and reducing negative impacts that can endanger health. Thus, the existence of a proper and well-maintained toilet is one of the main factors in creating a clean, healthy, and comfortable environment to live in [11].

Hand washing behavior This is an important step in sanitation, which aims to clean hands. and fingers using water or other liquids and soap, so that hands are clean and free from germs or bacteria that cause disease [12]. it is important to provide and maintain adequate handwashing facilities, equipped with running water, soap, and appropriate wastewater drainage. With adequate facilities and continuously fostered habits, it is hoped that it can prevent the spread of disease and improve the quality of sanitation in the community [11].

Management drinking water and food in households to improve and maintain the quality of water from water sources that will be used for drinking water, as well as to apply the principles of food hygiene and sanitation in the process of managing food at home. ladder that includes 6 principles of Food Hygiene Sanitation: first, selection of fresh and safe raw materials; second, proper storage of food materials so that they are not damaged or contaminated; third, hygienic food processing to avoid the spread of harmful microorganisms; fourth, safe storage of cooked food to maintain quality and prevent damage; fifth, transportation of food in a way that maintains its cleanliness and safety; and sixth, serving food by ensuring the cleanliness of the tools and serving place. The application of these principles will support the creation of good, healthy, and safe food for consumption [3].

Drinking water management at home The steps are carried out through three main stages. First, the processing of raw water if it is cloudy, is done by natural sedimentation, filtering using cloth, or clarification using chemicals such as alum. Second, the processing of drinking water aims to eliminate bacteria And germs that cause diseases through methods such as filtration (biosand filters, ceramic filters), chlorination (liquid chlorine/tablets), coagulation and flocculation (giving coagulant powder), and disinfection (boiling water or Sodis method). Third, drinking water storage is done using closed containers, narrow-necked or equipped with taps, which are washed every three days or when empty, and stored in a clean and closed place to maintain the quality of the water that has been treated [3].

Household waste management is part of the fourth pillar of STBM which emphasizes the 3R principle, namely reducing, reusing, and recycling. This behavior is manifested through the habit of sorting waste according to its type and throwing it away routinely outside the home, making efforts to reduce and reuse waste, and providing and maintain household waste disposal facilities outside the home to make waste management more effective and sustainable.

Wastewater produced by household industries is generally contains substances that are harmful to human health. If not disposed of or processed properly, the waste can cause the spread of disease in the surrounding environment [13]. Do household liquid waste processing activities originating from washing, bathroom and other activities a kitchen that meets environmental health quality standards and health requirements that are capable Breaking the chain of disease transmission. The 5th pillar of STBM behavior realized through minimal activities, separating household liquid waste channels through infiltration wells and drainage channels wastewater disposal. However, if In residential areas, wastewater treatment facilities are already available (Wastewater Treatment Plant) with a piping system or septic tank that meets standards equipped with absorption areas, latrine and non-latrine wastewater can be processed in a mixed manner, providing and using household liquid waste storage and maintaining drainage channels and household liquid waste storage.

Conclusion

Based on the results of the 5-pillar STBM survey in Kedurus Village on 5,854 families, the results of STBM Pillar 1 "Stop Defecating in the Open" there were 1.2% sharing category, 19.5% decent category and 79.3% safe category, Pillar 2 "Washing Hands with Soap" there were 2% non-CTPS category and 98% CTPS category, Pillar 3 "Household Drinking and Eating Water Management" there were 0.2% non-PAMM-RT category and 99.8% PAMM-RT category, STBM Pillar 4 "Household Waste Security" there were 7.4% non-PS-RT category, 61.9% PS-RT category sorting and 30.7% PS-RT category, Pillar 5 "Household Liquid Waste Management" there were 35.6% non-PLC-RT category and 64.4% PLC-RT category.

The local government should further increase socialization about the importance of good sanitation, improve coordination between agencies for the provision of sanitation facilities, and empower STBM cadres to assist the community. In addition, waste and liquid waste management needs to be strengthened with the 3R principle and adequate infrastructure, and regular evaluations should be carried out to ensure the sustainability of the sanitation program.

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