

Original Article

Description Of Clean Water Sanitation in Sipare-Pare Central Village, Merbau District, Labuhan Batu Utara Regency

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ARTICLE INFO

Article History:

Submit, 30 Dec 2021

Revised, 30 Dec 2021

Accepted, 31 Dec 2021

Available online, 31 Dec 2021

Keywords:

Sanitation, Clean Water, Community

ABSTRACT

Background: The absence of proper sanitation and clean water in sufficient quantities is the beginning of the emergence of various health problems in the community. One of the difficulties in accessing clean water is in the Sipare-pare village area, in this village, it is still a problem that the water used by the community contains a mixture of oil so that it is said to be unfit for daily use and can disturb and endanger health. This study aims to determine the description of clean water sanitation in Sipare-pare Village, Merbau District, Labuhan Batu Utara Regency

Methods: The research design uses a quantitative approach with descriptive research type, the sampling technique used is the accidental sample. Methods of collecting data through in-depth interviews and observations with a cross-sectional research design. The data analysis used in this research is using univariate analysis. The research was conducted in Sipare-pare Village, Merbau District, Labuhan Batu Utara Regency

Results: The results of the research conducted by the research team on 100 respondents found that clean water sanitation facilities in Pare-Pare Village are still said to be not good because there are still people whose water conditions are not clear or cloudy.

Conclusion: For the quantity of water discharge sufficient to meet daily needs, in washing activities, the community uses water from drilled wells and dug wells, in contrast to the source of water used for cooking from PDAM water and for drinking water purchased refills, the water consumed is cooked. first and there are skin diseases and diarrhea caused by the consumption of clean water

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Cite this as: Nanda, M. ., Panjaitan, N. P. ., Nurmayni, Zulkhairani, S., Dwitia, S. ., & Ananda, W. (2021). Description Of Clean Water Sanitation in Sipare-Pare Central Village, Merbau District, Labuhan Batu Utara Regency. Journal of Applied Nursing and Health, 3(2), 111-118. <https://doi.org/10.55018/janh.v3i2.23>

Introduction

Sanitation according to the World Health Organization (WHO) is an effort that monitors several physical environmental

factors that affect humans, especially those that affect their effects, which can damage physical development, health, and survival. Meanwhile, according to [Notoadmojo \(2010\)](#), sanitation itself is a deliberate



behavior in the cultivation of clean living to prevent humans from coming into direct contact with dirt and other hazardous waste materials in the hope that this effort will maintain and improve human health.

Currently, it is very difficult for some communities in several regions in Indonesia to meet their needs for clean water. So that one of the efforts that can be done to provide clean water is to use existing water sources. Access to clean water and sanitation is important in the effort to produce superior human resources. The absence of proper sanitation and clean water in sufficient quantities is the beginning of the emergence of various health problems in the community.

One of the classic unresolved problems in Indonesia is the problem of clean water and sanitation. The target of achieving sanitation both in the Millennium Development Goals (MDGs) which ended in 2015, as well as in the Sustainable Development Goals (SDGs) which are still ongoing until now, have not been able to be achieved optimally.

Geographically, Indonesia's territory consists mostly of water. But in fact, water that can be used for daily activities is still in the sufficient category in terms of quality and there are still many parts of Indonesia that are experiencing a clean water crisis. The provision of water to meet the needs of the community is one of the important agendas in ensuring the basic needs of the community. These targets and targets in Indonesia have been set in the National Medium-Term Development Plan (RPJMN) in 2015-2019, through increasing access to safe drinking water services in 2019 to 100% ([Cabinet Secretariat of the Republic of Indonesia, 2017](#)).

According to [PERMENKES No. 416/MENKES/PER/IX/1990](#) concerning clean water quality standards, what is meant by clean water is water used for

daily needs whose quality meets health requirements and can be drunk when it has been cooked. The quality of drinking water is one of the important things that must be considered so that the water is safe for consumption by the community. Clean water must meet quality requirements including physical, chemical, and biological requirements. Until now, the provision of clean water is still a serious problem.

Clean water that is widely used in Indonesia comes from groundwater. Household drinking water sources in Indonesia use bottled water, refilled water, tap water from PDAM or buy retail, drilled wells, protected dug wells, springs, rainwater storage, and river/irrigation water. The results of data from Basic Health Research in 2013 types of clean water sources for all household needs and drinking water in Indonesia, in general, are protected dug wells (29.9%), pump wells (24.1%), PDAM (19.7%), and springs (27%). In urban areas, more households use water from drilled wells/pumps (32.9%) and tap water/PDAM (28.6%), while in rural areas more use protected dug wells (32.7%) ([Riskesdas, 2013](#)).

From the results of observations made in the village of Sipare-pare Tengah, Merbau District, Labuhan Batu Utara Regency, the difficulty of accessing clean water in this village is still a problem at this time, in fact, the water used by the community contains a mixture of oil so it is said to be unfit for daily use and can be harmful and harmful to health. However, the people of Siparepare village continue to use the water for daily needs such as bathing, washing, and sometimes even for cooking. Therefore, the purpose of this study is to describe clean water sanitation in Sipare-Pare Tengah Village, Merbau District, Labuhan Batu Utara Regency in 2021

Method

The research design in this clean water sanitation research uses a quantitative approach with a descriptive type of research. The research location was conducted in Sipare-Pare Tengah Village, Merbau District, Labuhan Batu Utara Regency.

The population in this study is the people who live in the village of Sipare-pare. Samples taken from this study were respondents totaling 100 people. Sampling used in this study is the accidental sample, namely the technique of determining the sample based on chance, namely the researcher who coincidentally/incidentally meets the respondent can be used as a sample if it is considered that the person who happened to be met is suitable as a data source. Data collection techniques in this study were carried out through interviews, observations, and questionnaires. This type of research is quantitative descriptive with a cross-sectional research design. And the data analysis method used in univariate analysis. Univariate analysis was carried out on each variable used in the study,

Results

The number of respondents in this study was 100 people who were people in the village of Sipare-Pare Tengah Village, Merbau District, Labuhan Batu Utara Regency.

Based on the results of the study, it was found that the frequency distribution of respondents based on gender showed that there were 55 male respondents (55%) and 45 female respondents (45%).

Characteristics of Respondents Based on Age

Based on the results of the study, it can be seen that the distribution of sample

frequencies is based on age, mostly at the age of 30-39 years as many as 35 people or 35%, ages 19-29 years as many as 28 people or as much as 28%, then age 40-49 years, namely 20 people. or 20% and finally in the age range above or equal to 50 years, namely 17 people or 17%.

of the frequency of respondents based on the level of education showed that respondents with elementary education level were 28 respondents (28%), junior high school education was 26 respondents (26%), and high school education was 38 respondents (28%).

Based on the results, it was found that the frequency distribution of respondents based on the type of work showed that the most respondents worked as housewives as many as 36 respondents (36%), 17 respondents (17%), entrepreneurs as many as 15 respondents (15%), not working as many as 11 respondents (11%), working as private employees as many as 9 respondents (9%), farmers 5 respondents (5%), students 4 respondents (4%), teachers 2 respondents (15%) and working as laborers 1 respondent (1%).

Discussion

Source of Clean Water Used by the Community

According to [Permenkes No. 416 of 1990](#) concerning the requirements and supervision of water quality, the requirements for clean water are to meet health requirements and have a maximum permissible level including microbiological requirements, including water free from germs that can interfere with health, then it is better if it is far from polluting sources that contain lots of germs. disease. The second is the physical requirements, including colorless water, smells, and tastes. Third, the chemical requirements include water free from chemicals that are

harmful to health, and the last requirement is radioactive.

Based on the results of observations in Sipare-Pare Village from 100 respondents, 40 respondents (40%) got sources or facilities for clean water obtained by the community mostly from drilled wells, 36 respondents (36%) of water sources came from PDAM, and 36 respondents said the source was water comes from dug wells as many as 24 respondents (24%). The source of water from PDAM used by the community has gone through a piping system and meets physical requirements (colorless, odorless, and tasteless).

Condition of Clean Water Facilities

According to the Indonesian Ministry of Health (1995), one of the efforts to determine the quality of clean water supply facilities is by monitoring or inspecting the quality of water sources. The purpose of this inspection is to identify potential sources of pollution.

The results showed that from 100 respondents, 43% of respondents said that the condition of the community's clean water facilities was said to be less clear, the condition of clean water was 35%, the water conditions were not clear or cloudy as many as 17% of the respondents and only 5% of the respondents had clear water conditions. This shows that clean water sanitation facilities in Sipare-Pare Village are still said to be not good because there are still people whose water conditions are not clear or cloudy.

Research conducted by (Almas Ghassani Celesta and Nurul Fitriyah, 2016) states that the availability of clean water facilities in Payaman Village will improve basic sanitation. With clean water facilities, people do not need to worry about diseases that can be transmitted through water. In addition to paying attention to the source

of clean water supply, it is also necessary to pay attention to the cleanliness of the clean water reservoir to be used.

Water Discharge Quantity

Water quantity is the amount of clean water used to meet daily needs. Requirements for the quantity of water discharge in the provision of clean water can be viewed from the amount of raw water available. This means that the raw water can be used to meet needs following the needs of the region and the number of people to be served.

From the data obtained, the conclusion can be drawn that the quantity of clean water discharge in the community in Sipare-Pare Village from a total of 100 respondents shows the frequency that is said to be sufficient to meet daily needs as many as 49% of respondents, less than 29% of respondents, only 18 % of respondents who fulfill the quantity of water discharge are said to meet their daily needs and do not meet their daily needs, there are 4% of respondents.

So, this shows that the fulfillment of the quantity of water discharge in this village is said to be sufficient to meet the daily needs of the community in the need for clean water.

Water Source for Cooking

Water used for daily needs must be considered following drinking water quality standards. Likewise with the sources of water used in the treatment of drinking water consumed, one of which is a source of water for daily drinking needs.

Based on the results of research in Sipare-Pare Village, the source of water for community cooking comes from PDAM water with a total of 47% of respondents, 29% of respondents use drilled water for cooking, some 18% of respondents source

dug wells, but some 6% of the respondents who use water sources for cooking by buying bottled water. This means that the source of water used in cooking is mostly from PDAM.

Water Source For Washing

Water for sanitation and hygiene purposes is the water of a certain quality used for daily purposes which is of a different quality from drinking water. Projection of the number of clean water needs can be done based on the estimated water demand for various purposes plus the estimated water loss. The use of water is very influential on public health. Dirty water because it is polluted by various kinds of pollutant components causes various kinds of diseases.

Based on the results of research in Sipare-Pare Village, from the total number of respondents, namely 100 respondents, it shows that the source of water for washing used by the community comes from drilled wells as many as 40% of respondents, sourced from PDAM as many as 34% of respondents, and sourced from dug wells as many as 26% of respondents. . This means that for their daily needs in the form of washing, the community mostly uses water from bore wells and PDAM, while only a few people use dug wells for their daily needs.

How to Get Drinking Water

In Government Regulation Number 16 of 2005 concerning Development of Drinking Water Supply System (SPAM). It is explained that the Drinking Water Supply System can be carried out through a piping network system and/or not a piped network.

The ideal drinking water should be clear, colorless, tasteless. Drinking water

should also not contain chemicals and pathogenic germs and all creatures that endanger human health. The water should be non-corrosive and leave no deposits on the entire distribution network.

Based on the results of research in Pare-Pare Village, from the total number of respondents, namely 100 respondents, it shows that there are 66% of respondents who get drinking water say they buy it, and 34% of respondents say they don't buy drinking water sources.

This shows that people are more confident in using purchased water for drinking purposes compared to consuming water from water sources at homes such as from PDAM or wells.

The Process of Cooking Water Before Drinking

Water is an important part of the body so its consumption must be in the form of clean water. Things that must be considered such as in a more effective way are to cook or boil the water that we will consume until it boils. This method is very effective in killing all pathogens in water such as viruses, bacteria, spores, fungi, and protozoa. The length of time the water needs to boil is around 5 minutes, but the longer the time the better, 20 minutes is recommended.

From the data obtained, the conclusion can be drawn that in managing or cooking water before drinking it, more people always answer, namely 47% of respondents, who say sometimes as much as 31%, and 22% of people who say they never boil water before drinking.

This states that there is awareness from the community in managing or cooking water before consumption or drinking. This means that public health in Pare-Pare Village can be said to be good because they consume drinks that have been cooked or boiled.

Distance from Pollutant Source to Clean Water Source <10 m

The distance between the well and the waste greatly affects the quality of the well water itself. The closer the distance from the well to the waste, the more likely it is to pollute the well water. According to the Ministry of Health of the Republic of Indonesia (1977), each clean water sanitation facility has different requirements, but from each existing requirement, the main requirement that must be considered is the distance between the source of clean water and the septic tank. less than 10 meters.

Based on the results of research on the distance of wells or clean water sources, which is <10 m, with waste or pollutant in Sipare-Pare Village, it shows that respondents who answered by leaving it alone were 43%, those who said that making bulkheads were 35%, and those who made source construction pollution that is watertight and does not leak only as much as 22% of respondents.

Thus, it shows that there are still some respondents who have wells or clean water sources that are not healthy because the distance from the waste source is relatively very close to the statement that they just let the distance of the well or clean water source <10 with waste or pollutant.

Diseases Caused From Water Sources

Groundwater is a common water source used for daily activities, including drinking, bathing, and washing clothes. However, groundwater should not be used carelessly, especially if its cleanliness has not been confirmed, because it can be dangerous to health. Groundwater can be contaminated by human activities from industry, leaks from fuel storage tanks, or

seepage from landfills. This can cause bacteria and chemical compounds, such as arsenic, nitrate, and mercury, to more easily contaminate groundwater. Boiling contaminated groundwater can kill bacteria, but it cannot remove other contaminants in it. When water is cooked, the volume of water will decrease and make the concentration of harmful substances in it more concentrated.

Based on the results of research that has been conducted in the village of Spare-Pare Tengah with 100 respondents, that the community who have been exposed to diseases from water sources as many as 53% of respondents, and those who say they have never been exposed to diseases from water sources are 47% of respondents, and out of all respondents said that there are various kinds of diseases caused by water sources, some say itching, diarrhea, stomach pain, and typhoid.

This shows that the water source used by the community has the potential to cause disease.

Diseases Due to Not Managing Water

Raw water is water that has not been filtered, processed, or treated at all. Usually, to become proper and healthy drinking water, raw water will go through several processes using several chemicals that function to remove bacteria and harmful substances. Another simpler way is to cook the raw water until it is cooked so that all the bacteria in it die. If you drink raw water directly without being treated, bacteria will still be in the water and it is very possible to infect the body. Everyone who drinks raw water is very likely to get infectious diseases, but the elderly and children are the more vulnerable groups. The reason is, the immune system of the elderly and children is not so strong, so it

can be 'lost' in fighting bacteria. Therefore, you should not drink raw water directly. Therefore, this shows that people are aware that untreated water before consumption can cause disease, but in reality, there are still many people who do not treat water for consumption so that diseases are still found caused by clean water consumed

Conclusion

Based on the results of the research conducted by the research team on 100 respondents who are people in Pare-Pare Village, Merbau District on clean water sanitation, the following conclusions are obtained: Of the 100 respondents, the sources or facilities for clean water obtained by the community are mostly from drilled wells and PDAMs. PDAM has gone through the piping system and meets the physical requirements (colorless, odorless, and tasteless). And some people get their source of clean water from dug wells. The condition of the community's clean water facilities is said to be less clear; the condition of the water is not clear or cloudy as many as 17 respondents and the condition of clear water is only 2 respondents. The quantity of clean water debit is sufficient to meet the daily needs of the community as many as 49 respondents. This shows that the fulfillment of the quantity of water debit in this village is said to be quite good, with a sufficient frequency of people in the need for clean water. Most of the community's water source for cooking comes from PDAM water, but some people use this water source for cooking by buying bottled water. This states that the source of water used in cooking does not come from wells. The source of water for washing the majority of the community comes from drilled wells and dug wells, in contrast to the source of

water used for cooking which uses PDAM water. How to get community drinking water by buying refilled water. This shows that people are more confident in using purchased water for drinking purposes compared to consuming water from water sources at home. In managing or cooking water before it is consumed or drunk, many people do this. This means that public health in Pare-Pare Village can be said to be good because they consume cooked drinks. For the distance of wells or clean water sources <10 people are less concerned with the majority of the responses ignoring this. This of course can pollute clean water in the community.

The existence of diseases caused by water sources causes people to still be affected by diseases such as itching, diarrhea, stomach pain, and typhus. And the community's response to disease because it does not treat the water, they consume states that it causes disease but some people do not agree

The government is expected to play an active role in optimizing environmental health, especially in handling clean water in Merbau District, Labuhan Batu Utara Regency. For Society. It is hoped that the community will prioritize cleanliness in consuming clean water. Researchers are expected to be able to conduct more in-depth research related to clean water sanitation. The research results can be used as a reference for the development of health sciences, especially in environmental health in the future

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