

The toilet sanitation management to meet healthy house standards

Anung B Studyanto¹, Mujahidatul Musfiroh² and Sholahuddin³

¹Department of Interior Design, Faculty of Arts and Design, Universitas Sebelas Maret, Jl. Ir. Sutami 36A Kentingan Surakarta 57126

²Departement Midwifery, Faculty of Medicine, Universitas Sebelas Maret, Jl. Ir. Sutami 36A Kentingan Surakarta 57126

³Departemen of Agronomi, Faculty of Agriculture, Universitas Sebelas Maret, Jl. Ir. Sutami 36A Kentingan Surakarta 57126

Email : anungbs@staff.uns.ac.id

Abstract. To increase the community participation in the toilet sanitation management at house to making a house according the healthy house standart. The toilet sanitation management is becoming complex with increasing population growth, and limited land for sanitation. The community participation determines the success of the toilet sanitation management and improving the health status of the community.

This study used an observation method for the availability of latrines according the healthy house criteria, spatial layout and pit layout that meet health and safety standards. Spatial and layout include bathroom area, type of material used for wall and floor bathroom, type of latrine, distance the waste storage distance with water source, and sewerage. The respondents in this study are the people who live in Jaten Village taken by accidental sampling. The number of respondents in this study were 15 respondents. This study shows that all respondents (100%) already have toilet and 8 respondents (53%) have a good toilet sanitation management. Respondents have provided latrines as an effort to manage household waste and according the healthy house standart. The latrine spatial plan has been well implemented, but the latrine layout plan has not been properly.

1. Introduction

Sanitation for a healty living must have an access to contributes for human health and well being . The Joint Monitoring Programme 2008 reported that 37% of rural population have an access for safe sanitation. However , sanitation which provides access to toilet in household environment has not met the criteria for a healty house yet. It is based on the toilets that are still using building materials that are difficult to find and expensive [1]. The use of building materials which are hard to find and expensive is not a characteristic of the toilet that can be used in households environment. The characteristic of the toilet that can be used in a households environment such as, the soil surface in sanitary areas are not easily contaminated, it is not causing a contamination to the ground water or water sources around the toilets, the excrement is not affordable by flies or other animals, the toilets must be free from odors or latrines in a comfortable conditions and proper for the use, the technique of making and the operation of toilets should be simple and not expensive [2]. (Soeparman and Suparmin, 2002). Improving



sanitation facilities is one of management as an effort to prevent and reduces environment pollution. It also contribute for human health care.

The criteria of sanitation are to provide a healty living for everyone [3]. The main technology of sanitation such as a *septic tank* which has a distance 10 meter away from the clean water sources at least and not become a place for breeding and bullies animal [4]. Sanitation is a facilities which separates human waste from human contact, prevents the transfer of bacteria, viruses and parasites found in human excreta which otherwise contaminate water resources and soil, and helps to create a physical environments that enhance safety. Improving sanitation facilities of these research is helps to create physical environments that enhance safety, dignity, and self-esteem. Sanitation management which meet a healthy standard could increase a human health care, families, and the community [1].

2. Method

This research was using the environmental observation technique and interview with the respondent. Observation methods conducted by observing the latrines which meet a healthy house criteria, the space and layout of latrines which provides a healthy living standard. Providing sanitation requires a spatial layout include spacious of bathroom, type of material for space elements, the kind of latrines used, the distance, and the access of wastes disposal. The interview methods with 25 respondent in Jaten Village used *accidental sampling* and *cross sectional* approach to get some information about the behaviour of sanitation management. These research is located in the residential of Jaten Vilage, Karanganyar Regency. The residential has a similiar criteria, such as the distance of housing and space arrangement that also helps the research to be more homogeneous.

3. Results and Discussions

3.1. Results

Table 1. The Results of House Sanitation Access

Sanitation Access	Frequency (Percentage)
Yes	25 (100%)
No	0 (0%)
Total	25 (100%)

Source : Primary Data, 2017

Table 2. Bathroom Spacious

Bathroom Spacious (m ²)	Frequency (Percentage)
2	20 (80%)
2-4	5 (20%)
4-6	0 (0%)
> 6	0 (0%)
Total	25 (100%)

Source : Primary Data, 2017

Table 3. Materials for Bathroom Interior Elements

Floor Materials	Frequency (Percentage)	Wall Materials	Frequency (Percentage)
Plaster	0 (0%)	Brick Wall with Paint Layers	2 (8%)
Tiles	1 (4%)	Brick Wall with Tiles Layers	0 (0%)

Ceramic	24 (96%)	Brick Wall with Ceramic Layers	23 (92%)
Total	25 (100%)	Total	25 (100%)

Source : Primary Data, 2017

Table 4. Materials of Bathtub Access

Bathtub Access	Frequency (Percentage)	Bathtub Materials	Frequency (Percentage)
Yes	24 (96%)	Plastic Bathtub	3 (12%)
No	1 (4%)	Cement Bathtub	1 (4%)
		Ceramic Bathtub	20 (80%)
Total	25 (100%)	Total	24 (100%)

Source : Primary Data, 2017

Table 5. The Type of Latrines

The Type of Latrines	Frequency (Percentage)
Squat Closet	20 (80%)
Sit Closet	5 (20%)
Total	25 (100%)

Source : Primary Data, 2017

Table 6. Bathroom and Latrines Management

Bathroom and Latrines Management	Frequency (Percentage)
Good	17 (68%)
Less	8 (32%)
No	0 (0%)
Total	25 (100%)

Source : Primary Data, 2017

The results shows that the respondents have a toilets, and own a bathroom with an area of 2 m² is 20 respondents. The material for bathroom floor and wall is ceramic 24 (96%) and brick walls with tiles layers 23 (92%). The level of bathroom access is 96% with the ceramic material of 20 (80%). Based on the table 6, it shows that the respondent have a good behaviour in the bathroom and toilet management, it shows 17 (68%). Respondent management of bathroom and toilet include the distance of latrines to the water source, improving hygiene of bathroom and toilet and the use of clean water.

3.2 Discussions

Toilet is a facility which a person may urinate or defecate, typically consisting a large bowl connected to a system for flushing away the waste into a sewer or septic tank [5]. According to Permenkes No. 39 year 2016, toilet is a facility used for human wastes disposal, called with latrine or WC, that is prevents the transfer of bacteria, viruses and parasites found in human excreta [6]. Healthy latrine is a facilities that is prevents the transfer of disease which found in human wastes [7]. (Depkes RI, 2008). The result shows that 25 respondents (100%) has provide their toilet at house with healthy living management properly. The access of latrine is an access by own family that is not public latrines. Toilet access in

a dormitory or rented house used by several families who live together excluded in the healthy latrine criteria.

The respondent of these research have a spacious bathroom in 2m² is 20 respondent (80%). The material which use for the floor and wall of the bathroom was tiled by 24 (96%) and the brick wall with tile layers by 23 (92%). Interview result shows that the use of ceramic materials for floor and wall of bathroom because the ceramic material is easy to clean and is not easy to absorb and are all having qualified. The criteria of healthy latrines is quite extensive, has a safe access, and also equipped with wall and roof as a protector, waterproof wall and a waterproof floor [8]

The result shows that 20 (80%) of respondents use the toilets with the kind of squat toilets. According To Permenkes No. 39 year 2016, the kind of latrine standard that meets the healthy criteria has a sanitary latrines. Sanitary latrines is a sanitary which use a system for flushing away the waste into a sewer or septic tank. Sanitary latrines is the latrines which has a seal or without water seal. The toilet that has a Water-seal latrines are similar to simple pit latrines with a small quantity of water to prevent the odor and insects. While, the latrines without water seal is a latrines which has not of water on the closet disposal. The results shows that the respondents use the toilets with water seal [6]. The type of this toilet can meet the healthy latrines criteria because the toilets of this type could prevent the spread of hazardous materials directly, prevents of disease, not causing the odor, and could not be touched by insects or rats [6,8]. The management of bathroom and toilets in the House performed by respondents is clean up and draining the bathtub 1 time per week of 15 respondents (60%), using PDAM as a source of clean water for as much as 17 respondents (68%) and the placement of toilets with a water source distance along ≥ 10 meters by as much as 16 respondents (64%). The maintenance of a good criteria is the floor of the toilet toilets are always clean and dry, the perimeter of the toilet there is no flowing water, there is no trash in the bathroom, the floor is always clean, no flies, rats and cockroaches, and cleaning tools are always available. The distance between the toilet water source is 10-15 meters (Depkes RI, 2004).

4. Conclusions

1. The whole family in the Jaten Village has own the toilets that meet standard house healthy management.
2. The space and layout of latrines showed the extensive of bathroom = 2 m², the type of material which use for the walls and bathroom floors is a ceramics, the types of latrines used squats closet with water seal latrines, the distance of waste water resources with the shelters has along ≥ 10 meters.
3. Create of sewer waste has been demonstrated by the management of the bathroom and the healthy toilets, such as clearing and draining the bath 1 time per week.

Advices

The improvement of the bathroom and toilets management are related to the placement of the latrines distance with water sources and the availability of the accessible toilet cleaning stools.

References

- [1] Water and sanitation. 2009. Informasi Pilihan Jamban Sehat. Jakarta : World Bank Office.
- [2] Soeparman & Suparmin. 2002. Pembuangan Tinja & Limbah Cair: Suatu Pengantar. Jakarta: Penerbit Buku Kedokteran EGC.
- [3] Notoatmodjo, Soekidjo. 2003. Ilmu Kesehatan Masyarakat: Prinsip-prinsip Dasar. Jakarta: PT. Rineka Cipta.
- [4] Menteri Kesehatan RI. 1999. Keputusan Menteri Kesehatan Republik Indonesia No. 829/Menkes/SK/VII/1999. Jakarta : Kementerian Kesehatan RI.

- [5] Depkes RI. 2009. Seri Perilaku Hidup Bersih dan Sehat di Rumah Tangga. Jakarta : Pusat Promosi Kesehatan Departemen Kesehatan RI.
- [6] Menteri Kesehatan RI. 2016. Peraturan Menteri Kesehatan Republik Indonesia No. 39 Tahun 2016. Jakarta : Kementerian Kesehatan RI.
- [7] Depkes RI. 2008. Strategi Nasional Sanitasi Total Berbasis Masyarakat. Jakarta : Departemen Kesehatan RI
- [8] Depkes RI. 2004. Syarat-syarat Jamban Sehat. Jakarta : Departemen Kesehatan RI.