

## **RELATIONSHIP BETWEEN GARBAGE DISPOSAL FACILITIES AND PARTICIPATION IN DISPOSING OF GARBAGE IN HOUSEWIVES**

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### **ABSTRACT**

The participation of housewives in waste management through waste banks can solve the increasing waste problem. Moreover, the number of waste banks in Indonesia has increased significantly. However, on the other hand, it was found that Indonesia is the second highest country in the world that dumps the most plastic waste into the sea after China. This is an important and interesting phenomenon to study regarding the participation of housewives who are members of the waste bank. The participation of housewives may not be sustainable so that the phenomenon of Indonesia being the second highest waste producer emerges to the surface. Therefore, this study aims to analyze the factors related to the level of participation of housewives in waste management through waste banks. This research was conducted in the Mekarwangi Health Center, Bogor. The research approach uses a quantitative approach with a cross sectional design. The number of samples is 53 people who are determined using the Taro Yamane formula. Sample data were analyzed using analysis descriptive and inferential (chi square). The results showed that the age of the respondents was included in the productive category with variations between 28 to 61 years. The level of formal education is in the intermediate category between junior high and high school. The level of knowledge of housewives is classified as medium and tends to be high, so there are no respondents who have low knowledge. Housewives participate in waste management through waste banks with supporting factors such as level of knowledge, level of infrastructure availability, and level of family support. Increasing the knowledge of housewives about the dangers of unmanaged waste will increase their involvement in waste management through waste banks.

**Keywords:** Garbage disposal facilities, participation of housewives

### **INTRODUCTION**

The increasing population growth in Indonesia is directly proportional to the amount of waste production piles. If it is observed that the emergence of waste problems cannot be separated from the behavior of humans or the community as producers of waste. So far it is felt that people's understanding and awareness in maintaining environmental cleanliness has not gone as expected. There are still many people who throw garbage carelessly even though trash bins are available

According to the definition of the World Health Organization (WHO), waste is something that is not used, is not used, is not liked, and is something that is thrown

away that comes from the results of human activities that occur by itself. According to the Waste Management Act No. 18 of 2008 states that waste is the residue from the results of daily human activities and from natural processes in the form of solid and liquid (waste). Waste generated from human activities must be managed properly, so that further environmental pollution does not occur. According to the Regulation of the Minister of Home Affairs Number 33 of 2010, waste is the residue of daily human activities and/or natural processes in solid form consisting of household waste and household-like waste. 1

The World Bank in a report entitled "What a Waste: A Global Review of Solid Waste Management", revealed that the amount of solid waste in world cities will continue to increase by 70% from this year to 2025 from 1.3 billion tons per year to 2.2 billion tons per year. The majority occur in cities of developing countries.<sup>3</sup>

Indonesia is the fourth most populous country in the world, with a total population of 237 million people. The population is expected to increase in 2025 with an estimated population of 270 million. The population is increasing, the amount of waste produced nationally reaches 130,000 tons per day.<sup>3</sup>

Indonesia is the second largest contributor of plastic waste to the sea in the world after China with an estimated 0.48–1.29 million metric tons.<sup>4</sup>

This is a big problem as a human resource, but a large part of society is still a source of pollution. Overall, the population of Indonesia who live with bad sanitation is 72,500,000 people. The Ministry of Health states that in Indonesia there are 240 cities that face problems regarding waste management

In Indonesia, World Bank data states that solid waste production reaches 151,921 tons per day. This means that every Indonesian resident disposes of an average of 0.85 kg of solid waste per day. The same data also states, of the total waste produced nationally, only 80% is successfully collected, the rest is wasted polluting the environment. (5) The problem of urban waste in Indonesia is a major problem that has not been completely resolved. Of the total waste generated by the community, it is estimated that only 60% -70% is transported to the landfill by the authorities. Most of the waste that is not handled by the government is usually burned or thrown into the river and only a small part is handled by scavengers.<sup>3</sup>

In West Java, according to the Head of the West Java Environmental Service (DLH), the amount of waste production in West Java reaches 24,000 tons per day. Efforts were made by the West Java Provincial Government to reduce the amount of waste generation with a number of breakthroughs. Garbage in West Java is still a thorny problem considering the high waste production. The problem is that in one day there are 24,000 tons of waste in West Java, we have to finish it. While the (target) reduction of 30 percent is 2025, in fact now we have to reduce only 5 to 10 percent, especially from sources, many of which come from households.

In Bogor Regency, according to the Ministry of Environment and Forestry (KLHK), Bogor Regency has currently produced 21.88 million tons of waste in 2021. This amount has decreased by 33.33% compared to 32.82 million tons in the previous year.

One of the more complicated waste problems is the household waste problem, because in addition to the relatively large amount of waste, housewives also have their own problems, because most of the household waste consists of wet waste, so that when collecting piles this is a nest of flies, rats and insects, a source of soil, water and air contamination and from an aesthetic point of view it will cause odors and an unpleasant sight 2

Factors that are thought to influence the active participation of the community in development planning are divided into two, namely internal factors (consisting of age, level of education, type of work, income level of the population, length of stay) and external factors (consisting of communication and leadership).<sup>2</sup>

Garbage that is not managed properly will become a means of disease transmission, this arises because wet waste (garbage) can become breeding places and breeding grounds for various disease vectors including flies, cockroaches (roaches), mosquitoes and rats. In order to achieve conditions for a healthy and prosperous society in the future, it is very necessary to have a healthy residential environment. Viewed from the aspect of waste, the word healthy means a condition that can be achieved if waste can be managed properly so that it is clean from the residential environment where humans are active in it.

To reduce this risk, a waste disposal facility (waste bank) is provided, it is hoped that the facilities provided are used properly by housewives in Pamagesari Village, not only that, sorting waste is something that must be implemented immediately by all elements of society in all activities. .

Based on a preliminary study on Thursday 2 June 2022 which was conducted in Pamagersari Village Rt 004/003 and found that the number of housewives in the area was 50 housewives, and 4 housewives were interviewed from 50 housewives, they said they had not all housewives get a Garbage Disposal Facility. For those who already have a garbage disposal facility, they will transport it once a week or once every 2 weeks depending on the arrival of the garbage disposal facility.

Housewives who don't have garbage disposal facilities collect their garbage and then burn it at one point after collecting it. This is due to the lack of waste disposal facilities for housewives.

Therefore, based on the background above, the researcher is interested in developing public health by taking the title "Relationship of Garbage Disposal Facilities with Participation in Disposing of Garbage in Housewives"

## RESEARCH METHOD

This type of research is a type of quantitative research with an analytical approach. This research design uses a cross sectional approach. The sampling technique in this study used accidental sampling. For a known population, the determination of the sample in this study uses the Taro Yamane formula. Based on calculations using the formula, the number of samples in this study were 53 respondents. The sample inclusion criteria are as follows: Residents are willing to become respondents, Respondents are housewives, Respondents can read and write. The sample exclusion criteria are as follows: Residents refuse to be respondents, Respondents who are not included as housewives, Respondents who have limited communication. This research was conducted at the Mekarwangi Health Center and the Malimping Lebak Health Center. When the research was carried out on October 8 2021 – July 28 2022. The data collection tool used a questionnaire. Data analysis was performed using univariate and bivariate analysis with the chi square test.

## RESEARCH RESULTS

The time of the research was carried out on October 8 2021 – July 28 2022 in the Mekarwangi Health Center area.

Table 1 Frequency Distribution of Garbage Disposal Facilities

No	Garbage Disposal Facility	F	%
1	Available	36	67,9
2	Not available	17	32,1
	Amount	53	100

Based on Table 1 above, it shows that of the 53 respondents, as many as 36 respondents (67.9%) with available waste disposal facilities.

Table 1 Distribution of the Frequency of Participation by Housewives in Disposing of Garbage

No	Housewife Participation	F	%
1	Good	33	62,26
2	Enough	12	22.64

3	Not enough	8	15.09
Amount		53	100

Based on Table 2 above, it shows that out of 53 respondents, as many as 33 respondents (62.26%) with good participation in disposing of garbage by housewives.

Table 3 Relationship between Garbage Disposal Facilities and Housewives' Participation in Disposing of Garbage

Chi Square		
p	value	0.000

Based on the data in table 3, it shows a p-value of 0.000, which means that there is a relationship between waste disposal facilities and the participation of housewives in disposing of garbage, so that  $H_a$  is accepted and  $H_o$  is rejected.

## DISCUSSION

### a. Garbage Disposal Facility

Factors related to the level of participation are the level of availability of infrastructure and the level of family support. This means that there is a significant relationship at the 95 percent level of significance between the level of availability of infrastructure and the level of participation of housewives in waste management through waste banks. This explains that infrastructure contributes to the involvement of housewives in waste management. These results are in line with the research of Wibisono and Dewi (2014) which shows that the lack of infrastructure such as roadside trash cans makes the community not actively participate in disposing of waste in its place. In addition, Hermawan, Amanah & Fatchiya (2017) and Posmaningsih (2016) also explain that facilities have a relationship with community participation. This means that the more available the existing infrastructure, the higher the participation of housewives in managing waste in the waste bank. Conversely, the more unavailability of infrastructure will make the participation of housewives lower.

### b. Participation in Disposing of Garbage at Housewives

Waste management activities in the Mekarwangi Health Center area began in 2013. This activity was the result of a collaborative empowerment program carried out by the Bunga Melati Indonesia Foundation (YBMI) with the Ministry of Women and

Children Protection (KPP&A). The waste bank activity is implemented through participatory empowerment so that the management is carried out entirely by local housewives. The success of this first waste bank became a source of motivation for the birth of other waste banks. Within 4 years from 2013 to 2017, there were 10 waste banks in Mekarwangi. This increase indicates the willingness of local residents to be involved in waste management through waste banks. The activities carried out by housewives at the waste bank start from sorting the waste in their respective homes according to its type, bringing the waste to the waste bank, the waste bank management weighs and records the waste brought by the customer, then the results of the waste weighing are recorded in a ledger and customer savings books. Garbage collected during weighing is immediately transported by collectors who have collaborated with waste banks to be bought and sold to larger collectors.

In addition to routine weighing of waste, housewives who are members of the waste bank are involved in participating in outreach activities and training in waste management. The benefits of these activities can increase the knowledge of housewives about the dangers of waste that is not managed properly. In addition, housewives who take part in the training become better trained in processing non-organic waste into handicraft products such as tote bags, flower vases, or other items of economic value.

Development of existing waste bank activities by participating in competition activities between waste banks held by private companies (Garuda Food) and the government. One of the environmental competitions held by the government made Ragajaya Village known by other regions because the garbage bank together with the PKK who took part in the competition won 2nd place at the provincial level. This makes waste bank activities continue to grow and increase in number. Nonetheless, on the other hand the high rate of population growth is directly proportional to the level of need so that it ends up with an increasing volume of waste with an increasingly diverse type. For 3 years (2014-2017), the Ministry of Environment said that the volume of waste has increased from only 64 million tons to 65.8 million tons per year.

The type and volume of waste that continues to increase needs to be managed effectively and efficiently in order to reduce the negative impact on the environment. The main waste management is environmental management which in its utilization is to maintain balance or preserve environmental functions. Zulkifli (2014) explains that environmental management is an integrated effort in utilizing, managing, maintaining, controlling, restoring and developing the environment.

Meanwhile, law number 18 of 2008 concerning waste management explains that waste management is a systematic, comprehensive and continuous activity including reducing and handling waste. The results of this study illustrate that the waste management activities assisted by the Bunga Melati Indonesia Foundation (YBMI) in the Mekarwangi Health Center area have been carried out based on the principles of

responsibility, the principle of sustainability, the principle of benefit, the principle of justice, the principle of awareness, the principle of togetherness, the principle of safety, the principle of security, and the principle of economic value. This activity is carried out by empowering the community so that they know, want and are able to manage waste so that it has a positive impact not only on the (economic) welfare of the family, but also on social and environmental aspects.

According to Salim (2010) equalizing these three aspects is deemed necessary considering that the conventional development paradigm has changed to a sustainable development which considers social and environmental improvements as important as economic growth. While so far the application of conventional development has only placed the economy as the center of growth issues, social and environmental issues have been less important. Therefore, even though conventional development has succeeded in increasing economic growth, it has failed in social and environmental aspects.

In addition, the benefits of this waste bank activity are an integral part of family education because indirectly housewives have taught their families to be able to manage waste at home. Observations in the field show that the children of housewives who are members of the waste bank are able to store waste according to its type in the space provided.

## **CONCLUSION**

There is a relationship between the Garbage Disposal Facility and the Participation in Disposing of Trash by Housewives

## **SUGGESTIONS**

### **1. For Educational Institutions**

It is hoped that it will further improve the facilities and infrastructure that support research and it is hoped that the results of this study can add sources of reference and information to students at STIKes Wijaya Husada Bogor so that they can become a reference for further researchers.

### **2. For Further Researchers**

It is recommended to conduct research with other variables that can affect the participation of housewives in disposing of garbage, such as knowledge, education, age, and family support.

## REFERENCES

1. Abadi, RS 2013. Sustainability of domestic waste management in Menoreh Village, Sampangan Village, Semarang. *Journal of Regional & City Development*. 9(1): 87-96.
2. Adawiyah SR, Firmanul AY, Effendy M, Siddiq M. 2012 . Community participation in urban waste management in Kotabaru District (a case study in Pulau Laut Utara District). *Journal Enviro Scienteeae*. 7 (2011): 31-38. ISSN 1978-8096.
3. Adi I, Rahdriawan M. 2016. Study of community participation in community-based sanitation management (PSBM) in Mangunharjo Village, Semarang. *Journal of City Development*. 4(2): 151-159.
4. Amal, Baharudin II. 2016. Community perception and participation in community-based mangrove forest management in Suppa District, Pinrang Regency. *Journal of Scientific Pinisis*. 2(1): 1-7.
5. Ankesa, H., Amanah, S., Asngari, PS 2016. Participation of women's groups concerned with the environment in handling waste in the Cikapundung Sub-watershed, West Java. *Extension Journal*. 12(2):105-113.
6. Budiman, RA 2013. Community Participation and Perception in Efforts to Maintain Environmental Management and Maintain the Clean City Predicate. *Journal of Environmental Science*. Tanjung Pinang, Riau Archipelago
7. Bungin, B. 2005. *Quantitative Research Methods: Communication, Economics, and Public Policy and Other Social Sciences*. Jakarta (ID): Kencana Prenanda Media Group.
8. Dwiyanto, BM 2011. Models for increasing community participation and strengthening synergies in urban waste management. *Journal of Development Economics*. 12(2):239-256.
9. Gunawan, KS, Barkey, RA, Hajar, MAI 2014. Implementation of Community Forest Resource Management Programs in the Perspective of Forest Village Empowerment. *Journal of Digitalization of the UNHAS Central Library*
10. Hermawan, A., Amanah, S., Fatchiya, A. 2017. Participation of fish farmers in aquaculture business groups in Tasikmalaya Regency, West Java. *Extension Journal*. 13 (1):1-13.
11. [INDII] Indonesia Infrastructure Initiative. 2017. Reducing Up to Local Processing. [Internet]. [accessed 2017 Nov 02]. Available at: [http://www.indii.co.id/images/dx\\_article\\_file/10449/reducing-waste-with-if-in-place.pdf](http://www.indii.co.id/images/dx_article_file/10449/reducing-waste-with-if-in-place.pdf).
12. Jambeck JR, Geyer R, Wilcox C, Siegler TR, Perryman M, Andrady A, Narayan R, Law KL. 2015. Plastic waste inputs from land into the ocean. *Journal of Science* 347: 768-771 .doi: 10.1126/science.1260352.
13. Johanto, A. 2010. The Effect of Social Conditions and Environmental Knowledge of Housewives on Household Waste Management in Nganjuk District, Nganjuk Regency. *Geography Major Student Articles*. Faculty of Social Sciences. Malang (ID): UNM

14. [MOE]. 2015. Innovation on the Development of On-Line System Garbage Banks. [Internet]. [accessed 2017 Nov 04]. Available at: [http:// www.menlhk.go.id/berita-13-inovasi-development-bank trash-sistem-online-.html](http://www.menlhk.go.id/berita-13-inovasi-development-bank-trash-sistem-online-.html)
15. Levis LR. 1996. Rural Extension Communication. Bandung: Citra Aditya Bakti.
16. Manoso, F., Palendeng, H., Tucunan, A. 2013. The Relationship Between Education Levels and Income Levels with Household Waste Management Actions in Environment II, Sumompo Village, Tuminting District, Manado City. Public Health Articles. Sam Ratulangi University: 1-6
17. Mardikanto T. 2010. Development Communication. Surakarta (ID): UNS Press.
18. Muchtar, K., Purnaningsih, N., Susanto D. 2014. Participatory communication in integrated crop management field schools (SL-PTT). Development Communication Journal. 12(2) :1-14.
19. Nadirawati. 2011. The relationship between the support of the head of the family and family participation in the filariasis elimination program in Majasetra, Bandung Regency. Journal of Nursing Soedirman (The Soedirman Journal of Nursing). 6(1): 47-55
20. Permanasari, D., Damanhuri, E. 2012. Study of the Effectiveness of a Waste Bank as an Approach to Community-Based Waste Management [internet]. [accessed 2017 November 02] available at: [https:// fa.itb.ac.id/ wp-content/ uploads/ sites/ 8/ 2012/ 07/ 15308006-Devita Permanasari.pdf](https://fa.itb.ac.id/wp-content/uploads/sites/8/2012/07/15308006-DevitaPermanasari.pdf).