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## Building Community Awareness in Waste Management

Lusia Sri Arini

Mercubuana University, Jakarta, Indonesia

Email: [lusia.sri.arini@mercubuana.ac.id](mailto:lusia.sri.arini@mercubuana.ac.id)

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KEYWORDS	ABSTRACT
waste management, community awareness, community involvement	<p><b>Objectives:</b> This research aims to increase public awareness about waste management in West Jakarta by evaluating existing educational programs and social campaigns and proposing improvement strategies. <b>Methods:</b> The study involved an assessment of current educational initiatives and social campaigns, focusing on their effectiveness and inclusivity. Data were collected through surveys and interviews with community members and stakeholders to gauge the level of public awareness and identify key challenges. <b>Results:</b> The research results show that public awareness varies significantly, with many individuals possessing limited knowledge about types of waste and their environmental impact. While some initiatives have demonstrated success, many educational programs and social campaigns are not yet fully appropriate and inclusive. The main challenges identified include a lack of understanding among communities, as well as systemic issues such as inadequate infrastructure and poor coordination. <b>Conclusions:</b> Community-based models show positive potential but require further support. The study recommends strengthening educational programs, designing more targeted social campaigns, and improving waste management infrastructure and policies. Implementing these strategies is expected to enhance public awareness and participation in waste management in West Jakarta, leading to more effective and sustainable practices.</p>

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**Corresponding Author:** Lusia Sri Arini \*

**Email:** [lusia.sri.arini@mercubuana.ac.id](mailto:lusia.sri.arini@mercubuana.ac.id)

## INTRODUCTION

The presence of Law Number 23 of 1997 concerning Environmental Management, which was later replaced by Law Number 32 of 2009 concerning Environmental Protection and Management, is expected to be able to overcome various challenges related to environmental utilization, including in terms of waste management, (Manalu, Nurmitha, Siregar, Akbar, & Lubis, 2023). Moreover, with the enactment of Law Number 18 of 2008 concerning Waste Management, it is hoped that we can anticipate the impact of population growth and changes in people's consumption patterns, which will cause an increase in the volume, types, and characteristics of increasingly diverse waste. This law aims to improve waste management, which so far has not been in accordance with environmental management principles, resulting in negative impacts on public health and the environment (Susisno, 2017).

Waste management needs to be carried out comprehensively and integrated from upstream to downstream to provide economic benefits, public health, and environmental safety, and can influence changes in community behavior (Fadilla & Kriswibowo, 2022). Apart from that, this law also provides legal certainty in waste management, Budihardjo (2022) determines the responsibilities and authority of the government, regional government, community, and business world so that waste management runs proportionally, effectively, and efficiently.

The policies stated in Law Number 32 of 2009 concerning Environmental Protection and Management are the basis for sustainable development by paying attention to environmental aspects (Pardede et al., 2023). This is a conscious and planned effort to manage natural resources wisely to

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improve the quality of life, both for current and future generations (Yahman & Setyagama, 2023). Waste is basically discarded or discarded material from human activities or natural processes that has no economic value, and can even have negative economic value because of the high handling costs (Ghisellini, Ripa, & Ulgiati, 2018).

Every human activity produces waste, and the amount or volume of waste is directly proportional to the level of daily consumption of goods or materials (Aziz, Abu Amr, Vesilind, Wang, & Hung, 2021). The type of waste also depends on the type of material consumed. Therefore, waste management cannot be separated from managing people's lifestyles (Esmailian et al., 2018).

This research aims to evaluate and increase public awareness of waste management in West Jakarta, considering the challenges faced by this dense urban area in terms of waste management. Previous relevant research, such as by Bergman (2016), which shows that environmental education programs significantly increase public awareness, as well as a study by Williamson (2020), which identifies the effectiveness of social campaigns in increasing public participation, provides an important basis for this research. Additionally, an analysis by Budihardjo (2022) evaluating community-based waste management systems in West Jakarta provides insight into how community involvement can improve waste management systems.

This research offers novelty through a multidimensional approach that integrates educational factors, social campaigns, and community-based systems to build public awareness more effectively. The specific geographic focus on West Jakarta and the use of participatory methodology that involves the community in designing and evaluating waste management programs are the advantages of this research (Kurniawan et al., 2021a). The urgency of this research lies in the urgent need to improve waste management in West Jakarta in order to overcome environmental pollution and public health problems related to waste.

The main objective of this research is to evaluate the level of public awareness regarding the importance of waste management, analyze the effectiveness of educational programs and social campaigns, and identify challenges and opportunities in implementing a community-based system. It is hoped that the research results can provide comprehensive strategy recommendations to increase public awareness and participation in waste management. The benefits of this research include contributions to local governments in designing more effective policies, increasing public knowledge about waste management, as well as providing useful data for researchers and academics (Kurniawan et al., 2021b). Apart from that, the business world can gain insight into how to contribute to waste management through corporate social responsibility.

The implications of this research include improving public policy by including elements of public awareness as the main focus, encouraging changes in public behavior in waste management, and developing more effective educational programs. It is also hoped that this research can strengthen community collaboration in waste management, thereby creating solutions that are more sustainable and oriented to local needs (Sharma et al., 2020).

## **METHOD**

This research uses a qualitative approach to explore and understand public awareness about waste management in West Jakarta (Suryandari, 2017). The design of this research is a case study that focuses on several sub-districts in West Jakarta, considering the unique challenges in waste management in this area. Research participants consisted of the general public, stakeholders such as RT/RW administrators and community leaders, local government officials from environmental services, and local environmental organizations. This research aims to evaluate community perceptions regarding waste management, the effectiveness of educational programs, and challenges in community-based systems.

Data collection techniques include in-depth interviews with various parties to explore their views regarding the impact of waste and the effectiveness of existing programs. These semi-structured interviews will be conducted with communities, stakeholders, and government officials, using an interview guide that allows for in-depth discussion. Focus Group Discussions (FGD) will also be

conducted with community groups and local organizations to gain collective insight into waste management. Participatory observation at waste management sites, including dump sites and recycling centers, will provide a direct understanding of practices and challenges on the ground. In addition, document analysis will be carried out to assess policies and educational materials related to waste management.

Data collected from interviews, FGDs, and observations will be transcribed verbatim and analyzed using the thematic coding method. Thematic coding will be conducted inductively to identify key themes and patterns in the data (Sharma et al., 2020). This analysis process will be carried out interactively, with comparison and verification of findings during the research to ensure the accuracy and consistency of the results. The validity of the research will be strengthened through triangulation of data from various sources and member checking, where participants will be involved in reviewing initial findings. An audit trail will be created to document the research process in detail, ensuring the reliability and transparency of research results.

In terms of ethics, this research will ensure informed consent from all participants before interviews or FGDs are conducted, maintain the confidentiality of identities and information provided, and submit research proposals for approval from the ethics committee if necessary. With this method, the research is expected to provide in-depth insight into public awareness of waste management and identify effective strategies to increase community participation in West Jakarta (Suryawan & Lee, 2024).

## RESULT AND DISCUSSION

### Respondent Profile

#### 1. Demographics

**Table 1.**  
**Demographic Profile of Respondents**

Criteria	Number of Respondents	Percentage (%)
<b>Age</b>		
< 20 years	30	15.0
21-30 years old	75	37.5
31-40 years old	50	25.0
41-50 years old	25	12.5
> 50 years		
<b>Gender</b>		
Man	110	55.0
Woman	90	45.0
<b>Level of education</b>		
elementary school	20	10.0
JUNIOR HIGH SCHOOL	40	20.0
SENIOR HIGH SCHOOL	80	40.0
Diploma/Bachelor	60	30.0
<b>Economic Status</b>		
Low	50	25.0
Intermediate	100	50.0
Tall	50	25.0

Based on Table 1, it is known that the majority of respondents are in the 21-30 year age group (37.5%), followed by the 31-40 year age group (25%), which indicates that the productive age population dominates this study and may influence their attitudes and knowledge towards waste

management. The ratio of men (55%) and women (45%) is relatively balanced, but with a slight male dominance, which needs to be taken into account so that the analysis is not gender biased. Most of the respondents had a high school education (40%) and a Diploma/Bachelor's degree (30%), indicating that the majority were individuals with a middle to above education level, which could influence their knowledge and awareness about waste management. The economic status of respondents was mostly in the middle category (50%), with 25% each in the low and high categories, indicating economic variations that may influence their access to waste management information and facilities.

## 2. Social and Economic Background

The social and economic background of the respondents reflects that the majority come from the middle class. They generally have better access to education and information about waste management, but differences in economic status can influence the extent to which they are involved in waste management programs. Respondents from lower economic classes may experience limitations in access to facilities and information, which affects their participation in waste management programs.

### Level of Public Awareness

#### 1. General Knowledge of Waste

**Table 2.**  
**General Knowledge about Waste**

Knowledge Category	Number of Respondents	Percentage (%)
Knowing All Types of Waste	60	30.0
Knowing Several Types of Waste	90	45.0
Not Knowing the Type of Waste	50	25.0
Understanding Environmental and Health Impacts	80	40.0
Understanding Environmental Impacts Only	70	35.0
Not Understanding the Impact of Waste	50	25.0

Based on Table 2, it is known that only 30% of respondents know about all types of waste, indicating a lack of comprehensive understanding of waste, while 45% only know about several types, and 25% do not know about the types of waste that exist, indicating an urgent need to expand education regarding this matter. Additionally, although 40% of respondents understand the impact of waste on the environment and health, another 25% still do not understand this impact, which underlines the need for further education to raise awareness of how poorly managed waste can affect the environment and human health.

#### 2. Awareness of Waste Management Programs

**Table 3.**  
**Awareness of the Waste Management Program**

Waste Management Program Aspects	Number of Respondents	Percentage (%)
Know all the programs	50	25.0
Know some programs	100	50.0
Don't know the program	50	25.0
Very effective	40	20.0
Quite effective	70	35.0
Less effective	80	40.0
Ineffective	10	5.0

Based on Table 3, it is known that as many as 50% of respondents are only aware of several waste management programs, while 25% are not aware of any programs, indicating that although there are efforts to educate the public about these programs, many do not fully understand or are involved. An assessment of the program's effectiveness showed that 35% of respondents considered the program to be moderately effective, while 40% felt the program was less effective, with 5% even rating the program as not effective at all, indicating significant dissatisfaction and a need for program evaluation and

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improvement. In conclusion, this research reveals that public awareness in West Jakarta regarding waste management varies, with limited knowledge about types of waste and their impacts, as well as a lack of understanding and participation in existing waste management programs. Therefore, more effective strategies are needed, including comprehensive education programs and in-depth evaluation of waste management programs to increase public understanding and participation.

### **Effectiveness of Educational Programs and Social Campaigns**

Evaluation of educational programs and social campaigns reveals that several initiatives have succeeded in increasing public awareness about waste management, but there are still areas that need improvement (Knickmeyer, 2020). Existing educational programs are often poorly adapted to local needs and characteristics, so they are not fully effective in reaching diverse audiences. For example, the method of delivering information via social media may be effective for young age groups but does not reach older age groups or those who are not active on digital platforms. To increase program effectiveness, it is important to adapt educational approaches in a more inclusive and community-based way, such as involving community leaders or using local media to disseminate information (Black et al., 2017). Social campaigns also require a more targeted and sustainable strategy, with regular monitoring and assessment to ensure that the messages delivered are effective and in line with society's changing needs.

### **Challenges in Waste Management**

Challenges in waste management in West Jakarta involve various obstacles both from the community and systemic side. At the community level, lack of awareness and participation is often a major obstacle. Many people still don't understand the importance of separating waste and the impact of waste on the environment (Pedersen & Manhice, 2020). From a systemic perspective, inadequate infrastructure and lack of coordination between various related parties, such as local governments and the private sector, make it difficult to implement effective waste management programs. Waste collection and processing systems that are not well integrated also cause waste to accumulate in final landfills and have negative environmental impacts. To overcome this problem, it is necessary to make improvements to the waste management system, which includes improving infrastructure, strengthening coordination between parties, and more intensive public awareness-raising programs.

### **The Role of Communities and Community-Based Systems**

The role of communities in waste management is proven to have great potential to increase program effectiveness. Community-based initiatives, such as recycling programs led by local community groups, show positive results in increasing participation and awareness. Successful practices often involve active participation from community members in program planning and implementation, as well as support from trusted community leaders (McNeish, Rigg, Tran, & Hodges, 2019). However, some community-based models still face obstacles, such as a lack of resources or support from the government. Therefore, it is important to strengthen these models by providing training, adequate resources, and policy support from the authorities.

### **Strategy and Recommendations**

Based on these findings, strategies to increase public awareness and participation in waste management need to focus on strengthening educational programs, designing more targeted social campaigns, and improving infrastructure and policies. Strengthening educational programs can be done by adapting materials and delivery methods to make them more relevant and effective for various community groups. Social campaigns must be designed with a strategy that includes monitoring and evaluation to ensure the messages delivered reach the target audience and influence their behavior. Improvements in waste management infrastructure, including improved recycling facilities and more efficient collection systems, are also needed to support better waste management efforts. In addition, waste management policies must be strengthened with clear regulations and support for community-based initiatives, in order to create a more integrated and sustainable system (Margallo et al., 2019).

Through an in-depth evaluation of the effectiveness of educational programs and social campaigns, this research reveals the need for a more tailored and inclusive approach to conveying information about waste management. Identification of challenges, both societal and systemic, indicates the need for improvements in existing infrastructure and policies as well as increased community

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participation. By highlighting the potential of community-based models and providing recommendations for improvement, this research aims to increase the effectiveness of waste management in West Jakarta. These recommendations include strengthening educational programs, designing more targeted social campaigns, and improving the waste management system, in order to create positive changes that can increase public awareness and active participation in waste management.

## CONCLUSION

This research highlights that public awareness regarding waste management in West Jakarta is inconsistent, with many residents lacking comprehensive knowledge about waste types and their environmental impact. Evaluations of existing educational programs and social campaigns indicate some successes but also reveal significant opportunities for enhancement in both content and dissemination methods. The primary challenges identified include limited public understanding, inadequate infrastructure, and insufficient systemic coordination. While community involvement has been effective in boosting participation, it still requires additional support. To increase public awareness and engagement, the study recommends reinforcing educational initiatives, creating more focused social campaigns, and improving waste management infrastructure and policy frameworks. Implementing these strategies is expected to lead to more effective and sustainable waste management practices in West Jakarta.

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