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SOCIALIZATION MODELS OF WASTE MANAGEMENT IN RURAL COMMUNITIES (A CASE STUDY OF THE COMMUNITY OF CILELES JATINANGOR)

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Abstract

Waste is basically materials intentionally or unintentionally discarded as the product of human activities or natural processes. The handling and management of waste are increasingly more complex and complicated as its volume, types, and composition are more and more complex. Optimizing waste management needs an active role of the community to reduce, sort, and recycle the waste. However, the participation of the community in waste management often presents a complex challenge because it involves cultural, social, and economic factors. The community empowerment was conducted in Cileles Village, Jatinangor. Its proximate location to the center of education and economy gives Cileles Village the potential for the development of sustainable waste management. However, up to the present time, waste management in the village still faces some obstacles, such as the lack of infrastructure and the lack of the community's motivation for sorting their waste. The result of this community service activity indicates that the community has a positive perception of waste and an awareness of waste management. However, the perception has not materialized in the community's daily behavior in managing their waste. For this reason, Socialization models of waste management have been carried out with participation, behavior change, and collaboration models.

Keywords: Participation, Socialization, Waste Management

INTRODUCTION

Waste has become a problem that is hard to handle not only in urban communities but also in rural ones. Some problems related to waste include the reduced area of landfill sites, not optimized waste management technology, limited capacity of temporary landfill sites, the lack of socialization and support of the government for waste management, the lack of self-education and self-management of waste management, and ineffective waste management. These problems of waste require the active role of the community in solving the waste problem. Some roles the community can take are, among others, reducing waste, sorting waste, and recycling waste.

However, the community's participation in waste management in rural areas is often limited due to several factors. One of them is the community's awareness. According to a survey

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conducted by the Ministry of Environment and Forestry (KLHK) in 2019, only 48% of communities in rural areas have had sufficient knowledge of waste management. The other challenges are the lack of infrastructure and access to sufficient waste management in rural areas. Many rural areas in Indonesia have not yet had a good system of waste management, such as regular landfill sites.

Some studies have been conducted to promote the community's participation in waste management in rural areas. These studies focused on the importance of the role of education and socialization in increasing the community's awareness of waste management. They found that socialization and training related to waste management can increase participation and change the community's behavior toward waste management (Maibach, E., Parvanta, C., Widman, R., & Mishra, S, 2010; Thomas, G. O, 2000). Another study focused on the impact of cellular phone-based technology on the increase of the community's participation in waste management in Indonesia (Ardiansyah et al., 2019). Therefore some efforts can be made to increase the community's participation in waste management in Indonesia, namely, education, dissemination, and technology.

The theme of this community service activity is Socialization Models of Waste Management in Rural Communities. This theme is taken up considering that waste management can make some impacts as follows:

1. Rise of awareness: Socialization facilitates the rise of the community's awareness of the importance of good waste management. Information delivered in the activity of Socialization can help the community to understand the negative impact of bad waste management on their environment, health, and life quality.
2. Knowledge of procedures and practices of waste management: Socialization provides knowledge about procedures and practices of proper waste management. It comprises waste sorting, the use of proper trash bins, regular collection, and management and recycling.
3. Behavior changes: Socialization can stimulate the change to positive behaviors in waste management. With a better understanding, the community tends to adopt better practices of waste management, such as waste sorting at homes or waste reduction.
4. Participation in local initiatives: Through dissemination, the community can be more active in local initiatives of waste management, such as collective waste collection or community recycling projects. They feel that they are involved and contribute to the improvement of their environment.
5. Formation of social norms: Socialization can facilitate the formation of social norms beneficial to good waste management. When the community sees many people in their surroundings practice good waste management, they tend to follow the example.
6. Obedience to laws: In some cases, Socialization also makes sure that the community understands regulations and rules of law related to waste management. They are more likely to obey these regulations after receiving sufficient knowledge.

Therefore, socialization is an important tool for building the understanding, awareness, and commitment of the community to better waste management. It has a positive impact on the cleanliness of the environment, the health of the community, and the overall life quality. Thus, Socialization should become an integral component in the effort to enhance the community's

participation in waste management.

The activity of the Socialization of waste management was conducted in Cileles Village, Jatinangor, Sumedang. Cileles Village is located in the District of Jatinangor, Sumedang Regency, West Java, Indonesia. Geographically, this village is located in a beautiful lowland with scenery of green paddy fields. Economically, most of Cileles's population relies on agriculture as their primary livelihood. Most of the farming land is used for planting rice, vegetables, and nonstaple food crops. Besides that, small industries like handicrafts and local culinary businesses also contribute to the economy of this village. Along with the development of the area of Sumedang Regency, the sector of tourism, particularly natural and culinary tourism, also becomes an increasingly important economic potential in this village. Concerning the social-cultural aspect, Cileles and its surrounding areas firmly hold Sundanese cultural values. Traditional Sundanese music and dances are often performed in a variety of customary ceremonies and local art performances. Besides that, the community of Cileles Village still firmly holds the principle of community self-help in engaging in social and community activities.

The problem of waste in Cileles Village, Jatinangor, Sumedang Regency, may reflect a general problem faced by many villages in Indonesia. Some problems that may arise in the context of waste management in this village include the lack of infrastructure for waste management, the lack of the community's awareness of waste management, high consumption of single-use plastics, limited funding, the lack of technical knowledge of waste management and the need for education and Socializationof waste management (Results of interviews, 2022).

The activity of socialization of waste management to the community of Cileles has the purpose of 1) identifying the community’s perception and behaviors in managing waste, 2) formulating an appropriate model of socialization to increase the awareness and role of the community of Cileles in managing waste, 3) changing the community’s behaviors in managing waste, and 4) forming a community of waste management.

IMPLEMENTATION METHOD

The method employed in this community service activity is the qualitative method. To achieve the determined goal, the community service team took these steps:

1. distribution of questionnaires to 30 people representing the community on the community’s perception and behaviors related to waste management;
2. Socializationof the importance of waste management and products resulting from waste management;
3. discussion on the problem of waste and the community’s solution to the problem;
4. Socializationof the formation of the community of waste management.

RESULTS AND DISCUSSION

Perception is a cognitive process that involves the introduction, interpretation, and comprehension of information or stimulus received by individuals through their senses. It includes how someone sees, hears, feels, smells, and tastes the world around them. Perception is a key in how individuals understand and interact with their environment, and how they give meaning to their experience (Goldstein, 2019).

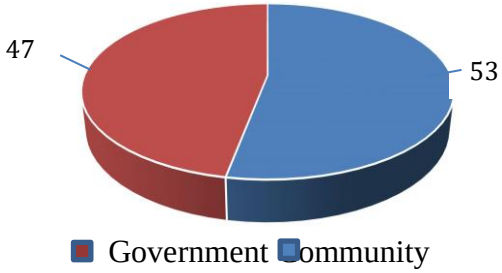
In the context of anthropology, the relationship between perception and behaviors is a rich and relevant research area. Anthropology focuses on the knowledge of a variety of cultures and human practices, hence understanding how humans see, interpret, and respond to the world around them is very important. Human beings perceive the world not only based on their senses but also based on the reference frame of their culture. Culture plays a key role in shaping individuals' perceptions of themselves, other people, and their environment. Some aspects of culture, including values, norms, symbols, and beliefs, affect their behaviors in managing waste. The following is the result of the distribution of questionnaires about the community's perception and behaviors in managing waste.

I. Perception and Behaviors of the Community of Cileles Concerning Waste

The community of Cileles has had a positive perception of waste. As many as 69.6% of respondents considered waste was the leftovers of human activities that still had an economic value, hence it could be processed into various kinds of products. As for the rest, they perceived that waste did not have any economic value. The positive perception becomes important capital for shaping the community's awareness of processing waste.

Although there was a difference related to the economic value of waste, 88.2% of respondents agreed that if waste was not processed, it would have an impact on health and the environment. As many as 94.1% of respondents were aware that the community had an important role in waste management. However, the respondents' opinion was split when they were asked which party should be responsible for the waste problem, as shown in the following diagram:

Diagram 1.1 Parties Responsible for Waste Management



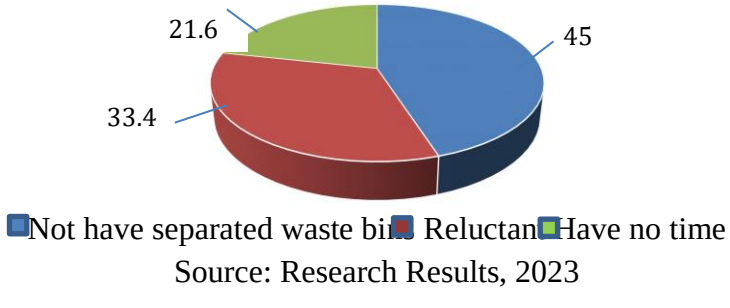
Source: Research Results, 2023

The respondents who thought that the matter of waste is the government's duty argued that the government had funds, human resources, and infrastructures that could be utilized for waste services, while the community's role was just to support the government's duties. Meanwhile, the respondents who answered that waste was the community's duty argued that waste management required the cooperation of some parties, namely the government, the

community, and the private sector.

Respondents also had no objection to being involved in waste management starting from the household. This opinion was conveyed by 94.1% of respondents who stated that they were willing to sort and reduce their waste. Although the community had a high level of awareness, their behavior in processing their waste had not yet been optimal. Waste materials produced by the community were plastic rubbish (packages of children's snacks and bottles), food leftovers, leaves, tins, and paper. Only 58.8% of respondents had separated organic waste from inorganic one, while the rest, as many as 41.2% of respondents had not yet sorted their waste because:

Diagram 1.2 Respondents' Reasons for Not Sorting Waste



Source: Research Results, 2023

Besides that, some respondents still disposed of their waste in the yard, amounting to around 18.8% of respondents. The waste disposed in the yard was usually in the form of dry leaves and food leftovers. The waste of dry leaves was usually processed by burning, while the waste of food leftovers was usually fed to animals like chickens or cats.

2. Socialization Models of Waste Management

Socialization models of waste management are the conceptual framework used to plan, implement, and measure the effort to improve the community's awareness and behaviors related to waste management. Theoretically, some models of waste management are available, namely, the education model (Buchenrieder, D., & Bazzani, R, 2015), the participative model (Mulugetta, Y., Berhane, F., & Drake, L, 2005), the demonstration model (Singh, R. K., & Prasad, G, 2012), the communication model (Gomiero, T., & Nicolosi, I, 2019), the collaboration model (Mbandlwa, P., & Wang, D, 2020), the recycling model (Ma, J., & Hu, Z., 2016), and the behavior management model (Thogersen, J, 2012).

The following is the elaboration of each Socializationmodel of waste management:

1. The education model: this model focuses on education and improvement of the community's awareness of waste management.
2. The participative model: this model encourages the community's active participation in making decisions related to waste management.
3. The demonstrative model: this model involves the development of effective waste management projects.
4. The communication model: this model uses various communication channels to disseminate information on proper waste management.
5. The collaboration model: this model encourages cooperation among the government, the private sector, and the community in the effort of waste management.
6. The recycling model: this model emphasizes waste recycling as an important part of sustainable waste management.

7. The behavior change model: this model emphasizes the behavior change of individuals in reducing waste.

Based on these Socialization models, the writers chose the participative, collaboration, and behavior change models in this community service activity. The following are some activities that have been carried out:

1. The Participative Model

In this activity, the community service team invited the community to discuss the problem of waste they faced and the solution related to waste management. Some problems the community conveyed were, among other things:

a. Some groups of residents had possessed their own methods of waste management, but collective management was still necessary. One of the realities that needed to be handled was waste seen scattered along the road in the area of Lebak Jati and at paddy fields. It indicated that there was a lack of effort in waste management in Cileles Village.
b. Participants stated that insufficient waste disposal facilities around the village were the main obstacle. Some participants also complained about the lack of Socializationand knowledge of proper waste sorting. In this case, thus far it has run and been disseminated only in four community units (RW), namely RW 4, RW 5, RW 6, and RW 7. Besides that, insufficient human resources in waste management and a lack of knowledge and training in management also posed an obstacle. Moreover, villagers conveyed that they needed certain items to make the activity of waste management run well, such as waste pressing machines for making paving blocks, composting machines, materials for liquid organic fertilizer, and extra larvae of maggots consuming organic waste that could be used for feeding chickens and catfish, and the knowledge.
c. The 3R waste management sites (TPS3R) existing among the community had not yet been able to be wholly implemented or utilized because some people in the community of Cileles Village were reluctant to dispose of their waste in the TPS3R due to a fee of Rp20,000.00. Besides that, some obstacles were faced by the administrators/organizers/members of the TPS3R, namely a lack of budget; insufficient human resources, in which there were only two persons who processed waste in the TPS3R; a lack of the community's concern about waste sorting, which made the TPS3R personnel do this task; a lack of land for building the ideal three sites of TPS3R; and a lack of knowledge of waste processing.
d. The community proposed some programs that could enhance their participation in waste management, among others:
    - Socializationand education about waste management provided more intensively to the community;
    - programs to give awards or incentives to the community active in waste management;
    - collectors available to receive certain plastic waste, such as bottles, styrofoam, and black and white plastic bags.

2. The Behavior Change Model

To change the community's behaviors in waste processing, an activity of Socializationof waste management was conducted. In this activity, the community service team gave the community knowledge related to types of waste management and samples of products created in the activity of waste management.

3. The Collaboration Model

At this stage, the community service team built the community's awareness to form a waste management community. This community would be activated by ladies of the Family Welfare Movement (PKK) and Karang Taruna (the Youth Group). The waste management community would collaborate with the Village Government of Cileles and an NGO that was active in waste management. The activities conducted by the community were in the form of practices of waste sorting in families and the surrounding environment and also the collection of waste that was hard to decompose, such as plastics, paper, bottles, and others. The waste that was hard to decompose would be collected by the community and handed over to the waste management NGO to be processed again into usable items.

CONCLUSION

The community of Cileles Village has possessed a positive perception and awareness to play an active role in waste management. However, this condition has not yet materialized in their daily behaviors. Some factors causing the incongruence between their perception and acts are as follows:

1. Insufficient infrastructure for waste management, such as a lack of proper trash bins and an inefficient collection system.
2. Old habits: many behaviors related to waste management are old habits and they are hard to change. Although someone may have an awareness of the importance of good waste management, changing their old habits in disposing of waste frequently takes time and requires quite a great effort.
3. Awareness that is not translated into behaviors: awareness does not necessarily encourage them to act properly. Factors such as a lack of motivation, inadequate practical knowledge, and constraints on time and resources may obstruct behavior changes.
4. Insufficient education and practical information: a high level of awareness does not necessarily mean that the community has sufficient knowledge about proper methods for managing waste. It requires education and practical information that provides concrete guidance on the methods for sorting, recycling, and managing waste properly.

Overcoming the gap between awareness and behaviors in waste management requires a sustainable effort to improve accessibility to infrastructures, provide practical education, motivate behavior changes, and build social norms that support sustainable waste management. Besides that, it needs cooperation between the government, the private sector, and the community to create an environment that supports good waste management.

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