FACTOR INFLUENCING COMMUNITY PARTICIPATION IN WASTE BANKS DURING COVID-19 IN CILEGON CITY, BANTEN INDONESIA

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ABSTRACT

In Indonesia, achieving community participation in waste management continues to be quite difficult. In Cilegon City, Banten, the management of solid waste at the local level requires the use of a waste bank. In Cilegon City, Banten, during COVID-19, this study sought to identify the contributing elements to community engagement in waste banks. Cross-sectional research is the method used in this study. The findings indicated that 60% of respondents struggled to participate in garbage banks. Female respondents made up 54% of the sample, and 64% of them were over 30 years old. Gender had a very strong impact on community involvement in waste banks (OR = 4.500; 95% CI: 1.862-10.877). Additionally, other variables such as attitude level (OR = 3.444; 95% CI: 1.403-8.457) and family influence this community participation. Female gender, attitude, and family support were the primary factors that significantly influenced community engagement in waste banks in Cilegon City. Therefore, a policy change that emphasizes female empowerment is required to enhance the current method of managing solid waste at the community level.

Keywords: *Community participation, COVID-19, waste banks*

ABSTRAK

Di Indonesia, mewujudkan partisipasi masyarakat dalam pengelolaan sampah masih sulit dilakukan. Di Kota Cilegon, Banten, selama masa COVID-19, membutuhkan penanganan pengelolaan sampah di tingkat komunitas melalui pemanfaatan bank sampah. Penelitian ini berupaya mengidentifikasi elemen-elemen yang berkontribusi terhadap keterlibatan masyarakat dalam bank sampah. Penelitian *cross-sectional* merupakan metode yang digunakan dalam penelitian ini. Temuan menunjukkan bahwa 60% responden kesulitan berpartisipasi di bank sampah. Responden perempuan berjumlah 54% dari sampel, dan 64% di antaranya berusia di atas 30 tahun. Gender mempunyai pengaruh yang sangat kuat terhadap keterlibatan masyarakat dalam bank sampah (OR = 4.500; 95% CI: 1.862-10.877). Selain itu, variabel lain seperti sikap (OR = 3,444; CI 95%: 1,403-8,457) dan dukungan keluarga juga mempengaruhi partisipasi masyarakat. Jenis kelamin perempuan, sikap, dan dukungan keluarga merupakan faktor utama yang secara signifikan mempengaruhi keterlibatan masyarakat pada bank sampah di Kota Cilegon. Oleh karena itu, perubahan kebijakan yang menekankan pada pemberdayaan perempuan diperlukan untuk menyempurnakan metode pengelolaan sampah padat di tingkat masyarakat.

Kata Kunci: *Partisipasi masyarakat, COVID-19, bank sampah*

INTRODUCTION

The COVID-19 pandemic issue has changed the dynamics of waste generation globally, necessitating urgent care (1). The amount of garbage produced in Indonesia changes dramatically during the COVID-19 outbreak. The trash produced from medical equipment, such as masks, Personal Protective Equipment (PPE), and hand sanitizers, has become a significant burden on waste treatment systems (2). The lockdown has an impact on trash generation as well, and working from home has greatly increased household garbage. During lockdowns in Indonesia, it was predicted that food waste

will increase by 43% and plastic packaging by 53% (3). According to (4), Cilegon City had a population of 434.900 people and generated 136.456 tons of solid trash in 2020. To preserve hygienic surroundings in residential areas, local authorities must employ solid waste management in urban systems (2). According to the Minister of Environment and Forestry's regulations, a waste bank is a facility for managing waste in accordance with the 3R principle (reduce, reuse, and recycle), as a tool for education, for altering waste management behavior, and for implementing the circular economy. It is created and run by local governments, businesses, and communities (5). Waste reuse is used in the waste bank to carry out reduction operations, whilst waste sorting, transportation, and processing are used to carry out handling activities. The sort of trash that the waste bank manages determines how waste reduction and management activities are structured. There was relatively little community involvement in the waste banks during COVID-19 in Cilegon City. There are still a lot of people in the community who are ignorant about the Waste Bank since there is a lack of socialization. Therefore, the waste problem has not been fully understood.

The key to effective waste bank management is community involvement in sorting and processing waste at the source. The level of community participation in garbage banks can be affected by a number of variables. According to studies, the majority of community involvement in waste banks occurred in urban areas because of factors such as family support (6), knowledge (7), attitude (8), female empowerment (9), the presence of infrastructure (10), and local government support (11).

It has been shown that interventions to increase community involvement in garbage banks are effective in improving the economic and environmental health. In Cilegon City, Banten Province, Indonesia, this study sought to ascertain the relationship of age, gender, educational attainment, attitudes, and family support with involvement in waste banks.

METHOD

The design study using descriptive statistical methods with a cross-sectional study approach. The research was carried out in Kubangsari, Cilegon City, Banten. Data for this study were gathered between July and December of 2022. In Kubangsari, 2.036 complete families made up the population of this research. Purposive sampling was used to collect the samples. The Lemeshow formula was used to compute the number of participants, which came to 100 families residing in Kubangsari village who meet the recorded inclusion criteria. (12).

Age, gender, educational attainment, familiarity with topics, attitudes, and family support all serve as independent variables in this study. Participation in waste banks by the community is the dependent variable in this study. Primary data collected through questionnaire-structured interviews with complete families. Testing for reliability and validity has been done. Using the chi square test, univariate and bivariate data analysis was carried out.

Volume III, Issue 1, 2023
November 2023

E-ISSN: 2808-5361
http://e-journal.fkmumj.ac.id/

Proceeding The Third Muhammadiyah Internasional-Public Health and Medicine Conference

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RESULTS AND DISCUSSION

Based on Table 1, the study's findings revealed that 64% of respondents were over 30 years old and 54% were women. According to schooling, 53% of all respondents had at least a high school diploma. The majority of respondents (56%) have strong knowledge, and the majority (61%) have a favorable outlook. 61% of respondents said their families were supportive. In general, people participate in their communities only 60% of the time.

Table 1. Characteristics of Respondents

No	Characteristics	n	(%)
1	**Age (year)**		
	≤30 years	36	36.0
	>30 years	64	64.0
2	**Gender**		
	Male	46	46.0
	Female	54	54.0
3	**Level of education**		
	Low (Junior High School & below)	47	47.0
	High (Senior High School & University)	53	53.0
4	**Level of knowledge**		
	Poor	44	44.0
	Good	56	56.0
5	**Level of attitude**		
	Negative	39	39.0
	Positive	61	61.0
6	**Family support**		
	No	41	41.0
	Yes	59	59.0
7	**Community participation**		
	Poor	60	60.0
	Good	40	40.0

Based on Table 2, It may be inferred from the findings of the association between gender and community partisipation, with a p-value of 0,001, that there is a substantial relationship between the two. The analysis's findings yielded an OR value of 4.500, indicating that women have a 4.500-times higher risk of contributing positively to their communities than men do.

According to the findings of the association between level of attitude and community participation, which had a p-value of 0,011, it can be said that there is a substantial relationship between the two. The analysis's findings yielded an OR value of 3.444, indicating that positive attitudes are associated with a 3.444-times higher risk of contributing to a healthy community than negative attitudes.

According to the examination of the association between family support and community participation, which yielded a p-value of 0,012, there is a strong connection between the two. The analysis's findings yielded an OR value of 3.207, indicating that strong family support increases the likelihood of positive community participation by 3.207 times compared to weak family support.

Table 2. Association Between Each Independent Variable and Community Participation

No	Variable	Community Participation				OR (CI 95%) P-*value*	
		Poor		Good			
		n	%	n	%		
1	**Age (year)**						
	≤30 years	22	61.1	14	38.9	1.075 (0.466-2.479)	1.000
	>30 years	38	59.4	26	40.6		
2	**Gender**						
	Male	36	78.3	10	21.7	**4.500 (1.862-10.877)**	**0.001**
	Female	24	44.4	30	55.6		
3	**Level of education**						
	Low	32	68.1	15	31.9	1.905 (0.842-4.311)	0.153
	High	28	52.8	25	47.2		
4	**Level of knowledge**						
	Poor	25	56.8	19	43.2	0.789 (0.353-1.766)	0.711
	Good	35	62.5	21	37.5		
5	**Level of attitude**						
	Negative	30	76.9	9	23.1	3.444 (1.403-8.457)	**0.011**
	Positive	30	49.2	31	50.8		
6	**Family support**						
	No	31	75.6	10	24.4	3.207 (1.335-7.706)	**0.012**
	Yes	29	49.2	30	50.8		

Gender and community involvement are related

Women have potential in terms of household duties and personal hygiene (abilities and talents). Women typically do most domestic tasks, including rubbish disposal (13). In 46 people with good engagement, the results showed that 10 people (21.7%) were of the male gender. While 30 (55.6%) of the 54 participants were women, a good participation rate. This suggests that women's participation in the community is influenced by their gender. The level of community participation is also influenced by gender. Women make up the majority of those who participate in garbage bank activities. Men typically delegate control of their households to the women who live there.

Gender and community involvement are significantly correlated (p-value = 0.001, <0.05). This study is consistent with (14) research that demonstrates a link between gender and community engagement in waste banks. According to a different study, empowering initiatives that make use of easy access to education and technology may be significantly correlated with women's participation in waste management training. This is the cornerstone for creating awareness to implement more environmentally friendly methods of managing home garbage and to effect change for a better quality of life (15).

Women are more involved in trash management than males because, as housewives, they spend more time in the kitchen, one of the major sources of household waste (16). More women took an active role in management and involvement, similar to what occurred at the waste bank in Cilegon City.

Relationship between attitude and community involvement

Attitude considerations are among the factors influencing behavior. Recycling and garbage classification practices among residents were substantially correlated with internal variables (such as attitude) (17). The findings revealed that 30 respondents (76.9%), out of the 39 with poor involvement, had negative sentiments. While those who responded with favorable sentiments were among the 61 people who participated poorly (49.2%). Based on the study's findings and the researcher's hypotheses, it is clear that the respondents believe they do not need to sort waste before disposal and believe that doing so is a waste of time.

The degree of attitude and community involvement are significantly correlated (p-value = 0.011, <0.05). This study is consistent with (18) research that demonstrates how attitude is associated to community involvement. Another study found that in Muntoi Village, Bolaang Mongondow Regency, community attitude are related to home trash management (p = 0.037) (19).The attitude identified in this study has an impact on community engagement since it takes a positive attitude about people's behavior for waste banks to operate effectively for someone who already has a variety of insights.

Support from the family and involvement in the community

Family support consists of the family's attitudes, deeds, and acceptance of the relatives who are constantly there to lend a helping hand when required. Family assistance might take the shape of opportunities or encouragement for members who desire to engage in waste management activities through the waste bank program (20). According to the findings, 10 respondents (24.4%) out of the 41 with high involvement levels did not receive any support from their families. While among the 59 respondents with high participation, 30 people (50.8%) reported having family support. This suggests that family support affects community involvement. Husbands who encourage their wives to participate in family activities will use the garbage bank more frequently. Husbands will be more enthusiastic and willing to take advantage of the opportunity to join in waste bank activities.

Family support and community involvement are significantly correlated (p-value = 0.011, <0.05). This study supports (6) studies that demonstrates a connection between family support and community involvement. According to a different study, there is an influence between family support (p=0.000) and community behavior towards the use of waste banks in Kapasa Raya Village, Makassar City (8). Due to a lack of family support, some waste separation-influencing elements are not put into practice (21). By permitting the family to take part in trash management operations in garbage banks, the family is said to be providing assistance. The percentage of family support (50.8%) is considered strong because it is believed that the trash bank will be beneficial to both the family and the individual's personal growth.

Volume III, Issue 1, 2023
November 2023

E-ISSN: 2808-5361
http://e-journal.fkmumj.ac.id/

Proceeding The Third Muhammadiyah Internasional-Public Health and Medicine Conference

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Association between (age, education, and knowledge) with community participation

Age and community involvement in waste banks do not significantly correlate (p-value = 1.000, > 0.05). This study supports (6) research that demonstrates that age level has no influence on community participation. However, age can play a role in how well someone learns and works, including how they react to something novel and can participate in activities. The study's findings, however, did not indicate any connection between participants' involvement in trash management through the waste bank and their age. Young, adults, and older respondents cannot participate more directly in waste management activities at the waste bank due to age differences, it is indicated.

Education and community involvement in garbage banks are not significantly correlated (p-value = 0.153, >0.05). The degree of formal education also supports the notion that actual determination cannot be found in formal education. Through garbage banks, participants are involved in waste management operations. This study supports research by Solihin et al. (2019), which demonstrates that educational attainment is unrelated to involvement levels. Therefore, neither a high nor a low level of formal education may predict how actively respondents will participate in trash management.

In waste banks, there is no statistically significant correlation between knowledge and community involvement (p-value = 0.771, > 0.05). This study supports (22) research that demonstrates that knowledge is unrelated to community engagement in garbage banks. Researchers claim that a person's behavior is not always influenced by their level of knowledge. The community engagement in Cilegon City was affected by this; the majority of residents knew waste management but chose not to participate in garbage banks.

CONCLUSION AND SUGGESTIONS

Female gender, attitude, and family support were the key determinants of community involvement in waste banks. Women's participation in waste bank activities to raise awareness of the need for better household waste management practices and to effect change for a better living environment. Women can encourage environmentally friendly behavior to aid in sustainable development. Therefore, a change in policy is required to incorporate family assistance and female empowerment in order to enhance the current method of managing solid trash at the community level in Cilegon City, Banten.

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Volume III, Issue 1, 2023
November 2023

E-ISSN: 2808-5361
http://e-journal.fkmumj.ac.id/

Proceeding The Third Muhammadiyah Internasional- Public Health and Medicine Conference

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Volume III, Issue 1, 2023
November 2023

E-ISSN: 2808-5361
http://e-journal.fkmumj.ac.id/

Proceeding The Third
Muhammadiyah Internasional-
Public Health and Medicine
Conference

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