



Community Participation in Household Waste Management in Tulungrejo Village, Kediri Regency

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ABSTRACT

Household waste remains one of the major environmental challenges due to its increasing volume and potential impacts on environmental quality and public health. Effective household waste management requires not only adequate facilities but also active community participation. However, previous studies have reported inconsistent findings regarding the relationship between community participation and household waste management behavior. This study aimed to analyze the relationship between community participation and household waste management behavior in Tulungrejo Village, Pare District, Kediri Regency. This quantitative study employed a cross-sectional design involving 97 respondents selected through purposive sampling. Data were collected using structured questionnaires and analyzed using the Spearman Rank Correlation test with a significance level of 0.05. Most respondents demonstrated good community participation (48.5%), while household waste management behavior was predominantly categorized as good (44.3%). Statistical analysis showed no significant relationship between community participation and household waste management behavior ($p = 0.223$; $r = 0.125$), indicating that community participation alone was insufficient to explain variations in household waste management behavior. Community participation was not significantly associated with household waste management behavior. These findings suggest that household waste management behavior is influenced by other factors beyond community participation and provide evidence that future interventions should integrate educational, behavioral, and environmental approaches to promote more effective and sustainable household waste management.

ABSTRAK

Limbah rumah tangga merupakan salah satu permasalahan lingkungan yang terus meningkat dan berpotensi berdampak pada kualitas lingkungan serta kesehatan masyarakat. Pengelolaan limbah yang efektif membutuhkan fasilitas memadai dan partisipasi aktif masyarakat. Namun, hasil penelitian sebelumnya menunjukkan temuan yang belum konsisten mengenai hubungan partisipasi

masyarakat dengan perilaku pengelolaan limbah rumah tangga. Penelitian ini bertujuan menganalisis hubungan partisipasi masyarakat dengan perilaku pengelolaan limbah rumah tangga di Desa Tulungrejo, Kecamatan Pare, Kabupaten Kediri. Penelitian menggunakan pendekatan kuantitatif dengan desain **cross-sectional** dan melibatkan 97 responden yang dipilih melalui **purposive sampling**. Data dikumpulkan menggunakan kuesioner terstruktur dan dianalisis dengan uji korelasi **Spearman Rank** pada tingkat signifikansi 0,05. Hasil menunjukkan bahwa partisipasi masyarakat sebagian besar berada dalam kategori baik (48,5%), sedangkan perilaku pengelolaan limbah rumah tangga juga didominasi kategori baik (44,3%). Analisis menunjukkan tidak terdapat hubungan yang signifikan antara partisipasi masyarakat dan perilaku pengelolaan limbah rumah tangga ($p = 0,223$; $r = 0,125$). Temuan ini menunjukkan bahwa perilaku pengelolaan limbah dipengaruhi faktor lain sehingga diperlukan pendekatan edukatif, perilaku, dan lingkungan secara terpadu.

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PENDAHULUAN

Household waste has become one of the major environmental challenges due to rapid population growth, changing consumption patterns, and increasing human activities. Population growth contributes to an increase in waste generation, while changes in consumption patterns further increase the volume and diversity of household waste (Jayantri & Ridlo, 2022). Improper household waste management contributes to environmental pollution and may result in the accumulation of waste at disposal sites (Harjanti & Anggraini, 2020). Therefore, integrated waste management is necessary to minimize environmental impacts and support public health and environmental sustainability (Damanhuri & Padmi, 2016). In Indonesia, waste management is also regulated through Law of the Republic of Indonesia Number 18 of 2008 concerning Waste Management.

Effective waste management depends not only on the availability of adequate facilities and infrastructure but also on active community involvement in implementing proper waste management practices, including waste segregation, reducing single-use materials,

reusing recyclable items, and disposing of waste appropriately. Community participation is widely recognized as an important component in community-based waste management. Studies have examined community participation through activities such as waste banks and the implementation of the TPS 3R system (Meri Nopriani et al., 2022; Ribut Lupiyanto et al., 2023). In addition, community participation may be influenced by individual factors, particularly knowledge and attitudes toward waste management (Rahman et al., 2022). Other studies have also examined factors influencing participation in waste bank activities (Putri & Santoso, 2024). These findings indicate that household waste management behavior is a complex issue involving individual and environmental factors.

Previous studies have reported inconsistent findings regarding the relationship between community participation and household waste management behavior. Differences in community characteristics, levels of knowledge and attitudes, availability of facilities, and local environmental conditions may contribute to variations in waste

management practices. Community participation in waste management has been examined in different local contexts, including community-based waste management and waste bank programs (Dewi, 2021; KLHK, 2022). These differences indicate the need for further investigation of the relationship between community participation and household waste management behavior within specific community settings.

Tulungrejo Village, Pare District, Kediri Regency, was selected as the study area because household waste management represents an important environmental issue at the community level. The characteristics of the local population and socioeconomic conditions provide a relevant context for examining household waste management practices (Badan Pusat Statistik Kabupaten Kediri, 2025). Although various waste management initiatives have been implemented, differences in individual household waste management behavior may still be observed. This condition provides an appropriate context for examining whether community participation is associated with household waste management behavior under actual community circumstances.

Unlike studies that primarily evaluate waste management programs or examine multiple determinants simultaneously, this study specifically focuses on the relationship between community participation and household waste management behavior. By concentrating on these two variables, the study provides a more focused understanding of the role of community participation in household waste management practices. The findings are expected to complement previous studies concerning community participation, knowledge, attitudes, and community-based waste management (Rahman et al., 2022; Putri & Santoso, 2024) and provide evidence-based information for local governments and stakeholders in developing more effective

community-based waste management strategies.

Based on these considerations, this study aimed to analyze the relationship between community participation and household waste management behavior in Tulungrejo Village, Pare District, Kediri Regency. The findings are expected to serve as a scientific reference for future studies and contribute to the development of policies and intervention programs that encourage sustainable household waste management practices.

METODE PENELITIAN

This study employed a quantitative research design with a cross-sectional approach to determine the relationship between community participation and household waste management behavior. A quantitative approach is appropriate for measuring variables objectively and examining the statistical relationship between variables. The cross-sectional approach allows data on community participation and household waste management behavior to be collected at a specific period. This approach is relevant to studies of community-based waste management, where participation and household practices are examined as important components of effective waste management (Damanhuri & Padmi, 2016; Dewi, 2021).

The study was conducted in Tulungrejo Village, Pare District, Kediri Regency, Indonesia. The population consisted of housewives residing in Tulungrejo Village. The selection of housewives as respondents was based on their important role in managing household activities, including waste segregation, temporary storage, reuse, and disposal. Household-level waste management is an important component of integrated waste management because inappropriate practices at the household level can contribute to environmental problems (Damanhuri & Padmi,

2016). A total of 97 respondents were selected using purposive sampling based on predetermined inclusion criteria.

Primary data were collected through a structured questionnaire consisting of community participation and household waste management behavior variables. The use of a questionnaire enables systematic measurement of respondents' participation and waste management practices. Community participation is an important aspect of community-based waste management, particularly in programs involving waste reduction, waste banks, and the 3R approach (reduce, reuse, and recycle) (KLHK, 2022; Meri Nopriani et al., 2022; Ribut Lupiyanto et al., 2023). The questionnaire had been tested for validity and reliability before data collection to ensure that the research instrument was appropriate for measuring the variables under investigation.

Data analysis was performed using IBM SPSS Statistics with descriptive statistical analysis to describe respondent characteristics and variable distributions. The relationship between community participation and household waste management behavior was analyzed using the Spearman Rank Correlation test with a significance level of 0.05. The use of correlation analysis is consistent with the objective of identifying the strength and direction of the relationship between community participation and household waste management behavior. Previous studies have shown that community participation can be related to individual factors such as knowledge, attitudes, and involvement in waste management activities (Rahman et al., 2022; Putri & Santoso, 2024). However, differences in community characteristics and waste management conditions may produce different findings across study locations (Dewi, 2021; KLHK, 2022).

This study was conducted after obtaining permission from the related institutions, and all respondents participated voluntarily after providing informed consent. The research procedures were conducted by maintaining the voluntary participation of respondents and ensuring that the information collected was used solely for research purposes. The findings are expected to provide empirical information regarding the relationship between community participation and household waste management behavior in Tulungrejo Village and support the development of more effective community-based waste management strategies.

HASIL DAN PEMBAHASAN

Distribution of Community Participation

Tabel 1. Distribution of Community Participation

Community Participation	Total	
	Frequency (n)	Percentage (%)
Good	47	48.5
Moderate	44	45.4
Poor	6	6.2
Total	97	1000

Table 1 shows that nearly half of the respondents demonstrated good community participation (48.5%), while 45.4% had moderate participation and 6.2% had poor participation. These findings indicate that most respondents had actively participated in household waste management activities.

Distribution of Household Waste Management Behavior

Tabel 2. Distribution of Household Waste Management Behavior

Distribution of Household Waste Management Behavior	Total	
	Frequency (n)	Percentage (%)
Good	43	44.3
Moderate	41	42.3
Poor	13	13.4
Total	97	100.0

Based on Table 2, most respondents demonstrated good household waste management behavior (44.3%), followed by moderate behavior (42.3%) and poor behavior (13.4%). This finding indicates that although good behavior was the dominant category, a considerable proportion of respondents still demonstrated only moderate waste management practices.

Cross-tabulation of Community Participation and Household Waste Management Behavior

Tabel 3. Cross-tabulation of Community Participation and Household Waste Management Behavior

Community Participation	Poor Behavior	Moderate Behavior	Good Behavior	Total
Poor	4	1	1	6
Moderate	4	20	20	44
Good	5	20	22	47
Total	13	41	43	97

Among respondents with poor community participation, most demonstrated poor household waste management behavior (66.7%). Respondents with moderate participation were almost equally distributed between moderate and good behavior.

Likewise, respondents with good participation were predominantly classified as having good household waste management behavior (46.8%), although moderate and poor behavior were also observed.

Relationship between Community Participation and Household Waste Management Behavior

Tabel 4. Spearman Rank Correlation Analysis

Variabels	Correlation Coefficient (r)	p-value
Community Participation - Household Waste Management Behavior	0.125	0.223

The Spearman Rank Correlation test showed a correlation coefficient of 0.125 with a p-value of 0.223 ($p > 0.05$). These findings indicate that there was no statistically significant relationship between community participation and household waste management behavior among respondents in Tulungrejo Village. Although the correlation coefficient was positive, its magnitude was very weak, suggesting that higher community participation did not necessarily correspond to better household waste management behavior.

Pembahasan

The findings of this study showed that most respondents had good community participation (48.5%), while household waste management behavior was predominantly categorized as good (44.3%). However, the Spearman Rank Correlation test demonstrated that community participation was not significantly associated with household waste management behavior ($p = 0.223$; $r = 0.125$). Although the correlation coefficient indicated a positive direction, the strength of the

relationship was very weak, suggesting that increased community participation was not necessarily followed by improved household waste management behavior. This finding indicates that community participation should not be viewed as the sole determinant of household waste management behavior.

Community participation is generally considered an important component in environmental management because it reflects the willingness of individuals to become involved in activities related to environmental conservation. In this study, community participation included activities such as paying waste collection fees, providing suggestions related to waste management, participating in community discussions, and attending environmental education or training programs. The relatively high proportion of respondents with good participation indicates that the community has demonstrated positive involvement in waste management activities. Community involvement is also an important component of community-based waste management programs, including waste banks and the implementation of the 3R approach (*reduce, reuse, and recycle*) (KLHK, 2022; Meri Nopriani et al., 2022). Nevertheless, active participation in these activities alone was insufficient to produce consistent household waste management behavior.

The absence of a significant relationship may be explained by the multifactorial nature of human behavior. Household waste management behavior is influenced not only by participation in community activities but also by knowledge, attitudes, personal motivation, daily habits, family support, environmental conditions, and the availability of waste management facilities. Rahman et al. (2022) emphasized the relevance of knowledge and attitudes in relation to community participation in waste management. Similarly, Putri and Santoso (2024) examined various factors

associated with community participation in waste bank activities, indicating that participation is influenced by contextual and individual conditions. Consequently, individuals who actively participate in environmental programs may not consistently implement proper waste management practices in their daily lives. Conversely, some individuals with lower participation may still demonstrate good waste management behavior because it has become part of their personal habits.

Another possible explanation is that community participation observed in this study mainly reflected involvement in community-based activities rather than the consistent implementation of proper waste management practices at the household level. Participation in meetings, environmental campaigns, or community discussions does not necessarily guarantee behavioral changes in daily waste management. Community-based waste management requires not only participation but also an effective management system, adequate facilities, and continuous implementation at the household level (Damanhuri & Padmi, 2016). The implementation and performance of TPS 3R programs likewise demonstrate the importance of integrating community involvement with appropriate waste management systems and infrastructure (Meri Nopriani et al., 2022; Ribut Lupiyanto et al., 2023). Therefore, sustainable behavioral change generally requires continuous reinforcement through environmental education, regular monitoring, supportive infrastructure, and long-term community engagement.

These findings differ from several previous studies reporting that community participation contributes significantly to household waste management behavior. However, they are consistent with studies suggesting that participation alone is

insufficient to explain behavioral change without support from other internal and external factors (Rahman et al., 2022; Putri & Santoso, 2024). This discrepancy highlights that the relationship between participation and behavior may vary according to community characteristics, environmental conditions, and local waste management systems. The findings also indicate that behavioral change is a complex process requiring collaboration among individuals, communities, and local authorities rather than relying solely on community participation. This perspective is consistent with the broader concept of integrated waste management, which emphasizes the interaction between community involvement, management systems, infrastructure, and waste reduction practices (Damanhuri & Padmi, 2016).

The present study contributes to the existing literature by providing empirical evidence that community participation alone may not be a significant predictor of household waste management behavior in rural communities. Unlike studies that emphasize community involvement as an important component of waste management programs, this study emphasizes the importance of considering multiple behavioral determinants when designing community-based waste management programs. Previous research on community participation in waste management has highlighted the importance of participation in activities such as waste banks and community-based waste management systems (Dewi, 2021; KLHK, 2022). Therefore, the findings of this study may serve as a reference for policymakers and environmental practitioners in developing more comprehensive interventions that integrate behavioral, educational, and environmental approaches.

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design only

describes the relationship between variables at a single point in time and cannot establish causal relationships. Second, data were collected using self-administered questionnaires, which may be influenced by respondents' perceptions and social desirability bias. Third, the study focused on a single village, limiting the generalizability of the findings to other communities with different demographic and environmental characteristics. Future studies are recommended to involve larger study populations, include additional variables such as environmental attitudes, environmental knowledge, motivation, and social support, and employ longitudinal or mixed-method approaches to obtain a more comprehensive understanding of household waste management behavior.

The findings of this study provide practical implications for local governments and community organizations. Programs aimed at improving household waste management should not only encourage community participation but also strengthen environmental education, increase public awareness, improve access to waste management facilities, and promote sustainable behavioral change through continuous community empowerment. Community-based waste management programs, including waste banks and TPS 3R, can be strengthened by integrating participation with education, infrastructure, and systematic management (Meri Nopriani et al., 2022; Ribut Lupiyanto et al., 2023). An integrated approach is therefore expected to be more effective in improving household waste management practices than relying solely on community participation. This approach is also consistent with the principles of integrated waste management, which emphasize coordinated management from the household level through community and institutional levels (Damanhuri & Padmi, 2016).

SIMPULAN

Most respondents demonstrated good community participation and good household waste management behavior. However, statistical analysis revealed no significant relationship between community participation and household waste management behavior ($p = 0.223$; $r = 0.125$). Although the correlation showed a positive direction, its strength was very weak, indicating that community participation alone was insufficient to influence household waste management behavior. These findings suggest that household waste management behavior is a complex phenomenon that may be influenced by various individual, social, and environmental factors beyond community participation.

The findings of this study provide evidence that improving household waste management behavior requires a comprehensive approach rather than relying solely on community participation. Integrating environmental education, behavioral interventions, community empowerment, and adequate waste management facilities may be more effective in promoting sustainable waste management practices. This study also contributes to the existing literature by providing empirical evidence from a community setting and may serve as a reference for policymakers and future researchers in developing more effective waste management strategies and exploring additional

determinants of household waste management behavior.

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