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The Relationship Between the Availability of Facilities and River Littering Behavior Among the Community of Purwosari II Village, Tamban Subdistrict, Barito Kuala Regency

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ABSTRACT
Waste remains an ongoing environmental issue that must be addressed. The community's lack of concern regarding waste contributes to environmental pollution. This study aims to determine the relationship between the availability of waste disposal facilities and river littering behavior among the residents of Purwosari II Village, Tamban Subdistrict, Barito Kuala Regency. This research uses a quantitative method with an analytic survey type and a cross-sectional approach. Data were collected using a questionnaire regarding the availability of household waste disposal facilities and waste disposal behavior, involving 83 housewives in Purwosari II Village. The data were analyzed using univariate and bivariate methods with the Chi-square test. The results showed that the majority of respondents (55) did not have access to waste disposal facilities, while 28 respondents did have access. Additionally, 48 respondents demonstrated poor waste disposal behavior, whereas 35 showed good behavior. The study found a significant relationship between the availability of waste disposal facilities and river littering behavior, with a p-value of 0.000 (<0.05).

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INTRODUCTION

Waste remains an ongoing environmental issue and a serious challenge to this day. The lack of public awareness regarding waste management has contributed to increasing environmental pollution (Marpaung et al., 2022). Improperly managed waste can lead to harmful impacts on public health and the overall quality of the environment. One key solution is to cultivate proper waste management behavior starting at the household level, as households are the largest producers of waste (Eka R Purwana, 2019).

Government Regulation No. 27 of 2020 emphasizes the importance of waste reduction and handling, including the sorting and transportation of waste from its source to final processing facilities. However, limited infrastructure such as the lack of temporary disposal sites (TPS), household trash bins, and waste collection services makes it difficult for communities, especially in rural areas, to practice effective waste management.

Littering, including the disposal of waste into rivers, remains a common habit that cuts

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across educational and social levels (Yuniarti et al., 2020). Low environmental awareness and inadequate supporting facilities are the main contributing factors. Waste dumped into rivers contaminates water sources and can become a vector for diseases such as diarrhea, acute respiratory infections (ARI), and skin diseases (Hasrina & Yarmaliza, 2022).

In South Kalimantan, waste generation continues to increase, including in Barito Kuala Regency, where in 2023 it reached 36,061 tons per year. Meanwhile, the incidence of diarrhea in the province remains high, reaching 9.5%, exceeding the national average (Megasari et al., 2015).

Purwosari II Village in Tamban Subdistrict, Barito Kuala Regency, exemplifies this issue. Preliminary studies show that many residents still dispose of waste into rivers or burn it due to the lack of disposal facilities and waste transportation services. This practice not only pollutes the environment but also directly threatens community health (Yati, 2021).

METHODS

This study employed a quantitative analytic survey design with a cross-sectional approach to examine the relationship between the availability of waste disposal facilities and river waste disposal behavior among housewives in Purwosari II Village, Tamban Subdistrict, Barito Kuala Regency. The target population consisted of 507 housewives, with a sample size of 83 respondents determined using the Slovin formula at a 10% margin of error. Respondents were selected through purposive sampling based on inclusion criteria: housewives aged over 20, residing in the village, and willing to participate. Data were collected using a structured, closed-ended questionnaire that had been tested for validity and reliability with 30 respondents from Purwosari I. The independent variable was the availability of waste facilities, and the dependent variable was river waste disposal behavior. Data analysis involved univariate analysis (frequency distribution) and bivariate analysis using the Chi-square test at a 95% confidence level ($\alpha = 0.05$). A p-value < 0.05 was considered statistically significant, indicating a meaningful relationship between the variables.

RESULTS AND DISCUSSION

Univariate Analysis

The univariate analysis aims to provide an overview of the distribution of each variable, including the availability of waste disposal facilities and river littering behavior among residents of Purwosari II Village.

Availability of Waste Disposal Facilities

Based on the research data conducted using a questionnaire regarding the availability of facilities, the following is the result:

Facility Availability	Frequency	Percentage
Not Available	55	66.3%
Available	28	33.7%
Total	83	100.0%

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Based on the table above, it can be seen from the research data conducted on 83 respondents that 55 people (66.3%) did not have trash bins available and 28 people (33.7%) had trash bins available.

River Littering Behavior

Based on the data obtained from the questionnaire regarding littering behavior in rivers among the residents of Purwosari II Village, the distribution is as follows:

Waste Disposal Behavior	Frequency	Percentage
Poor	48	57.8
Good	35	42.2
Total	83	100.0

The findings show that out of 83 respondents, 48 individuals (57.8%) demonstrated poor waste disposal behavior. such as discarding waste into the river while 35 individuals (42.2%) exhibited proper waste disposal practices. These results suggest that a majority of the community members still engage in environmentally harmful waste disposal habits.

Bivariate Analysis

Relationship Between Availability of Facilities and Waste Disposal Behavior

The table below shows the relationship between the availability of waste disposal facilities and river littering behavior among residents of Purwosari II Village:

Availability of Facilities	Waste Disposal Behavior: Poor	Waste Disposal Behavior: Good	Total
Not Available	42	13	55
Available	6	22	28
Total	48	35	83
p-value			0.000

Based on the data from 83 respondents, 42 individuals who lacked waste disposal facilities exhibited poor disposal behavior, while 13 showed good behavior. Among those with available facilities, 6 respondents still exhibited poor behavior, and 22 demonstrated good behavior. Statistical analysis using the Chi-square test produced a p-value of 0.000 ($p < 0.05$), indicating a significant relationship between the availability of waste disposal facilities and waste disposal behavior in the river. Therefore, the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted, suggesting that the presence of waste disposal infrastructure is associated with improved waste management behavior in the community.

Availability of Waste Disposal Facilities in Purwosari II Village

Based on the findings, 66.3% of respondents reported that proper waste disposal facilities were unavailable in their households. This lack of infrastructure is due to the use of non-standard waste containers such as plastic bags or sacks instead of proper covered bins. Furthermore, waste is generally not separated into organic and inorganic categories. Only a small portion of the community utilizes waste bins that meet acceptable environmental standards and practice waste segregation.

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These findings align with the study by Sanda & Pawarangan (2018), which revealed that a lack of environmental awareness and inadequate disposal infrastructure are the main factors contributing to littering behaviors. Non-biodegradable waste such as plastics and rubber items are particularly problematic, as they persist in the environment for extended periods and are difficult to decompose.

The primary reason behind the unavailability of proper bins lies in the community's low awareness regarding household waste management. Additionally, plastic containers and sacks are more accessible and affordable than standardized bins, which contributes to their widespread use. While these alternatives make waste collection easier, their use leads to environmental issues due to their non- biodegradable nature and the potential for long-term pollution.

Waste Disposal Behavior in Purwosari II Village

The study also found that 57.8% of respondents demonstrated poor waste disposal behavior, including indiscriminate dumping and failing to separate organic from inorganic waste. Many households reported accumulating waste for a week or more, contributing to household waste build-up. Some families reuse organic waste, such as food scraps, as animal feed, while others dispose of it directly into the river.

Maqfiroh (2023) emphasized that improper waste management behaviors often stem from a lack of proper facilities. The absence of communal disposal sites such as temporary collection points (TPS) leads residents to dispose of their waste irresponsibly, including open dumping and river disposal.

Moreover, the study found that poor waste disposal behavior cuts across educational backgrounds. For example, among 42 respondents who had completed senior high school, 23 still engaged in environmentally harmful waste disposal practices, contradicting previous research Mukharomah et al. (2020) that linked education level with responsible waste behavior.

Relationship Between Facility Availability and Waste Disposal Behavior

Bivariate analysis showed a significant relationship between the availability of waste disposal facilities and community waste disposal behavior. Among 83 respondents, 42 lacked access to proper waste facilities and exhibited poor disposal habits, while only 13 in this group practiced proper behavior. Conversely, 22 respondents with access to waste bins demonstrated good disposal practices, while only 6 behaved poorly. The chi-square test yielded a p-value of 0.000, indicating a statistically significant relationship ($p < 0.05$).

These findings support the study by Windasari et al. (2020), which found a correlation between facility availability and riverbank waste disposal behavior. Ahlunnaza (2019) also argued that access to facilities influences individual behavior both positively and negatively. Providing adequate waste bins sends a direct message encouraging proper waste disposal, which can lead to cleaner and healthier environments.

Interestingly, 13 respondents who lacked standard waste bins still exhibited responsible waste disposal behavior by separating waste types and avoiding river dumping. This may be due to heightened environmental awareness despite the absence of proper

containers, as Maqfiroh (2023) also noted that the use of plastic buckets or sacks does not necessarily reflect behavior quality if waste is still managed responsibly.

In contrast, 6 respondents with access to facilities continued to dispose of waste irresponsibly. This could be attributed to the lack of access to final disposal sites or comprehensive waste management systems. Azizah and Sudarti (2023) noted that the absence of proper TPS and TPA often leads communities to create informal dumping grounds, including along riverbanks or by burning waste, both of which harm the environment and public health.

Patras & Mahihodi (2018) also demonstrated that inadequate infrastructure strongly correlates with littering behavior in coastal areas. Waste management infrastructure should include not only household bins, but also TPS, TPA, waste transport systems, and cleaning equipment to support proper waste disposal practices.

Lastly, according to Dariyo in Lestari (2020), individuals in their early adulthood (around 40 years) are generally more mature and capable of handling social responsibilities. This is supported by the study findings, in which the 31-40 age group represented the largest proportion (38.6%) of respondents, with 19 exhibiting responsible waste disposal behavior, suggesting a link between age, maturity, and environmental behavior.

CONCLUSION

Based on the findings of this study in Purwosari II Village, it can be concluded that most residents do not have adequate waste disposal facilities, with 66.3% of respondents reporting the unavailability of proper infrastructure such as standardized trash bins or designated waste areas. Only 33.7% of the respondents had access to appropriate waste disposal means. Additionally, a large proportion of the population (57.8%) demonstrated poor waste disposal behavior, including practices such as dumping waste into rivers or leaving it in open areas, while only 42.2% exhibited proper waste management practices. Furthermore, the results of the bivariate analysis using the chi-square test showed a significant relationship between the availability of waste disposal facilities and littering behavior, with a p-value of 0.000 (<0.05). This indicates that the absence of proper waste disposal infrastructure is strongly associated with a higher tendency toward poor waste management behavior. The findings emphasize the importance of improving access to waste disposal facilities in rural communities to encourage environmentally responsible behavior and reduce pollution-related health risks.

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