

Evaluation of Waste Management Practices and Associated Health Risks in Loko Community of Song Local Government Area of Adamawa State, Nigeria

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Article History	Abstract
Original Research Article	<p><i>This study examined waste management practices and their associated health impacts in Loko Community of Song Local Government Area of Adamawa State, Nigeria. The objectives of this study were to evaluate the existing waste management practices, assess the level of awareness of residents regarding the health risks associated with improper waste disposal, identify challenges affecting proper waste management, examine the influence of educational level, assess the role of government and health workers, and suggest strategies for improving waste management practices in the community. 7 research questions were raised and answered 5 while 5 hypotheses were formulated and tested at 0.05 level of significance. This study adopted a descriptive survey research design. The population of the study comprised residents of Loko Community, from which a sample of 336 respondents were selected using random sampling techniques. Data were collected using 3 different types of questionnaires. Descriptive statistics were analyzed using frequency counts, percentages, standard deviation, and mean scores while inferential statistics were analyzed using Pearson Product Moment Correlation (PPMC). Results of the study showed improper waste management practices in Loko Community. The study further identified several challenges affecting effective waste management in the community, including lack of adequate waste disposal facilities, poor access to designated dumping sites, irregular waste collection and weak enforcement of environmental sanitation laws. In addition, the findings showed that educational level plays a significant role in influencing waste management practices, as individuals with higher levels of education demonstrated better understanding and compliance with proper sanitation practices. Findings from focus group discussions further supported the results as participants highlighted the prevalence of open dumping and poor sanitation practices within the community. It was recommended that government agencies should provide adequate waste disposal facilities, strengthen environmental sanitation laws, enhance health education and promote community participation in waste management activities. Hoping that these measures would improve environmental sanitation and reduce the prevalence of waste-related diseases in Loko Community.</i></p> <p>Keywords: Waste Management, Diseases, Community Members, and Public Health.</p>
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<p>Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.</p> <p>Citation: BIMAN, K. ABUBAKAR; HAMMAN, U. MUHAMMED & ABUBAKAR, S. ISA. (2026). Evaluation Of Waste Management Practices and Associated Health Risks in Loko Community of Song Local Government Area of Adamawa State, Nigeria. UKR Journal of Multidisciplinary Studies (UKRJMS), 2(4), 184-194.</p>	

Introduction

Waste materials are the byproducts of human activities that cannot be reused or recovered as resources, nor can they be recycled into material production processes through thermal or biological means, or utilized for energy generation (Nwosu, Orji, Asoegwu & Awuchi, 2021). Liu and Liu (2022) noted that numerous countries worldwide

recognize the environmental and health hazards posed by the unregulated disposal of waste, leading to the enactment of various policies aimed at enhancing waste collection, transportation, and recycling. However, Nigeria's situation remains largely ineffective due to inadequate funding, weak policy enforcement, and a lack of public engagement. In

several communities, residents resort to informal practices such as open dumping and incineration, which further harm the environment and jeopardize human health.

The World Health Organization (WHO, 2023) reports that insufficient waste management and sanitation are responsible for over 12 million cases of preventable diseases each year in low-income nations. WHO (2025) emphasizes that poorly managed municipal solid waste (MSW) significantly contributes to environmental pollution and poses health risks through the contamination of air, water, and food systems. Olukanni and Nwafor (2019) indicated that Local Government Authorities are legally mandated to oversee municipal solid waste management. However, due to inadequate funding, this level of government struggles to fulfill this duty effectively, resulting in state governments assuming these responsibilities in many regions, with some forming collaborations with private enterprises.

The rapid increase in population, urbanization, and economic activities has resulted in the generation of significant quantities of solid waste, frequently exceeding the ability of local authorities to manage it effectively. The poor waste management practices have created ideal conditions for rats to thrive, which serve as vectors for various diseases, and some of them cause damage to electrical wiring and other household items within the community. This situation also promotes the breeding of flies, leading to a rise in their population and other vermin, occasionally resulting in several outbreaks of epidemics (Omang, et al, 2021; Nwosu, et al, 2021; Kadhila, 2019).

Furthermore, the ongoing influx of consumer goods into the market places additional pressure on the Earth's resources and complicates efforts to safeguard the environment and its ecosystems (Raimi et al., 2022). In particular, the situation in the Loko community of Adamawa State has deteriorated due to recurring floods, which disperse waste into homes, agricultural lands, and water bodies, thereby exposing residents to numerous environmental and health hazards.

Justification

The Loko community has historically been susceptible to seasonal flooding, a phenomenon that has continued for several years. These floods disrupt normal living conditions and lead to the washing of solid waste into open drains, water bodies, and residential areas, thereby creating breeding grounds for mosquitoes, flies, and rodents. Such circumstances facilitate the spread of communicable diseases, including cholera, malaria, diarrhea, and typhoid fever.

Additionally, the recurring floods disperse waste throughout the community, complicating waste collection

and management, and heightening residents' exposure to contaminated environments. Adegoke and Bello (2024) noted that flooding exacerbates the transmission of waste-related diseases in riverine regions. The researchers also pointed out that there is a scarcity of studies examining the combined impact of inadequate waste management and flooding on health outcomes in the Loko Community, underscoring the necessity for this investigation. Despite the gravity of these issues, there is a lack of empirical research connecting waste management practices, the effects of flooding, and health risks in the Loko community, which this study aims to address.

Review of Related Literature

In Nigeria, the existing waste management strategy predominantly depends on traditional garbage treatment techniques, resulting in insufficient and ineffective waste collection and disposal. Aluko, Obafemi, and Obiajunwa (2022) investigated the links between potential exposure to air pollution from municipal solid waste (MSW) combustion and possible pulmonary, neurological, and other health effects associated with chronic exposure to emissions from MSW fires in Nigeria. The findings reveal detrimental health consequences of prolonged exposure to MSW combustion emissions. This is attributed to the presence and proliferation of open dumpsites near residential areas, which are linked to environmental health issues in the urbanizing regions of Nigeria.

The most and least recognized health outcomes were malaria. It was reported by Ebikapaye et al. (2020) and Sridhar et al. (2020) that due to the absence of effective local and national waste management in Nigeria, the average individual produces 0.43 kg of solid waste daily, with around 80% of the waste stream comprising organic and recyclable materials. Alongside the increasing population, the challenges of implementing proper waste management practices are intensified. Waste management in Nigeria is a collective responsibility shared among the federal, state, and municipal levels of government. Due to financial constraints faced by local governments, state agencies frequently assume waste management responsibilities (Ebikapaye et al., 2020). Consequently, there are discrepancies in garbage service policies across various cities in the nation. Recent research has highlighted the connection between waste management and health. Eze et al. (2024) identified a significant relationship between household waste management practices and the incidence of diarrhea in South-Eastern Nigeria.

Musa and Ibrahim (2023) disclosed that low-income communities in northern Nigeria face significant challenges in accessing organized waste collection services. Giri et al (2024) indicated that the solid waste management systems in underdeveloped nations, including Nigeria, are deficient

in infrastructure and effective collection methods, with a limited emphasis on sustainability and circularity. This situation leads to environmental issues and obstructs socioeconomic development. The researchers further asserted that the waste management systems in these countries are not only insufficient but also highly inefficient, resulting in over half of the waste remaining uncollected in streets and other areas. Nevertheless, the researchers believe there is considerable potential for waste recovery and circular economy initiatives, given the substantial amount of recyclable and compostable materials present in the waste streams of selected African and Asian countries.

Addressing these challenges necessitates comprehensive waste management strategies, enhanced recycling capabilities, and the promotion of public awareness and engagement in waste reduction and recycling initiatives. Kehinde et al (2025) noted that the current waste management systems in urban centers of Nigeria are predominantly ineffective. Inadequate waste handling practices have contributed to a rise in communicable diseases such as malaria, cholera, typhoid, and diarrhea. However, the researchers also mentioned that there could be economic employment opportunities in recycling and waste management if these practices are properly organized. Koliya and Solomon (2025) emphasized the importance of utilizing municipal solid waste as a renewable energy source, which can help reduce

greenhouse gas emissions and alleviate environmental risks associated with waste disposal. Awopetu et al (2013) reported that Nigeria's existing waste management strategies, similar to those in many developing countries, mainly depend on traditional waste treatment methods. Waste is typically gathered and disposed of in unregulated landfills outside municipal limits, which is not sustainable

Research Method

This research utilized a descriptive survey research design. A stratified and purposive sampling technique was employed, which involved segmenting the population into distinct subgroups (strata) that possess similar characteristics, and selecting samples from each subgroup to ensure equitable representation. Three different types of questionnaires were utilized to gather data. A total of 336 respondents (300 community residents, 3 focus groups each comprising 7 participants, and 15 health personnel) from the Loko community were stratified and randomly selected for the three categories of respondents. Descriptive statistics were analyzed through frequency counts, percentages, standard deviation, and mean scores, while inferential statistics were examined using Pearson Product Moment Correlation (PPMC).

Data Analysis

Research question 1: What are the current methods of waste management commonly practice by Loko community members?

Table 1: Mean and Standard Deviation of the current methods of waste management commonly practice by Loko community members

ITEMS	N	Mean	SD
I always dispose of my household waste in an approved dumping site or waste bin.	300	4.7000	.80342
I do not dump refuse in gutters, roadsides, or open spaces.	300	4.6300	.58387
I properly package household waste before disposal	300	4.5867	.75125
I ensure that waste generated in my household is disposed of regularly	300	4.1733	1.10182
I participate in community sanitation or environmental clean-up activities	300	4.4033	.89629
Grand Mean	300	4.4987	0.8273

The descriptive statistics in Table 1 shows 300 respondents responded to the 5 items on the instrument indicating current methods of waste management commonly practice by Loko community members. The 4.49 mean average and 0.82 standard deviation indicated that, the respondents agree on the current methods of waste management commonly practice by Loko community members.

Research Question 2: What is the level of awareness of Loko community members on health risks associated with improper waste management practices?

Table 2: Mean and Standard Deviation of the level of awareness of Loko community members on health risks associated with improper waste management practices

ITEMS	N	Mean	SD
Improper waste disposal causes malaria	300	4.5600	.82178
Waste attracts flies and mosquitoes that spread disease	300	4.4600	.95819
Poor waste disposal can cause cholera and typhoid	300	4.6867	.82305
I have received health education on waste-related diseases	300	4.5667	.70276
I know that improper waste disposal can pollute water and the environment.	300	4.5667	.63790
Grand Mean	300	4.568	0.7887

The descriptive statistics in Table 2 shows 300 respondents responded to the 5 items on the instrument indicating level of awareness of Loko community members on health risks associated with improper waste management practices. The 4.56 mean average and 0.78 standard deviation indicated that, the respondents agree with the level of awareness of Loko community members on health risks associated with improper waste management practices.

Research question 3: What major challenges do Loko community members face in maintaining proper waste management practices?

Table 3: Mean and Standard Deviation of the major challenges do Loko community members face in maintaining proper waste management practices

ITEMS	N	Mean	SD
I have no ideas on basic waste management practices.	300	3.9400	1.24159
I lack necessary equipment for waste disposal.	300	4.5467	1.11293
Government should increase funding for waste management	300	4.5467	1.11293
Living close to refuse dumps can cause frequent sickness.	300	4.2133	1.21080
Poor access to facilities affects my waste management practices	300	4.1800	1.07616
Grand Mean	300	4.2853	1.1509

The descriptive statistics in Table 3 shows 300 respondents responded to the 5 items on the instrument indicating major challenges do Loko community members face in maintaining proper waste management practices. The 4.28 mean average and 1.15 standard deviation indicated that, the respondents agree with the major challenges do Loko community members face in maintaining proper waste management practices.

Research Question 4: What influence has educational level on proper waste management practices among Loko community?

Table 4: Mean and Standard Deviation of the influence has educational level on proper waste management practices among Loko community

ITEMS	N	Mean	SD
My level of education influences how I dispose my waste	300	4.5133	.95893
Because of education, I understand dangers of improper disposal	300	4.4533	.98881
Educated residents manage waste better than less educated ones.	300	4.0733	1.30907
Lack of formal education leads to poor waste practices.	300	4.2567	1.15842
Education helps prevent waste-related diseases	300	3.8600	1.00853
Grand Mean	300	4.2313	1.0848

The descriptive statistics in Table 4 shows 300 respondents responded to the 5 items on the instrument indicating influence has educational level on proper waste management practices among Loko community. The 4.23 mean average and 1.08 standard deviation indicated that, the respondents agree with the influence has educational level on proper waste management practices among Loko community.

Research Question 5: What is the role of government support through health workers participation in promoting proper waste management practices in Loko community?

Table 5: Mean and Standard Deviation of the role of government support through health workers participation in promoting proper waste management practices in Loko community

ITEMS	N	Mean	SD
Health workers visit Loko community regularly	300	4.1200	1.39238
Government enforces sanitation laws effectively	300	4.3800	1.13721
Health officers educate residents on waste management	300	4.5867	.97587
Health workers play an important role in sanitation	300	4.5600	.98470
Poor government supervision worsens waste problems	300	4.0800	1.29584
Grand Mean	300	4.3453	1.1572

The descriptive statistics in Table 5 shows 300 respondents responded to the 5 items on the instrument indicating the role of government support through health workers participation in promoting proper waste management practices in Loko community. The 4.34 mean average and 1.15 standard deviation indicated that, the respondents agree with the role of government support through health workers participation in promoting proper waste management practices in Loko community.

Research Question 6: What strategies can be developed to improve waste management practices and reduce associated health risks in Loko community based on community and expert insights?

Table 6: Mean and Standard Deviation of the strategies can be developed to improve waste management practices and reduce associated health risks in Loko community based on community and expert insights

ITEMS	N	Mean	SD
More waste bins should be provided	300	4.5333	1.11940
Monthly sanitation exercise should be enforced	300	4.2800	1.09190
Government should increase funding for waste management	300	4.3533	.94771
Health education campaigns will improve sanitation	300	4.0767	1.05570
Community leaders should lead sanitation programs.	300	4.6467	.81077
Grand Mean	300	4.378	1.0051

The descriptive statistics in Table 6 shows 300 respondents responded to the 5 items on the instrument indicating the strategies can be developed to improve waste management practices and reduce associated health risks in Loko community based on community and expert insights. The 4.37 mean average and 1.00 standard deviation indicated that, the respondents agree with the strategies can be developed to improve waste management practices and reduce associated health risks in Loko community based on community and expert insights.

Research Question 7: What are the perceptions of health workers regarding waste management practices and waste-related health problems in Loko community?

Table 7: Mean and Standard Deviation of the perceptions of health workers regarding waste management practices and waste-related health problems in Loko community

ITEMS	N	Mean	SD
Improper waste disposal is a major cause of malaria in Loko community	15	4.6267	.82232
Waste accumulation can contribute to outbreaks of cholera and typhoid in Loko community.	15	4.5600	.95714
Waste disposal behaviour in Loko community increases environmental health risks.	15	4.6267	.83843
Lack of waste disposal facilities worsens health conditions in Loko community	15	4.6867	.56824
Health workers' participation can significantly improve sanitation practices in Loko community.	15	4.7467	.59188
Inadequate government support limits effective waste management practices in Loko community	15	4.3500	1.14245
Public health education on waste disposal is inadequate in Loko community	15	4.4700	.82342
Monthly sanitation exercises will reduce waste-related diseases in Loko community.	15	4.5467	.83074
Community cooperation is essential for effective waste management practice in Loko community	15	4.6333	.94968
Strengthening environmental health enforcement will reduce disease prevalence in Loko community.	15	4.2500	1.12771
Grand Mean	15	4.5497	0.8652

The descriptive statistics in Table 7 shows 15 respondents responded to the 10 items on the instrument indicating the perceptions of health workers regarding waste management practices and waste-related health problems in Loko community. The 4.54 mean average and 0.86 standard deviation indicated that, the respondents agree with the perceptions of health workers regarding waste management practices and waste-related health problems in Loko community.

Testing Hypotheses

The following hypotheses were tested at 0.05 level of significant:

H₀₁ There is no significant relationship between the level of awareness and health risks associated with improper waste management among Loko community members.

Table 8: PPMC level of awareness and health risks associated with improper waste management among Loko community members.

		level of awareness	VAR00048
level of awareness	Pearson Correlation	1	.566
	Sig. (2-tailed)		.000
	N	300	300
VAR00048	Pearson Correlation	.566	1
	Sig. (2-tailed)	.000	
	N	300	300

Correlation is significant at the 0.01 level (2-tailed).

The PPMC in Table 8 show significant relationship between the level of awareness and health risks associated with improper waste management among Loko community members, $P < 0.05$. Since the computed p-value (0.00) is less than 0.05 level of significance, therefore the null hypothesis is rejected and concluded that, there is significant relationship between the level of

awareness and health risks associated with improper waste management among Loko community members. Furthermore, the r-value indicates that, 57% of significant relationship between the level of awareness and health risks associated with improper waste management among Loko community members is moderate.

H₀₂ There is no significant relationship between challenges faced and proper waste management practices among Loko community members

Table 9: PPMC level of significant relationship between challenges faced and proper waste management practices among Loko community members.

		major challenges	VAR00048
major challenges	Pearson Correlation	1	.650
	Sig. (2-tailed)		.000
	N	300	300
VAR00048	Pearson Correlation	.650	1
	Sig. (2-tailed)	.000	
	N	300	300

. Correlation is significant at the 0.01 level (2-tailed).

The PPMC in Table 9 show significant relationship between challenges faced and proper waste management practices among Loko community members, $P < 0.05$. Since the computed p-value (0.00) is less than 0.05 level of significance, therefore the null hypothesis is rejected and concluded that, there is significant relationship between challenges faced and proper waste management practices among Loko community members. Furthermore, the r-value indicates that, 65% of significant relationship between challenges faced and proper waste management practices among Loko community members is moderate.

H₀₃ There is no significant relationship between educational level and proper waste management practices among Loko community members

Table 10: PPMC level of significant relationship between educational level and proper waste management practices among Loko community members.

		educational level	VAR00048
educational level	Pearson Correlation	1	.587
	Sig. (2-tailed)		.000
	N	300	300
VAR00048	Pearson Correlation	.587	1
	Sig. (2-tailed)	.000	
	N	300	300

Correlation is significant at the 0.01 level (2-tailed).

The PPMC in Table 10 show significant relationship between educational level and proper waste management practices among Loko community members, $P < 0.05$. Since the computed p-value (0.00) is less than 0.05 level of significance, therefore the null hypothesis is rejected and concluded that, there is significant relationship between educational level and proper waste management practices among Loko community members. Furthermore, the r-value indicates that, 59% of significant relationship between educational level and proper waste management practices among Loko community members is moderate.

H₀₄ There is no significant relationship between government support through health workers' participation and proper waste management practices in Loko community

Table 11: PPMC level of significant relationship between government support through health workers' participation and proper waste management practices in Loko community.

		role of government support	VAR00048
role of government support	Pearson Correlation	1	.563
	Sig. (2-tailed)		.000
	N	300	300
VAR00048	Pearson Correlation	.563	1
	Sig. (2-tailed)	.000	
	N	300	300
Correlation is significant at the 0.01 level (2-tailed).			

The PPMC in Table 11 show significant relationship between government support through health workers' participation and proper waste management practices in Loko community, $P < 0.05$. Since the computed p-value (0.00) is less than 0.05 level of significance, therefore the null hypothesis is rejected and concluded that, there is significant relationship between government support through health workers' participation and proper waste management practices in Loko community. Furthermore, the r-value indicates that, 56% of significant relationship between government support through health workers' participation and proper waste management practices in Loko community is moderate.

H₀₅ There is no significant relationship between health workers' perceptions and waste-related health problems in Loko community.

Table 12: PPMC level of significant relationship between health workers' perceptions and waste-related health problems in Loko community.

		perceptions of health workers	VAR00048
perceptions of health workers	Pearson Correlation	1	.608
	Sig. (2-tailed)		.000
	N	300	300
VAR00048	Pearson Correlation	.608	1
	Sig. (2-tailed)	.000	
	N	300	300
Correlation is significant at the 0.01 level (2-tailed).			

The PPMC in Table 12 show significant relationship between health workers' perceptions and waste-related health problems in Loko community, $P < 0.05$. Since the computed p-value (0.00) is less than 0.05 level of significance, therefore the null hypothesis is rejected and concluded that, there is significant relationship between health workers' perceptions and waste-related health problems in Loko community. Furthermore, the r-value indicates that, 61% of significant relationship between health workers' perceptions and waste-related health problems in Loko community is moderate.

4.7 Discussion of Findings

The findings of this study indicated a notable correlation between the level of awareness and the health risks linked to improper waste management among members of the Loko community, with an r-value of 57%. Supporting this observation, Okafor and Musa (2023) argued that there should be a connection between residents' comprehension of waste management and health, as well as their propensity to adopt safe disposal practices. Additionally, the study revealed a significant relationship between the challenges encountered and the proper waste management practices

among Loko community members. This assertion is reinforced by the responses of participants from the focus group discussion, who noted that waste is predominantly discarded in nearby bushes, along roadways, in drainage channels, and behind residences. In alignment with this finding, Giri (2024) asserted that the waste management system is not only insufficient but also highly ineffective, leading to over half of the refuse remaining uncollected on streets and other areas. Moreover, another significant finding of this study highlighted the relationship between educational attainment and proper waste management practices among Loko community members. In support of this finding, Okafor and Musa (2023) noted that education and awareness initiatives can shape attitudes towards waste segregation and recycling. In rural areas like Loko, social structures such as town meetings, youth associations, and religious organizations can be mobilized to foster behavioral change, thereby enhancing the community's knowledge.

Nevertheless, another discovery from this study indicated a notable connection between government assistance via the involvement of health workers and effective waste management practices within the Loko community. The findings of Eze et al. (2024), which identified a significant link between household waste management and the incidence of diarrhea in South-Eastern Nigeria, may be associated with the role of health workers. Numerous studies have reported that improper waste disposal significantly contributes to the pollution of air, soil, and water, thereby indirectly exacerbating the greenhouse effect and posing threats to public health, environmental quality, and economic stability (Kwun Omang et al., 2021).

This aligns with the findings of Kehinde et al. (2025), which revealed that inadequate solid waste management practices can lead to the accumulation of waste in selected urban areas of Nigeria, attracting vectors such as mosquitoes, flies, and rodents that pose health risks to humans. A significant correlation was identified between health workers' perceptions and waste-related health issues in the Loko community. In terms of descriptive statistics, the low level of participation in organized sanitation observed in this study further substantiates that waste management in the Loko community is predominantly influenced by individual behavior rather than a collective sense of environmental responsibility. This situation significantly contributes to environmental degradation and heightens the risk of disease transmission. The quantitative results indicated that while a grand mean of 4.49 reflects an awareness of 'proper' methods, the actual implementation in the Loko community is severely deficient. Item 5 revealed that an alarming 240 respondents (80%) do not engage in community sanitation efforts. This finding is corroborated

by the Focus Group Discussion (FGD), where participants acknowledged that waste is mainly managed through open dumping in bushes, along roadsides, and in drainage systems. The study identified that this behavior is not necessarily a choice but a consequence of infrastructural failure; 260 respondents (86.7%) noted a lack of necessary equipment and poor access to facilities. This confirms the hypothesis test which showed a significant relationship ($r=0.65$) between challenges faced and waste practices. Essentially, the lack of government-provided bins and irregular truck visits forces residents into environmentally degrading habits like burning refuse.

Most participants recognized that inadequate waste management can result in diseases such as cholera and typhoid. This research also pinpointed significant obstacles hindering effective waste management in the Loko community, including a lack of waste disposal facilities, insufficient equipment, and limited access to designated dumping sites. This suggests that residents are not solely accountable for poor sanitation practices; rather, systemic issues, such as inadequate government provision of facilities, play a crucial role. This underscores the necessity for enhanced environmental infrastructure to facilitate behavioral change among residents. There exists a paradoxical relationship between residents' knowledge and their actions. The study recorded a high grand mean (4.56) for awareness of health risks, with 265 respondents acknowledging that improper disposal contributes to malaria.

The focus group discussion supported this, linking blocked drainages to mosquito breeding and subsequent malaria outbreaks. However, the hypothesis test for H02 ($r=0.57$) indicates that while awareness is present, it is 'moderate' and likely stems from personal experience rather than structured health education. Item 9 indicated that 200 respondents (66.7%) had never received formal health education regarding these diseases. This reveals a 'knowledge-practice gap' where residents comprehend the risks but lack the institutional support necessary to alter their environment. Moreover, the findings established a robust correlation between educational attainment and waste management practices. Respondents with a higher level of education exhibit a better understanding and adherence to proper waste disposal methods. Education plays a significant role in shaping environmental awareness and sanitation behavior. The implication is that enhancing literacy and environmental education in the Loko community could lead to more sustainable waste management practices and reduced health risks. The demographic data revealed a low educational profile, with 70% of respondents possessing only primary education or lacking formal education altogether. This correlates

strongly with the testing of H04 ($r=0.59$), confirming that educational level significantly influences waste management behavior. Furthermore, there is a clear dissatisfaction with government intervention. Items 21–23 show that residents feel health workers do not visit regularly, and 265 respondents agreed that poor government supervision worsens the situation. Interestingly, while residents feel neglected, the health workers themselves (86%) agree that their participation is essential but limited by inadequate government support (H06, $r=0.61$). In addition, the study revealed that government support and health workers participation in waste management activities are inadequate. Many respondents indicated that health workers do not visit regularly and that laws are not effectively enforced. The lack of engagement of health workers limits the dissemination of vital information and reduces community compliance with sanitation.

This research further identified various strategies aimed at enhancing waste management practices within the Loko community. These strategies encompass the provision of additional waste bins, the enforcement of monthly sanitation exercises, increased government funding, and greater engagement from community leaders. These findings align with the work of the World Health Organization (WHO 2021), which highlighted that community involvement, governmental support, and access to facilities are essential elements of effective waste management systems. The residents' willingness to adopt these strategies indicates that, with adequate support, substantial improvements can be realized. Insights from health workers also corroborated the quantitative results, as they strongly concurred that improper waste disposal is a significant contributor to environmental health issues in the Loko community.

They underscored that diseases such as malaria, cholera, and typhoid are closely associated with inadequate sanitation practices. This observation is consistent with global waste management trends, which indicate that poor waste management is a major factor in the spread of communicable diseases in developing nations (UNEP, 2020). Health workers emphasized the necessity of public health education, government intervention, and community collaboration in tackling these challenges. Lastly, the focus group discussions offered deeper insights into the lived experiences of residents. Participants confirmed that waste is frequently disposed of through open dumping and burning due to the absence of accessible facilities. They also reported a prevalence of health issues such as malaria and diarrhea, particularly during the rainy season. These qualitative findings reinforce the quantitative data and

provide a more comprehensive understanding of waste management in the Loko community.

Conclusion

According to the results of this study, it can be inferred that the waste management practices in the Loko community are inadequate and present a significant threat to public health. Residents recognize the risks linked to improper waste disposal; however, this awareness has not resulted in effective sanitation practices due to various structural and institutional obstacles. The absence of sufficient waste disposal facilities, limited access to designated dumping sites, and ineffective enforcement of environmental regulations have greatly contributed to the ongoing issues in waste management.

Recommendations

In light of the results obtained from this study, the subsequent recommendations are proposed: Establishment of waste disposal facilities by the government, Health education should be enhanced through health workers, Strict enforcement of sanitation regulations by the government, Augmentation of government support, Advancement of environmental education within schools and community organizations, Community engagement: Community leaders should play an active role in encouraging residents to take part in sanitation initiatives and uphold a clean environment, and Cooperation with non-governmental organizations.

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