

Effect of Health Education on Behavioural Intentions towards Household Waste Management among Women of an Urban Community in Nigeria.

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Abstract

This study investigated the effect of Health Education on the household waste management behavioral intentions of women in Mgbuoshimini, an urban community in Nigeria. The study was a quasi-experimental pre-test and post-test study which specifically focused on two research questions and two hypotheses. Data for the study was obtained from a sample size of 162 women drawn from a population of 6,591 women living in Mgbuoshimini using a purposive sampling technique. A validated self-structured questionnaire titled Household Waste Management Behavioural Intentions Questionnaire (HWMBIQ) with a reliability index of 0.77 was used for data collection. The data collected was analyzed employing the Mean, Standard Deviation Paired-sample t-test, and Analysis of Covariance (ANCOVA) at 0.05 level of significance. The result showed that health education significantly increased the behavioural intentions of the women from a mean of 1.74 to 3.26. However, there were variations in their behavioural intentions based on the demographic variables of age, level of education, and occupation. Based on the findings of the study, it was recommended among others that the State Waste Management Agency, in collaboration with the Ministry of Environment and key community leaders, should integrate the health education intervention into their waste management strategies. This can serve as a grassroots approach to promote sustainable waste management practices at the household level and foster long-term behavioural changes across communities in Nigeria.

Keywords: Health education, behavioural intention, household waste management, women, Nigeria.

Introduction

Household waste management remains a significant challenge globally, especially in developing countries like Nigeria, where rapid urbanization, population growth, and ineffective governance have exacerbated waste mismanagement. Port Harcourt, a densely populated industrial city, illustrates this issue, with streets and aquatic bodies overwhelmed by unmanaged garbage, posing environmental and health risks. Poor waste management

contributes to greenhouse gas emissions, the spread of diseases like malaria and cholera, and uninhabitable living conditions (Banga, 2019; Owzor, 2018; Kalonde et al., 2023).

Household waste management involves handling disposable materials generated from daily activities, such as food, paper, glass, plastics, metals, and textiles (Hubaybah, 2020). Effective management, particularly sorting waste at its source, is vital for advancing recycling and a circular economy (Nwosu & Okoye, 2019). However, achieving this requires significant public participation and behavioural changes. Studies highlight that education and awareness interventions are crucial for mitigating waste-related pollution and societal risks (Ambusaidi & Fulaiti, 2022; Eshete & Tigu, 2023). Behavioural psychology plays an essential role in understanding how knowledge and attitudes influence waste management behaviors (Akintunde, 2017). Behavioural intentions, shaped by cognition and attitudes, are central to improving household waste practices. Targeted interventions that promote public interest and active participation are necessary to address the challenges posed by increasing waste volumes and complex waste streams (Chen et al., 2021; Pongpunpurt et al., 2022). Sorting waste at the source is a key strategy to encourage recycling and sustainable waste management, underscoring the urgent need for effective interventions in this area (Nwosu & Okoye, 2019; Kalonde et al., 2023).

Behavioral intentions, as described by Robat et al. (2022), are deliberate plans or decisions to engage in specific behaviors, reflecting an individual's readiness and willingness to act in a given context. These intentions are widely regarded as a precursor to actual behavior and serve as a reliable predictor of future actions. Thus, understanding behavioral intentions becomes crucial in assessing the potential effectiveness of intervention programs. In a study done by Akuoko (2018), respondents had enough knowledge about the effects of waste and were not happy about the current waste management situation in the community, but this positive state was not reflected in their behavior. Considering the short time frame given to carry out this study, the impact of the intervention program will be measured, not from their behavior (which could take a longer period to ascertain), but through their behavioural intentions.

Health education is a powerful tool for fostering behavioral intentions by raising awareness and equipping individuals with practical strategies for waste management. Targeted interventions in waste management bridge behavioral gaps by promoting proactive actions such as recycling, composting, and reducing plastic waste. These initiatives align behavioral intentions with public health goals, emphasizing the risks of improper waste management, including disease spread and environmental harm (Ajibuah & Terdoo, 2014; WHO, 2022).

Linking knowledge to practice, health education shapes behaviors and promotes sustainable waste management. Health education programs benefit from structured planning models, which guide their development, implementation, and evaluation. These models ensure that all program aspects are systematically addressed, enabling impactful and sustainable outcomes. By raising grassroots-level awareness and encouraging public participation, health education addresses the pressing need for effective waste management initiatives. Such strategies are essential for fostering positive behaviors that support environmental sustainability, reflecting the growing importance of public health in tackling waste-related challenges. This highlights the critical role of health education in achieving long-term behavioral change. While extensive research examines economic, technical, and institutional aspects of waste management (Bilitewski, 2018; Ambusaidi & Al Fulaiti, 2022), fewer studies explore psychological factors like knowledge, attitudes, and behavioral intentions (Pakpour, 2014; Eshun et al., 2021). Fewer, still, are studies targeting education interventions and their effects on behavioural intentions towards waste management, hence the need for this study.

Women play a critical role in household waste management, influencing family practices and contributing significantly to environmental health. However, their effective participation requires adequate knowledge, skills, and positive behavior. The lack of comprehensive studies on how education interventions impact women's waste management behavioral intentions highlights a significant research gap. Addressing this is essential to harness their potential in promoting sustainable practices. Health education aims to foster lasting behavioral changes that improve health outcomes (Alem, 2014). Targeted interventions, such as workshops, awareness campaigns, and digital tools, can enhance women's knowledge and attitudes, empowering them to adopt sustainable waste practices (Baby & Mathew, 2020). Oda (2021) emphasizes women's unique insights into household waste management, vital for creating effective strategies. For example, Schwarz-Herion et al. (2008) revealed that Germany's success in achieving 90% public participation in waste separation demonstrates the impact of education interventions on waste management behaviors. However, factors like education level, age, income, and cultural norms may influence the effectiveness of such interventions. Tailoring programs to address these variables can enhance their impact on women's behavioral intentions toward waste management, emphasizing the need for theory-based, context-specific approaches to drive meaningful change.

Proper household waste management involves a series of practices aimed at reducing, reusing, recycling, and responsibly disposing of waste generated within a household. Some key strategies for effective household waste management include reducing the source,

sorting, recycling, composting, reusing, and responsible disposal of waste. Reducing waste at the source aims at minimizing the quantity of waste being generated. It starts with conscious consumption, such as buying only necessities, avoiding over-packaged items, and using reusable products. Sorting waste into categories of recyclables, organics, hazardous, and non-recyclable materials facilitates proper disposal and recycling. This, according to Shen et al. (2020) is the most effective way to reduce domestic waste management costs and improve resource efficiency. Recyclable materials such as paper, plastic, glass, and metals gathered after sorting waste should be sent to appropriate collection centers. If appropriately organized, this can serve as a means of economic empowerment for women. Composting organic waste like fruit scraps, coffee grounds, and yard trimmings turns waste into nutrient-rich soil. Reusable items like furniture, clothes, and toys can be repurposed or donated to reduce waste while also helping others. Finally, safe disposal of hazardous and non-recyclable waste like batteries, chemicals, and electronics to prevent environmental harm should be done using designated collection centers.

Statement of the Problem

In many societies, including the Mgbuoshimini community, women traditionally manage household waste as part of their daily responsibilities. Their significant role in generating, organizing, and disposing of waste, as well as teaching these practices to younger generations, highlights their influence on waste management behaviors. However, women's ability to engage in proper waste management depends on their willingness to act. In the Port Harcourt metropolis, including Mgbuoshimini, waste mismanagement remains a significant issue, resulting in environmental and public health problems such as pollution, disease outbreaks, vermin infestations, and aesthetic degradation. Despite existing waste management strategies, such as those implemented by the state waste management authority, RIWAMA, open landfills, scavenger activities, and inefficiencies persist, leaving waste littered across the community constituting health hazards and environmental threats.

Educational interventions have proved to effectively address similar issues elsewhere, emphasizing their potential to improve women's waste management behavioral intentions in Mgbuoshimini. Women, as primary household waste managers, play a crucial role in fostering sustainable practices starting at home, the initial point of waste generation. Yet, research has not comprehensively explored the intersection of education, and behavioral intention in this context. Addressing this gap is critical, as empowering women through education can lead to significant environmental improvements, reflecting the adage, "Train a woman, train a nation."

Objectives of the Study

The study examined the effect of health education on behavioural intentions toward household waste management among women in Mgbuoshimini community. The study further explored the influence of demographic variables of age, level of education, and occupation on the outcome of the intervention.

Methods

A Pretest Post-test Quasi-experimental research design was used for this study. A quasi-experiment is an empirical study used to estimate the causal impact of an intervention on its target population without random assignment (Nworgu, 2015). This design is useful in situations where the application of a randomized approach may not be realistic (Kothari & Garg, 2014). This design was chosen for its ability to provide pre-intervention baseline data from respondents, which could then be compared with post-intervention data from the same respondents to demonstrate the effects of the intervention. This design has also been successfully utilized by Hubaybah et al (2022), Abdullah & Marwa, (2022), *Maqbool et al. (2023)*, and *Charkhtab et al., (2024)* to carry out similar studies.

Mgbuoshimini is a community in Rumueme kingdom in Obio-Akpor, Port Harcourt metropolis in Rivers state, Nigeria. Rivers State is an oil-producing state located in the Niger Delta region of the country. Mgbuoshimini community constitutes mainly the people of Ikwere ethnic group and other dwellers (non-indigenes) who migrated from other areas, cities, or states. This population and their activities generate large tons of waste daily. The community which was originally a small settlement, expanded rapidly after the entrance of an oil and gas company (Agip) into the community, followed by Rivers State University (sharing a fence with the community). The rapid expansion has continued till today, hence other establishments such as Abattoir, food markets, private and public (government) schools, and many more are now considered as part of the community. Mgbuoshimini community is now well known for commerce, industry, oil, and gas. Their population has risen from 10,420 in the 2006 census to over 16,797 residents according to the National Population Commission (2008) and the National Bureau of Statistics (2020). Due to the population increase, waste management has become overwhelming, and in such situations, experts have come up with varied suggestions for creating awareness and interventions that could curb the menace.

The population for the study consists of over six thousand, five hundred and ninety-one (6,591) women of different age groups. The population figure is projected based on the

information obtained from the National Bureau of Statistics, (2020). The sample for the study was 162 women living in Mgbuoshimini community. Purposive sampling was employed to select women who were 20 years and older. Convenient sampling method was used to select women from the community which brought them to a total of 162 participants. The instrument used for data collection was a self-structured questionnaire which was tagged 'Household Waste Management Behavioural Intentions Questionnaire (HWMBIQ)'. The instrument was developed by the researcher and validated by experts. The instrument consists of two sections (A & B). Section A was designed to capture the demographic details of the respondents. The behavioural intentions of the respondents were measured using a 4-point Likert scale format of 'Very Willing, Willing, Unwilling, and Very Unwilling'.

A pilot study was carried out with 30 women at Rumuchinda, a neighboring community with similar characteristics to Mgbuoshimini to further determine the reliability of the instrument for the study. The instrument was administered once to the respondents and the reliability coefficient was obtained using Cronbach alpha. The reliability analysis result yielded 0.71 which is considered highly reliable.

To conduct the study, oral consent of the participants was sought and obtained before the commencement of the intervention and distribution of the questionnaire. Copies of the questionnaire were served twice as pre-test and post-test. First, copies of the instrument were served to the sampled 162 respondents before the intervention, and baseline data reflecting the waste management behavioral status of the women were obtained. Health Education Intervention was implemented on the participants for six (6) weeks at agreed periods. After six (6) weeks, copies of the same instrument were also served and retrieved from the respondents.

Intervention procedure

The teaching guide used for the intervention contains the program goal, specific objectives, learning objectives, program content/activities, teaching methods/strategies, instructional materials, lecture periods, and evaluation guides. The teaching guide was developed from literature and subjected to content validation by seven experts in the field of health education, and waste management practitioners. The intervention was a 6-week household waste management education program. The implementation of the intervention program was designed to teach women some effective household waste management strategies. Spread over six weeks, with sessions held every Saturday, the program was strategically timed to avoid attrition. The intervention began with an introductory session where participants were oriented on the program objectives and expected outcomes on proper household waste

management strategies. The initial session also involved the collection of baseline data through the pretest questionnaire. The implementation was carried out using physical contact, interactive sessions, question and answer time, slide shows, and practical moments of waste sorting.

The content was delivered through the use of projector slides, power points, and practical demonstrations of waste management strategies using waste materials and bags. Assignments were given after each session and feedback was in the next session (the following week) with questions, reactions, and interactions being encouraged. Suffice it to say that in each session, the participants were remunerated with incentives to boost their morale and the specified time of each session was not exceeded. The second data collection for the posttest was done on the final day of the intervention. The data from the respondents were collated, coded, and analyzed using Statistical Package for Social Sciences (SPSS version 25). The percentage was used to analyse the demographic data. Dependent t-test (paired sampled t-test) and Analysis of Co-variance (ANCOVA) were used to test the effect of the intervention at 0.05 level of significance.

Results

Demographic analysis

Table 1: Demographic characteristics of the participants

S/No	Demographics	Cohorts	F	%
1	Age	20-29 years	36	22.22
		30-39 years	69	42.59
		40-49 years	42	25.93
		50 years and above	15	9.259
		Total	162	100
2	Marital Status	Married	126	77.78
		Single	18	11.11
		Divorced/Separated	6	3.704
		Widow	12	7.407
		Total	162	100
3	Level of Education	No Formal Education	3	1.852
		Primary Education	12	7.407
		Secondary Education	93	57.41
		Tertiary Education	54	33.33
		Total	162	100
4	Occupation	Business	93	57.41
		Civil Servant	33	20.37
		House wife	27	16.67

Farming	9	5.556
Total	162	100

The demographic characteristics of the 162 participants show a diverse distribution across age, marital status, education, and occupation. The age group 30-39 years was the largest cohort at 42.59%, followed by 40-49 years at 25.93%, 20-29 years at 22.22%, and 50 years and above at 9.26%. Most participants were married (77.78%), with singles, widows, and divorced/separated constituting 11.11%, 7.41%, and 3.70% respectively. Educationally, 57.41% had secondary education, 33.33% tertiary, 7.41% primary, and 1.85% no formal education. Occupationally, 57.41% were engaged in business, 20.37% were civil servants, 16.67% were housewives, and 5.56% were farmers.

Table 2: Summary of Paired Samples t-test on the effect of Health education on waste management behavioural intention of women in Mgbuoshimini community

Paired Samples T-test Statistics

Waste Management Behavioural Intention	n	Mean	Std. Deviation	Df	T	Sig.
Pre-test	162	3.06	0.92			
				161	4.895	0.000
Post-test	162	3.46	0.31			

***** Significant at 0.05 alpha level**

The result from Table 6 shows that the mean score for waste management behavioural intentions increased from ($M = 3.06$, $SD = 0.92$) in the pre-test to ($M = 3.46$, $SD = 0.31$) in the post-test, indicating an improvement in behavioural intentions towards waste management following the health education intervention. The t-value of ($t = 4.895$) and a p-value of 0.000 ($p < 0.05$) suggest that the difference in mean scores between the pre-test and post-test was statistically significant ($t(161) = 4.895$, $p < 0.05$). This implied that the health education intervention had a significant positive effect on the behavioural intentions of the women towards waste management.

Table 3: Summary of the mean differences in the effect of health education on household waste management behavioural intentions of women in Mgbuoshimini community based on age, level of education, and occupation.

Aggregates of the Variables	(n)	Pretest		Posttest		Mean Diff.
		Mean	Std. D	Mean	Std. D	
Age	162	3.00	0.92	3.50	0.31	0.50
Level of Education	162	2.49	0.92	3.56	0.31	1.07

Occupation	162	2.95	0.92	3.45	0.31	0.50
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The results in Table 1b show a significant improvement in the behavioral intention of women in Mgbuoshimini community across the demographic variables following the health education intervention. The total aggregate mean difference across all ages, educational levels, and occupations is 0.50, 1.07, and 0.50 respectively demonstrating a significant overall enhancement in behavioral intentions toward household waste management as a result of the health education intervention. These aggregates improvements underscore the effectiveness of the intervention in promoting positive behavioral changes among women of varying age groups, educational backgrounds, and occupations in the Mgbuoshimini community.

Table 4: ANCOVA of the effect of Health education on household waste management behavioural intentions of women based on age, level of education, and occupation

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	77.478 ^a	23	3.369	4.704	0.00	0.439
Intercept	25.406	1	25.406	35.479	0.00	0.205
Age	3.790	3	1.263	1.764	0.16	0.037
Educational Level	26.898	3	8.966	12.521	0.00	0.214
Occupation	2.708	3	0.903	1.261	0.29	0.027
Age * Educational Level	12.580	4	3.145	4.392	0.00	0.113
Age * Occupation	24.299	6	4.050	5.655	0.00	0.197
Educational Level *	0.285	2	0.142	0.199	0.82	0.003
Occupation						
Age * Educational Level *	7.248	2	3.624	5.061	0.09	0.068
Occupation						
Error	98.821	138	0.716			
Total	202.540	162				
Corrected Total	176.299	161				

a. R Squared = .439 (Adjusted R Squared = .346)

The ANCOVA result from Table 7 indicates that the overall model was statistically significant ($p < 0.05$), with an F-value of (4.704), suggesting that the variables in the model collectively explain a significant portion of the variance in waste management behavioral intention. The model explained 43.9% of the variance (R Squared = 0.439, Adjusted R Squared = 0.346), indicating a moderate fit. The intercept was highly significant ($p < 0.05$), with a partial eta squared of (0.205), indicating that it explains 20.5% of the variance in waste management behavioral intention. Age did not have a statistically significant effect on waste management behavioral intention ($F(3), 1.764, p > 0.05$), with a small partial eta squared (0.037), indicating that age alone did not substantially contribute to the variance. Educational level was highly significant ($F(3), 12.521, p < 0.05$) with a partial eta squared of (0.214),

showing that it explained 21.4% of the variance in waste management behavioral intention. This indicates that educational level was an important predictor. Occupation did not have a significant effect on waste management behavioral intention ($F(3), 1.261, p > 0.05$), with a partial eta squared of (0.027), suggesting a minimal effect on waste management behavioral intention. The interaction between age and educational level was significant ($F(4), 4.392, p < 0.05$), with a partial eta squared of 0.113, indicating that this interaction explained 11.3% of the variance. This indicates that the effect of educational level on behavioral intention varied by age. The interaction between age and occupation was significant ($F(6), 5.655, p < 0.05$) with a partial eta squared of 0.197, suggesting that this interaction explained 19.7% of the variance. This showed a strong combined effect of age and occupation on behavioral intention. The interaction between educational level and occupations was not significant ($F(2), 0.199, p > 0.05$) and has a negligible partial eta squared (0.003), indicating no meaningful combined effect of educational level and occupation. The three-way interaction was significant ($F(2), 5.061, p < 0.05$) with a partial eta squared of (0.068), suggesting that the combined effects of these three variables explain 6.8% of the variance in the waste management behavioral intention of the women.

Discussion of Findings

This study's findings demonstrated that health education had a significant positive effect on waste management behavioral intentions among the women in Mgbuoshimini community. The finding is heart-warming and quite rewarding, suggesting the intervention's effectiveness. One key reason for the positive effect is that the health education intervention provided clear guidance and practical steps on how to manage waste properly. This can reduce uncertainty about waste management practices and increase women's confidence in their ability to take action, leading to stronger intentions to engage in proper waste disposal. When individuals understand the direct impact of waste management on their community's well-being and see how they can contribute, they are more likely to form strong behavioural intentions. Additionally, health education programs often highlight the personal benefits of waste management, such as improved health and reduced exposure to harmful waste-related diseases. These perceived benefits can enhance women's motivation to engage in waste management, translating into higher intentions to carry out these practices. Another reason could be that the health education intervention involved demonstrations and role-playing activities that stimulated interest in positive waste management behaviours. These activities help bridge the gap between knowledge and practice, making it easier for participants to

visualize and plan how they will implement the learned practices in their daily lives, thereby solidifying their behavioural intentions.

This finding aligns with the findings of Pongpunpurt et al. (2022), which found that health education interventions aimed at improving knowledge about waste management had a strong influence on behavioural intentions. Their study of households in Thailand revealed that education significantly increased the intention to separate waste at the source, as participants became more confident in their waste management abilities. Similarly, Loan et al. (2023) noted that knowledge and awareness raised through education campaigns significantly impacted household intentions to adopt solid waste separation practices in Vietnam. Their findings align with the idea that educational interventions can empower individuals to form positive behavioral intentions toward sustainable waste practices. The results from Mgbuoshimini community demonstrate that health education is a powerful tool in shaping behavioural intentions for waste management, aligning with evidence from previous studies that show the critical role of education in fostering the intention to engage in pro-environmental behaviour.

The finding of this study also showed that health education had a positive effect on waste management behavioural intentions across all age groups, with the largest mean difference observed in the 50 years and above age group. This suggests that older women were the most responsive to the health education intervention in terms of changing their behavioral intentions toward waste management. A possible reason for this impact could be that older individuals, particularly those in the 50 years and above category, are more likely to engage in long-term thinking and concern for future generations. They may also have more experience with the consequences of poor waste management practices, which could drive a greater willingness to adopt new behaviors. This finding is supported by Giao and Thien (2022) who indicated in their study that older adults often display a stronger commitment to community health and environmental sustainability when given the right information. The 40-49-year-old age group also showed a notable improvement, possibly due to a combination of experiences, and professional and personal responsibilities that motivate them to improve household and community waste management practices. However, the 20-29 years and 30-39 years groups exhibited smaller improvements, which may reflect the different priorities of younger women who are still focused on career and personal development and might perceive waste management as less urgent. These findings are consistent with studies by Robat et al. (2022), which noted that older adults tend to have stronger behavioral intentions

following environmental interventions due to heightened awareness of long-term community and health impacts.

This study also observed that health education had a positive effect on waste management behavioural intentions among women in the Mgbuoshimini community, with variations based on their level of education. The intervention appeared particularly impactful for those with no formal education. This may be because women with no formal education might have had limited previous exposure to structured information on waste management, so the health education provided them with entirely new perspectives, leading to a significant shift in their intentions to improve waste management behaviours. Women with higher educational levels also demonstrated meaningful improvements, though to a lesser extent. This could be because individuals with some formal education may already have a foundation of knowledge about proper waste disposal practices, so the intervention is reinforced and built upon their existing understanding rather than causing dramatic changes. Nonetheless, the intervention was effective across all education levels, highlighting the broad applicability of health education in promoting positive waste management behaviours. This finding aligns with studies by Conti et al. (2024), who found that educational interventions have a stronger influence on individuals with lower educational attainment, as they often gain new knowledge that they can directly apply to their daily lives. Similarly, Ding et al. (2022) observed that health education is effective at improving behavioural intentions across various educational backgrounds, though the greatest change often occurs among those with the least prior knowledge.

The effect of health education on waste management behavioural intentions also varied based on occupation. The largest mean difference was observed in the civil servant group, suggesting that the intervention had the most substantial impact on this group. Civil servants may be more exposed to structured and formalized learning environments, which might explain their higher receptivity to health education intervention. Their professional role may also give them a greater sense of responsibility for public health and environmental practices, leading to stronger behavioural intentions related to waste management. The housewife group also showed a notable improvement, likely due to their direct involvement in household waste management. As primary caretakers of the home, housewives may have found the information particularly relevant and practical, leading to stronger intentions to adopt improved waste management practices. The farming group showed improvement as well, although to a slightly lesser degree. Farmers' livelihoods are closely tied to environmental

conditions, which may explain their receptiveness to health education focused on waste management. Finally, the business group exhibited the smallest mean difference. This could be because businesswomen might prioritize their professional obligations over environmental concerns, making the intervention slightly less impactful for them compared to the other groups. These findings are in line with a previous study by Akeju and Omotoso (2023), which highlighted that individuals in public service roles often respond more positively to health education initiatives. This may be due to a heightened awareness of their impact on broader public health outcomes. Additionally, Ashari et al. (2022) found that housewives and individuals engaged in agriculture are generally responsive to waste management interventions because of their immediate and tangible relevance to their daily activities.

Conclusion

Based on the findings of this study, it is evident that health education plays a pivotal role in enhancing waste management behaviour among women. The health education intervention demonstrated a significant effect on waste management behaviour intentions, with substantial improvements across all demographic groups, particularly among older women. These findings highlight the effectiveness of structured educational programs in raising awareness and deepening understanding of waste management practices, which is especially crucial in communities where women are key actors in household waste management.

Recommendations

Based on the findings, the following recommendations were made:

1. Health institutions, both public and private, should integrate waste management education into maternal and child health services, particularly within antenatal care programs. This initiative would enable the message of proper waste management to reach women and their households early, helping to instill environmentally responsible behaviors from the grassroots level.
2. Rivers State Waste Management Agency (RIWAMA), in collaboration with the Ministry of Environment and key community leaders, should integrate the health education intervention into their waste management strategies. This can serve as a grassroots approach to promote sustainable waste management practices at the household level and foster long-term behavioural changes across communities in Port Harcourt and Rivers State.

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