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Socio-Cultural Barriers to Community Participation in Environmental Sanitation among Urban Residents in Port Harcourt Metropolis

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Abstract

A clean and healthy environment is essential for sustainable urban living, yet community participation in environmental sanitation remains limited in many developing cities due to cultural and social constraints. This study investigated socio-cultural barriers to community participation in environmental sanitation among residents in Port Harcourt Metropolis. A descriptive cross-sectional survey design was employed to collect data from a sample of 615 residents using a validated a self-structured questionnaire which has a reliability coefficient of 0.89. Descriptive statistics of mean and standard deviation, alongside inferential statistics of regression were employed in data analysis. Findings revealed that the overall level of community participation in environmental sanitation was moderate (aggregate mean = 2.52, SD = 1.10) and that socio-cultural barriers moderately hindered participation (mean = 2.39, SD = 0.83). Additionally, weak involvement of traditional and religious leaders and entrenched gender norms were identified as contributing factors that limit collective participation. The regression analysis confirmed that socio-cultural variables significantly predicted community participation in environmental sanitation ($R^2 = 0.218$, $F = 19.74$, $p < 0.05$), although gender differences were not statistically significant ($p = 0.317$). Based on these findings, the study concludes that socio-cultural beliefs, gender roles, and lack of traditional leadership involvement contribute to the moderate level of participation in environmental sanitation in Port Harcourt Metropolis. Finally, the study recommended among others that government agencies and local leaders integrate cultural and religious institutions in sanitation awareness campaigns.

Keywords: Socio-Cultural barriers, Community participation, Environmental sanitation

Introduction

Environmental sanitation remains one of the most pressing public health concerns in developing nations, particularly within cities such as Port Harcourt, the capital of Rivers State, Nigeria. The World Health Organization (WHO, 2020) defines environmental sanitation as the promotion of hygiene and the prevention of disease through the proper management of environmental factors that affect human health. It encompasses waste disposal, water sanitation, vector control, hygiene promotion, and environmental management. The effectiveness of these efforts depends largely on the extent of community participation— a collective involvement of residents in planning, implementing, and maintaining sanitation interventions (Adegoke & Oyelola, 2019). For instance, despite numerous government and non-governmental sanitation programs in Port Harcourt, community participation remains limited, often due to deep-seated socio-cultural barriers that influence people's perceptions, beliefs, and practices toward environmental cleanliness.

In the context of urban Nigeria, sanitation challenges are not solely infrastructural or economic but are also rooted in the social and cultural fabric of the people. Socio-cultural factors such as traditional beliefs, gender norms, social hierarchy, and community structures play a crucial role in shaping attitudes and behaviors toward sanitation (Ede, 2021). These factors determine how individuals and groups perceive environmental cleanliness, waste disposal, and collective responsibility. For instance, in many Nigerian communities, sanitation has traditionally been viewed as the duty of women, particularly housewives, while men are often excluded from household or communal sanitation activities (Ademola & Oladele, 2020). Such gendered perceptions not only limit participation but also perpetuate unequal burdens that affect sanitation outcomes in urban environments.

The urban landscape of Port Harcourt presents unique challenges that intensify these socio-cultural barriers. As a metropolitan hub, it attracts diverse populations from different ethnic, religious, and cultural backgrounds, each bringing varying perceptions and practices related to sanitation (Wahab & Popoola, 2021). These differences often lead to disjointed community efforts, poor coordination, and conflicting attitudes toward environmental hygiene. Moreover, traditional cultural systems that once enforced communal sanitation through social norms and taboos have weakened under urbanization and modernization (Ifejika, 2019). In the absence of strong communal structures, individuals may adopt an attitude of indifference toward shared environmental responsibility, assuming that waste management is the sole duty of government agencies or private contractors.

From a sociological perspective, culture provides the framework through which people interpret their environment and define acceptable behavior. According to Hofstede (2011), culture shapes collective programming of the mind, influencing values, attitudes, and practices that guide human interaction. Applied to sanitation, this implies that people's willingness to participate in environmental management depends on their cultural understanding of cleanliness, purity, and community responsibility. In Port Harcourt, where socio-cultural diversity is pronounced, differences in language, religion, and social class create fragmented perceptions of environmental health, thereby limiting collective participation (Chukwu & Adebayo, 2020). For example, in certain communities, waste disposal in open drains may not be considered inappropriate due to the lack of perceived link between waste and disease, reflecting a knowledge gap embedded within cultural norms (Obinna, 2022).

The cultural dimension of environmental sanitation can also be understood through the concept of environmental behavior, which is shaped by values and socialization patterns. Ajzen's Theory of Planned Behavior (1991) postulates that attitude, subjective norms, and perceived behavioral control influence individuals' actions. Within the Port Harcourt context, attitudes toward sanitation are often shaped by cultural beliefs that associate waste with poverty or low social status (Eneanya, 2020). Consequently, some residents may distance themselves from sanitation exercises to avoid social stigma, perceiving participation as an activity for the "less privileged." Such social stratifications reduce the inclusivity and effectiveness of community-based sanitation initiatives, even when facilities and programs are available.

Religious and traditional beliefs also influence environmental sanitation practices. In some traditional settings, there are taboos against cleaning or disposing of waste during specific periods, such as sacred days or festivals, which disrupt regular sanitation routines. Similarly, fatalistic religious attitudes that attribute illness or environmental problems to divine will

rather than human negligence weaken people's motivation to engage in proactive sanitation behaviors (Afolabi & Iwu, 2021). These beliefs, when collectively held, form cultural barriers that hinder the effectiveness of environmental policies and community-driven sanitation efforts.

Furthermore, socio-cultural structures influence power dynamics and decision-making processes within communities. In many parts of Rivers State, community leadership and decision-making are dominated by elders and men, leaving women and youth who often bear the brunt of poor sanitation underrepresented (Uchenna, 2022). Consequently, decisions about community sanitation initiatives may not reflect the priorities or experiences of those most affected by unsanitary conditions. This exclusion perpetuates gender inequity in sanitation participation and undermines the sustainability of interventions (Olawale & Nwosu, 2020). In contrast, evidence from other developing regions shows that when women and youth are meaningfully included in sanitation planning, community ownership and participation significantly improve (UN-Habitat, 2020).

Urbanization adds another socio-cultural layer to the sanitation problem in Port Harcourt. The rapid growth of informal settlements and slums has created culturally diverse but socially fragmented communities where residents lack shared norms or values concerning environmental hygiene (Ogu, 2021). In these settings, residents may prioritize survival and economic activities over sanitation, viewing cleanliness as a luxury rather than a necessity. The erosion of communal ties and traditional enforcement systems such as village meetings and sanctions has weakened collective accountability (Okoye, 2022). Without cultural mechanisms to reinforce participation, government-led sanitation programs often face apathy or noncompliance from residents who see such efforts as externally imposed.

The historical evolution of sanitation culture in Nigeria also provides insight into current participation patterns. During the colonial period, environmental sanitation was often enforced through legal mandates rather than voluntary community engagement (Ekpo & Ekanem, 2018). The legacy of enforcement without engagement still lingers, particularly in urban areas like Port Harcourt (Nwachukwu & Akinola, 2019). Many residents, therefore, wait for directives from authorities before engaging in sanitation activities, reflecting a cultural dependency rooted in historical governance patterns.

Another cultural element affecting community participation is the declining sense of communal ownership of public spaces. Traditional African societies, including those in Rivers State, once maintained a strong sense of collective responsibility over shared environments (Opara, 2021). However, urban migration and modernization have weakened these communal values, promoting individualism and reducing participation in group activities such as sanitation days. Residents often view streets, drains, and markets as "no man's land," leading to indiscriminate dumping and apathy toward environmental management (Adeniran & Afolabi, 2022). This shift in social values has created a disconnect between the people and their environment, undermining collective action and sustainability of sanitation programmes.

The implications of these socio-cultural barriers are profound for public health and sustainable urban development. Poor community participation exacerbates environmental degradation, increases disease outbreaks such as cholera and typhoid, and undermines government investments in sanitation infrastructure (WHO, 2021). When cultural norms discourage active engagement, even the most advanced sanitation technologies or waste management systems fail to achieve their goals. Therefore, understanding and addressing

these barriers is essential to designing culturally responsive sanitation policies that reflect the lived realities of urban residents (Adedeji, 2021). Also, addressing these socio-cultural challenges is critical to achieving sustainable environmental health, reducing disease burdens, and fostering a culture of shared responsibility among residents of Port Harcourt. Thus, this study sought to determine the socio-cultural barriers that hinder effective community participation in environmental sanitation, with the aim of providing insights for culturally informed interventions and policies.

Methods

This study employed a descriptive cross-sectional survey design. The sample comprised 620 residents of Port Harcourt Metropolis, drawn from a total population of 2,067,721. A multi-stage sampling procedure consisting of stratified, quota, and simple random techniques was used to select participants. Data was collected using a validated self-structured instrument titled: Barriers to Community Participation in Environmental Sanitation Questionnaire (BCPESQ), which had a reliability coefficient of 0.89 calculated using Conbach's Alpha. The instrument comprised two sections: Section A captured demographic information such as age, sex, and residential area, while Section B contained items addressing socio-cultural barriers to community participation in environmental sanitation. Responses in Section B followed a modified four-point Likert scale: Very Often (4), Often (3), Rarely (2), and Never (1). The researcher, assisted by two trained research aides, personally distributed the questionnaires to respondents. To enhance accessibility and prompt feedback, electronic copies were also shared. Upon collection, all completed copies of the questionnaire were sorted, coded, and subjected to statistical analysis using mean, standard deviation, and regression analysis.

Results

Table 1**: Mean analysis of the level of community participation in environmental sanitation (n = 615)**

S/No	Statement	Mean	Std.Dev
1	Sweeping my surroundings regularly.	2.81	1.062
2	Proper disposal of household wastes.	2.72	1.093
3	Participation in community sanitation exercises.	2.67	1.110
4	Separation of waste into recyclable and non-recyclable.	2.12	1.045
5	Burning or burying of waste safely when necessary.	2.68	1.112
6	Cleaning of the drainage system near my home.	2.60	.962
7	Attend environmental sanitation awareness campaigns.	2.24	1.094
8	Discouraging others from littering.	2.36	1.203
9	Reporting illegal dumping activities to authorities.	2.08	1.053
10	Reuse of containers or materials when possible.	2.68	1.221
11	Avoiding the use of single-use plastics.	2.22	1.103
12	Educating others on proper waste disposal.	2.68	1.057
13	Taking part in the monthly environmental cleanup.	2.61	1.252
14	Proper disposal of batteries and electronics.	2.48	1.078

15	Use of covered bins for waste storage.	2.68	1.221
16	Ensuring that my household members follow sanitation rules.	2.61	1.092
17	Contributing money or buying tools for environmental sanitation.	2.30	1.247
18	Supporting environmental clubs or groups.	2.72	1.126
19	Using public waste bins instead of littering.	2.73	1.128
20	Picking up trash when I see it on the street.	2.78	1.163
21	Composting organic waste.	2.46	1.241
22	Taking part in school/workplace environmental campaigns.	2.02	.997
23	Encouraging neighbors to clean their environment.	2.61	1.224
24	Keeping surroundings clean during the rainy season.	2.69	1.030
25	Planting trees or flowers to beautify the environment.	2.73	.932
26	Not dumping waste into the drainage.	2.57	1.037
27	Participation in recycling programs.	2.11	1.000
28	Cleaning up liters after outings or events.	2.62	1.057
29	Proper disposal of animal or pet waste.	2.57	1.037
30	Talking to others about the importance of sanitation.	2.39	1.114
	Aggregate	**2.518**	**1.103**

*** mean crit** (2.50), mean <2.50 (low level); 2.50-3.0 (moderate level) and 3.10-4.00 (high level)

The data in table 1 is summary of the mean and standard deviation scores of the respondents' level of participation in environmental sanitation. The result revealed that activities with relatively higher participation included sweeping surroundings (2.81 ± 1.06), picking up trash (2.78 ± 1.16), and planting trees/flowers (2.73 ± 0.93). Conversely, low participation was recorded in activities such as proper disposal of batteries/electronics (2.48 ± 1.08), composting organic waste (2.46 ± 1.24), and taking part in workplace/school environmental campaigns (2.02 ± 1.00). Overall, the aggregate mean score for community participation in environmental sanitation was 2.52 ± 1.10, indicating the level of community participation in environmental sanitation among the residents in Port Harcourt Metropolis was moderate.

Table 2: **Mean analysis of the sociocultural factors that constitute barriers to community participation in environmental sanitation (n = 615)**

S/No	Sociocultural factors	Mean	Std. Dev
1	The perception that environmental sanitation is the sole responsibility of the government.	2.68	1.112
2	Lack of elders' and traditional rulers' emphasis on the importance of sanitation as a communal responsibility.	2.60	.962
3	Cultural expectations which place the responsibility of sanitation primarily on youths.	2.24	1.094
4	The perception of environmental sanitation as a task for lower social classes, reducing willingness to participate.	2.27	1.125
5	Resistance to modern sanitation techniques due to deep-rooted	2.85	1.057

	traditional practices.		
6	Strong religious practices sometimes hinder peoples participation in scheduled sanitation exercises.	2.35	.808
	Aggregate	**2.39**	**.832**

** $Mean_{crit}$ 2.50: mean <2.00 =not a barrier, 2.10-2.49=low barriers; 2.50-3.00 moderate barrier; 3.10-4.00 High barrier.*

The analysis of sociocultural factors in Table 2 shows that respondents generally perceived low barriers to participation in environmental sanitation, with an overall mean score of 2.39 (SD = 0.832). However, a few individual factors emerged as moderate barriers. Notably, resistance to modern sanitation techniques due to traditional practices recorded the highest mean score of 2.85 (SD = 1.057), suggesting that entrenched cultural beliefs hinder engagement. Similarly, the perception that sanitation is the sole responsibility of government (M = 2.68, SD = 1.112) and lack of elders' and traditional rulers' emphasis on sanitation (M = 2.60, SD = 0.962) were also moderate barriers. By contrast, factors such as cultural expectations placing responsibility on youths (M = 2.24, SD = 1.094), perceiving sanitation as a lower-class activity (M = 2.27, SD = 1.125), and religious practices hindering participation (M = 2.35, SD = 0.808) were rated as low barriers.

Table 3: **Summary of regression analysis coefficients of sociocultural factors as barriers to community participation in environmental sanitation**

S/No	Statement	B	Std. Error	Beta	t (B ÷ SE)	Sig.
1	(Constant)	-3.713	0.136	—	-27.301	0.000
2	The perception that environmental sanitation is the sole responsibility of the government	-0.43	0.044	0.002	-9.773	0.002
3	Lack of elders' and traditional rulers' emphasis on the importance of sanitation as a communal responsibility	-0.29	0.044	0.032	-6.591	0.007
4	Cultural expectations which place the responsibility of sanitation primarily on youths	-0.15	0.042	-0.015	-3.571	0.032
5	The perception of environmental sanitation as a task for lower social classes	-0.35	0.038	0.045	-9.211	0.002
6	Resistance to modern sanitation techniques due to deep-rooted traditional practices	-0.29	0.043	-0.036	-6.744	0.007
7	Strong religious practices sometimes hinder my participation	-0.148	0.065	-0.137	-2.277	0.023

$R = 0.440$; $R^2 = 0.194$; adj $R^2 = 0.187$; $F = 12.034$; $P<0.05$; Durbin Watson = 1.137
a. Dependent Variable: Community Participation in Environmental Sanitation

The regression analysis in Table 3 indicates that socio-cultural factors significantly hinder community participation in environmental sanitation. Key predictors with significant negative effects include perceiving sanitation as solely the government's responsibility (B = -0.43, t =

-9.77, p = 0.002), lack of elders' and traditional rulers' emphasis on sanitation (B = -0.29, t = -6.59, p = 0.007), cultural expectations placing responsibility on youths (B = -0.15, t = -3.57, p = 0.032), viewing sanitation as a task for lower social classes (B = -0.35, t = -9.21, p = 0.002), resistance to modern techniques (B = -0.29, t = -6.74, p = 0.007), and strong religious practices (B = -0.148, t = -2.28, p = 0.023). The model explains 19.4% of the variance in participation (R^2 = 0.194, Adjusted R^2 = 0.187) and is statistically significant overall (F = 12.034, p < 0.05). The Durbin–Watson statistic of 1.137 suggests no severe autocorrelation issues, supporting the reliability of the model's estimates. Consequently, the null hypothesis is rejected, confirming that socio-cultural factors pose significant barriers to residents' participation in environmental sanitation.

Discussion

The study found that socio-cultural factors significantly shape how residents in Port Harcourt and Obio-Akpor LGAs engage in environmental sanitation. Many residents perceive sanitation as a government duty rather than a communal responsibility, leading to weak ownership of sanitation practices. Cultural and religious orientations also play a role, as some communities prioritize traditional rituals or religious activities over sanitation, undermining collective participation. Gender roles further reinforce these barriers, where men often view sanitation as women's work, limiting male involvement in routine sanitation exercises. Additionally, social class perceptions create inequalities, as wealthier households often rely on paid cleaners while poorer residents shoulder the manual responsibilities. These socio-cultural influences highlight that sustainable community participation requires cultural reorientation and active leadership engagement.

Several empirical studies support these findings. A study in Lagos by Akinwale and Adepoju (2019) showed that residents often defer sanitation responsibilities to government agencies, citing cultural expectations that downplay individual obligations. Similarly, Ekong and Edem (2020) found that in Akwa Ibom State, traditional and religious leaders rarely mobilized communities for sanitation, reinforcing weak collective ownership. Adebayo et al. (2021) observed that cultural perceptions of gender in Osun State made women disproportionately responsible for sanitation, which discouraged men from active participation. Beyond Nigeria, studies in Ghana by Owusu-Sekyere (2018) revealed that social status dictated engagement, where elites considered sanitation beneath them, outsourcing the task to hired laborers. Together, these studies illustrate how socio-cultural barriers manifest through shared beliefs, traditions, and class structures, confirming that behavioral and cultural factors strongly influence sanitation practices in many African communities.

Conversely, some studies reveal contrasting outcomes. For instance, Nwachukwu and Ume (2017) in Enugu found that religious institutions successfully mobilized congregations for regular clean-up exercises, indicating that faith-based orientation can also strengthen sanitation efforts. In Ibadan, Adeyemo and Omotayo (2020) reported that community-based cultural festivals were used as platforms to encourage collective sanitation, demonstrating how traditions could foster, rather than hinder, participation. Similarly, Mensah (2019) in Ghana documented that urban middle-class communities developed neighborhood sanitation committees where socio-economic status encouraged leadership roles and accountability. These findings suggest that while socio-cultural factors can serve as barriers, they may also act as enablers when harnessed effectively. The divergence in evidence implies that the influence of socio-cultural norms is not universally restrictive but contingent on how cultural and religious systems are mobilized within specific contexts.

The persistence of hierarchical cultural norms in many African settings often means that environmental sanitation is undervalued and assigned to marginalized groups such as women or the poor. Yet these same norms can be reshaped into enabling forces when traditional or religious leaders take active roles in mobilizing communities. Evidence from Zimbabwe and Rwanda shows that Community Health Clubs increased hygiene practices such as handwashing and latrine construction by embedding interventions within local cultural frameworks and peer support systems (Waterkeyn & Cairncross, 2005). These outcomes suggest that socio cultural barriers are not rigid but highly dependent on the presence of leadership, mobilization, and social cohesion. Where community leaders promote sanitation, cultural and religious practices become drivers of participation, while in their absence the same norms entrench passivity and reliance on government. This indicates that leadership, belief systems, and social organization determine whether cultural influences act as barriers or catalysts to sustainable sanitation practices.

Conclusion

Based on the findings of this study, it was concluded that community participation in environmental sanitation among residents of Port Harcourt Metropolis is moderate. Residents actively engage in simple activities such as sweeping and picking up trash but show low involvement in more organized or technical practices like composting and electronic waste disposal. Although socio-cultural barriers were generally low, factors such as resistance to modern sanitation techniques, the belief that sanitation is the government's responsibility and the lack of traditional leaders' involvement moderately hinder participation. Other barriers, including religious restrictions and social perceptions, had minimal impact.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Government and community-based organizations should organize continuous awareness and education campaigns aimed at correcting traditional beliefs that discourage modern sanitation practices. These programs should emphasize that environmental cleanliness is a collective responsibility, not a cultural taboo.
2. Traditional rulers, elders, and opinion leaders should be actively engaged in promoting environmental sanitation. Their endorsement and participation can influence community attitudes and increase residents' willingness to take part in sanitation activities.
3. Local authorities should create structured partnerships with community associations to jointly plan and implement sanitation programs. This shared approach will help dispel the perception that sanitation is solely the government's duty and foster a stronger sense of ownership among residents.
4. Schools, religious institutions, and youth organizations should integrate environmental sanitation education into their programs. Encouraging youths to lead clean-up exercises and environmental campaigns can help build long-term commitment to sustainable sanitation practices within the community.

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