

PUBLIC RELATIONS STRATEGIES ON ENVIRONMENTAL SANITATION ON RADIO AMONG RESIDENTS OF CALABAR METROPOLIS

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Abstract

Environmental sanitation has become a compulsory activity in Cross River State at every last Saturday of the month. This study examined the influence of radio broadcast media on environmental sanitation among residents of Calabar Metropolis. The study specifically examined residents' exposure to radio environmental sanitation messages, determined their level of awareness and understanding of such messages, and examined the influence of radio environmental sanitation messages on their environmental sanitation practices. The study adopted the survey research design. The population comprised residents of Calabar Municipality and Calabar South Local Government Areas, with a projected combined population of 682,610 in 2025. Using the Taro Yamane formula at a 5% level of precision, a sample size of 400 respondents was obtained. Respondents were selected purposively from the two Local Government Areas, while data were collected through a structured questionnaire. The data were analysed using frequency counts and simple percentages. Findings from the 390 correctly completed copies of the questionnaire showed that 61.3% of respondents heard environmental sanitation messages on radio very often or often, while 57.7% listened frequently or very frequently to radio programmes containing sanitation information. The findings further showed that 67.4% had high or very high awareness, while 67.1% reported good or very good understanding of the messages. In addition, 66.4% reported that radio messages influenced their efforts to keep their surroundings clean to a great or very great extent, while 65.9% reported similar influence on participation in sanitation activities. The study concluded that radio constituted an important channel for environmental sanitation communication in Calabar Metropolis. It recommended sustained sanitation broadcasting, clearer action-oriented messages, and stronger collaboration between radio stations, government agencies and communities to support sanitation practices.

Keywords: Radio, environmental sanitation, broadcast media, awareness, sanitation practices, Calabar Metropolis.

Introduction

Environmental sanitation is an important aspect of public health and community development because the quality of the physical environment has implications for human health, social wellbeing and the general quality of life of residents. Environmental sanitation involves practices directed towards keeping human surroundings clean and healthy through proper waste disposal, effective drainage management, maintenance of public spaces, hygienic handling of refuse and other measures that reduce environmental hazards. The World Health Organization (WHO, 2024) notes that inadequate sanitation is associated with several health problems, including diarrhoeal diseases, cholera, dysentery, typhoid and intestinal worm infections. This makes environmental sanitation not only an environmental issue but also an important public health concern.

In Nigeria, environmental sanitation remains a significant concern because of problems associated with indiscriminate waste disposal, inadequate waste management facilities, blocked drainage channels, open defecation and other unsanitary practices. The continuing attention given to sanitation by government and development organisations demonstrates the importance of improving sanitation practices across Nigerian communities. For instance, the Federal Government's renewed Clean Nigeria Campaign has continued to emphasise the need to eliminate open defecation and improve access to safe and dignified sanitation facilities across the country (UNICEF, 2024). Environmental sanitation therefore requires not only the provision of physical infrastructure but also continuous public enlightenment that enables residents to understand appropriate sanitation practices and participate in maintaining a clean environment.

Communication is central to environmental sanitation because people require information about the causes, consequences and appropriate responses to environmental problems. Through communication, members of the public can be informed about proper waste disposal, environmental

cleanliness, drainage maintenance, recycling, community sanitation exercises and the health implications of poor sanitation. Ezeaka and Bartholomew (2025) argue that communication has an important role in addressing sanitation challenges in Nigeria, particularly by improving public awareness and encouraging compliance with appropriate sanitation practices. They further emphasise the relevance of localised and culturally appropriate communication strategies in addressing environmental sanitation challenges in Nigeria.

The mass media provide important channels through which environmental sanitation information can be disseminated to large numbers of people. Newspapers, television, radio and digital media can provide information through news reports, discussions, interviews, advertisements, jingles, documentaries and public service announcements. These different formats allow environmental issues to be presented from different perspectives and can provide opportunities for public enlightenment. Akobe and Lukman (2025), for example, found that radio, television, social media, posters and interpersonal communication were among the channels used for disseminating information on waste disposal in Minna, Nigeria. Their findings also indicated that media-based environmental information dissemination could contribute to improved hygienic practices and public health awareness.

Among the different forms of mass media, radio remains an important medium for public enlightenment because of its accessibility, affordability and ability to reach people in different locations. Radio can transmit information through spoken language and can accommodate programmes such as interviews, phone-in discussions, panel discussions, jingles, news reports, documentaries and public announcements. These characteristics make it particularly suitable for communicating issues that require repeated public awareness and community participation. Evidence from environmental sanitation studies in Nigeria supports the relevance of radio as

a source of sanitation information. Sani and Aminu (2022), in their study of communication and sustainable environmental sanitation in local communities in Zaria, found that radio was regarded by respondents as the most reliable medium for relaying sanitation messages. However, the study also reported poor knowledge and attitudes towards environmental sanitation among respondents, suggesting that access to sanitation messages does not automatically guarantee appropriate sanitation practices.

The use of radio for environmental sanitation communication has also been examined in other Nigerian communities. Nwaerema et al. (2023), in a study of environmental sanitation and communication practices in Port Harcourt, found that radio was the most prominent medium identified for communicating environmental sanitation among the media considered. Their study showed that radio, television and print media were used to communicate sanitation information, with radio recording the highest level of use among the identified media. The researchers consequently emphasised the need for government and relevant stakeholders to make greater use of local and national media in communicating environmental sanitation information.

Similarly, Linus (2022) examined broadcast media content and audience attitudes towards environmental sanitation in Makurdi Metropolis. The study found that residents relied on broadcast media as a source of environmental information and that environmental sanitation content broadcast through the media was associated with audience attitudes and habits concerning the environment. This suggests that broadcast media may perform more than an informational function because the manner in which environmental sanitation issues are presented may contribute to how audiences perceive and respond to environmental practices.

Radio has also been examined specifically as an instrument of environmental sanitation enlightenment. Sanusi et al. (2023), in their study of Offa residents, investigated the use of radio for public enlightenment on

environmental sanitation. The study considered residents' perceptions of the role of radio stations in sanitation awareness campaigns, the contribution of radio to environmental sanitation enlightenment and the level of public awareness generated by sanitation campaigns. The focus on these dimensions demonstrates the importance of examining not simply whether residents listen to radio but whether radio content provides meaningful environmental sanitation information to its audience. More recently, Umar et al. (2025) examined public exposure and responses to environmental sanitation messages broadcast by Adamawa Broadcasting Corporation Radio in Yola Metropolis. Their findings indicated that exposure to sanitation messages was relatively low and that behavioural compliance remained limited, with infrastructural deficiencies and irregular waste collection identified as additional factors affecting sanitation practices.

The relevance of radio to environmental sanitation communication is also demonstrated by research conducted in southern Nigeria. Ikon et al. (2025) examined the role of radio broadcasts in promoting community participation in monthly environmental sanitation in Uyo, Akwa Ibom State. The study found that residents obtained information about environmental sanitation through radio and regarded radio programmes as an important medium for disseminating information on sanitation practices. The researchers therefore emphasised the need for regular media sensitisation on waste management and other environmental issues. These findings are relevant to the present study because Calabar Metropolis is also an urban environment in southern Nigeria where radio can provide a channel for communicating information about environmental sanitation to residents.

Calabar Metropolis provides an important setting for examining the influence of radio on environmental sanitation. As an urban centre in Cross River State, Calabar comprises residential neighbourhoods, markets, commercial areas, educational institutions, recreational spaces, roads and other public locations where environmental sanitation practices have

implications for residents and visitors. The maintenance of a clean environment requires the combined efforts of relevant authorities, private waste-management actors, community organisations and individual residents. Communication through radio can support these efforts by providing residents with information about sanitation expectations, environmental hazards, waste disposal practices and community sanitation activities.

However, the existence of environmental sanitation messages on radio does not necessarily mean that residents will automatically adopt the recommended practices. The influence of radio may depend on the frequency of sanitation messages, the clarity and relevance of the content, the credibility of the source, the language used, audience exposure and opportunities for listeners to participate in programmes. Furthermore, sanitation behaviour can also be affected by factors outside media communication, including the availability of waste bins, regularity of waste collection, drainage infrastructure, enforcement of sanitation regulations and residents' socioeconomic circumstances. Umar et al. (2025), for instance, reported that infrastructural deficits and irregular waste collection could constrain behavioural responses to radio sanitation messages.

In Cross River State, environmental sanitation has also been institutionalised as a regular community activity. The last Saturday of every month is observed as a sanitation day, during which residents are encouraged to clean their homes, business premises, streets, drainage channels and other public surroundings. The monthly sanitation exercise creates a recurring opportunity for environmental information to be communicated to residents and for members of the public to participate in maintaining a clean environment. Radio is particularly relevant to this process because announcements and other sanitation-related broadcasts can be used to remind residents of the scheduled exercise, communicate the expected sanitation

activities and encourage compliance with environmental sanitation requirements.

The use of radio announcements in connection with the monthly sanitation exercise demonstrates the relationship between broadcast communication and environmental sanitation. Before and around sanitation days, radio can serve as a channel for announcing the date of the exercise, informing residents about restrictions or expectations during the period, encouraging participation and reminding the public of the importance of keeping their surroundings clean. Repeated announcements can also help to maintain public awareness of the sanitation exercise beyond the immediate day of the activity. In this regard, radio does not merely provide general environmental information but can function as a practical communication channel linking government sanitation directives with residents' everyday activities.

This is particularly relevant in **Calabar Metropolis**, where residents constitute an important part of the environmental sanitation process. Although government agencies and waste-management authorities are responsible for providing and regulating sanitation services, residents' participation remains necessary for effective environmental cleanliness. Radio announcements concerning the monthly sanitation exercise may therefore influence residents' awareness of the sanitation day, their understanding of sanitation requirements and their willingness to participate in environmental cleaning activities..

Statement of the Problem

Environmental sanitation is essential to the health, safety and general wellbeing of residents in any urban community. Despite efforts by government and other stakeholders to promote environmental cleanliness, poor sanitation practices continue to constitute an environmental concern in many Nigerian cities. Indiscriminate disposal of refuse, littering of streets

and public spaces, blockage of drainage channels and improper management of domestic and commercial waste can undermine the cleanliness of the urban environment. These problems are particularly important in growing urban centres where increasing population and commercial activities generate substantial amounts of waste.

In Cross River State, environmental sanitation is given regular public attention through the observance of the last Saturday of every month as a sanitation day. The monthly exercise provides an opportunity for residents to clean their surroundings and participate in activities aimed at improving environmental cleanliness. Radio announcements and other broadcast messages are also used to remind and inform members of the public about the sanitation exercise. Through such announcements, residents can be informed about the date of the exercise, expected activities and the importance of participating in environmental sanitation. However, the existence of these announcements does not necessarily establish the extent to which residents actually receive, understand and respond to the information provided.

The problem, therefore, is not simply the availability of radio as a medium for environmental sanitation communication, but the extent to which its messages influence residents' sanitation awareness and practices. Radio messages may inform residents about the importance of proper waste disposal, regular cleaning of their surroundings and participation in the monthly sanitation exercise. However, residents' responses to such messages may vary depending on their level of exposure, frequency of listening, understanding of the messages, perceived relevance of the information and other environmental conditions within their communities. Consequently, it is necessary to establish whether radio communication is making a meaningful contribution to environmental sanitation among residents.

Existing studies have examined the use of radio and other media for environmental sanitation communication in different parts of Nigeria. For example, Sani and Aminu (2022) examined communication and sustainable

environmental sanitation in local communities in Zaria, while Nwaerema et al. (2023) investigated environmental sanitation and communication practices in Port Harcourt. Similarly, studies by Linus (2022) and Sanusi et al. (2023) examined the relationship between broadcast media, environmental sanitation information and audience responses in other Nigerian communities. These studies demonstrate the relevance of broadcast media to environmental sanitation communication. However, their findings are situated in different geographical and social environments and therefore cannot automatically be applied to residents of Calabar Metropolis.

The specific problem addressed by this study is the limited empirical understanding of the influence of radio sanitation messages and announcements on environmental sanitation among residents of Calabar Metropolis

Research Objectives

The general objective of this study is to examine the influence of broadcast media on environmental sanitation on radio among residents in Calabar Metropolis. Specifically, the study seeks to:

1. Examine the level of residents' exposure to radio environmental sanitation messages in Calabar Metropolis.
2. Determine the level of residents' awareness and understanding of environmental sanitation messages on radio in Calabar Metropolis.
3. Examine the influence of radio messages environmental sanitation messages on residents' environmental sanitation practices in Calabar Metropolis.

1.4 Research Questions

The following research questions guide the study:

1. What is the level of residents' exposure to radio environmental sanitation messages in Calabar Metropolis?
2. What is the level of residents' awareness and understanding of environmental sanitation messages on radio in Calabar Metropolis?

3. To what extent do radio environmental sanitation messages influence residents' environmental sanitation practices in Calabar Metropolis?

Review of Related Literature

Public Relations Strategies

Public relations strategies are deliberate approaches through which organisations communicate with their publics, create awareness, manage relationships and promote understanding of organisational activities. Strategy is regarded as a central component of public relations because communication activities are expected to be purposeful, planned and directed towards specific organisational and stakeholder objectives. Andersson (2024) explains that public relations strategy involves both deliberate planning and the practical activities through which communication objectives are pursued. Similarly, Gregory (2020) emphasises research, objective setting, strategy development, implementation and evaluation as important components of effective public relations campaigns.

One important public relations strategy is **publicity**, which involves generating public attention through news releases, media stories, interviews, features and other forms of unpaid media coverage. Publicity enables organisations to communicate information about their activities through media channels without purchasing conventional advertising space or airtime. Elrod and Fortenberry (2020) identify publicity and other unpaid promotional methods as important means through which organisations communicate stories and information to their publics. Their discussion demonstrates that publicity can provide organisations with opportunities to place issues, activities and institutional messages before audiences through media coverage.

Media relations constitutes an important component of this publicity-oriented approach. Johnston (2020) notes that changes in media platforms, social media and digital communication have significantly transformed the

relationship between public relations practitioners and the news media. The use of media releases, interviews, media conferences, media kits and online media centres provides organisations with different opportunities to present information to journalists and other media professionals. Thus, publicity is not restricted to traditional newspapers and broadcast media but increasingly incorporates online news platforms and digital channels.

The importance of media relations to public relations is also supported by recent scholarship. A systematic review by Lee, Sha and others (2023) found that public relations strategy and media relations practice constitute major themes within media relations scholarship. The review further indicates that media relations remains an important area through which organisations interact with mass media and seek media coverage. This suggests that establishing professional relationships with journalists and providing relevant information can form an important part of an organisation's broader public relations strategy.

Publicity can take several forms, including press releases, interviews, feature articles, press conferences, media briefings and news stories. A press release allows an organisation to provide journalists with information about an event, programme, achievement or organisational development. Interviews allow organisational representatives to explain issues and respond directly to questions from journalists and the public. Feature stories can provide more detailed information about organisational programmes and activities, while press conferences provide opportunities for organisations to communicate with several media organisations simultaneously. These activities can increase the visibility of an organisation and create opportunities for its activities to become part of wider public discourse.

The emergence of digital media has further expanded the possibilities for publicity. Nyitse, Damilare and Agbele (2023) observe that digitalisation has transformed public relations practice in Nigeria, with organisations increasingly using corporate websites, electronic press releases, video press

releases, live sessions and social networking applications as part of their communication activities. Digital platforms therefore provide additional channels through which organisations can disseminate information and interact with their publics.

Publicity also has implications for credibility and organisational reputation because media coverage can expose organisational activities to audiences beyond the organisation's immediate communication channels. However, the organisation does not have complete control over how journalists frame or present information. The media may select particular aspects of an organisational story based on news values, audience interest and editorial considerations. Consequently, public relations practitioners need to provide timely, accurate and newsworthy information while maintaining professional relationships with media practitioners. Johnston (2020) similarly stresses the importance of understanding the media environment and selecting appropriate media outlets when conducting media relations activities.

In Nigeria, the changing communication environment has made the integration of traditional publicity with digital communication increasingly relevant. Iyinoluwa, Omipidan and Ifeduba's review of public relations research in Nigeria identifies reputation management, crisis communication and public relations strategies as important areas of contemporary Nigerian PR scholarship. The authors further highlight the importance of communication between organisations and their stakeholders. This is particularly relevant to organisations operating within communities where public awareness and stakeholder understanding can influence perceptions of organisational activities.

Environmental Sanitation

Environmental sanitation encompasses practices and services that reduce environmental risks and maintain healthy surroundings. In urban communities, it includes proper waste generation, storage, collection,

transportation and disposal, as well as drainage management and cleanliness of streets, markets and residential surroundings. Sanitation is therefore both behavioural and institutional. Residents are expected to dispose of waste responsibly, but authorities must also provide functional systems that make responsible behaviour possible.

The Calabar literature illustrates this dual nature. Samson-Akpan (2009) identified deficiencies in waste storage, collection, transportation and disposal, while Agbaji and Ejemot-Nwadiaro (2019) described institutional challenges in the management of solid waste in Calabar Metropolis. Aigberua et al. (2024) further showed that environmental conditions around the Lemna dumpsite have implications for sustainable waste management. These studies indicate that sanitation problems cannot be reduced to individual attitudes alone; they are linked to governance, infrastructure, urban growth and institutional capacity.

Environmental Communication

Environmental communication involves the strategic use of communication processes to create understanding, shape public discourse and support action on environmental issues. It may involve mass media, interpersonal communication, community dialogue, advocacy and participatory communication. For sanitation, effective environmental communication should explain the problem, identify practical actions, address barriers, build social norms and provide feedback mechanisms. The most effective strategy is therefore unlikely to be a single medium or message format.

Radio and Environmental Sanitation Communication

Radio has several characteristics that make it suitable for sanitation communication. First, its comparatively low cost allows many households to access radio content. Second, radio can be used in local languages and culturally familiar forms. Third, repetition allows sanitation messages to become familiar. Fourth, interactive formats such as phone-ins, interviews

and audience discussions can make communication more responsive. Fifth, radio can connect citizens with environmental agencies by giving public officials opportunities to explain policies while allowing residents to raise complaints and ask questions.

Nigerian evidence supports these functions. Idamah (2015) examined broadcast-media enlightenment campaigns on solid-waste management in South-South Nigeria and reported a relationship between broadcast-media awareness and attitudes towards waste-management messages. Linus (2022), working in Makurdi, found that broadcast environmental content was perceived by respondents as shaping their attitudes towards environmental sanitation. Bappayo and Maidunoma (2018) also reported that radio stations could create awareness of proper solid-waste-management practices and provide a platform for community discussion.

However, media influence should not be exaggerated. Ojebode (2005) found that listeners to environmental radio jingles in Oyo State understood the messages and trusted them, yet recommended behaviours were not consistently adopted because supporting infrastructure was inadequate. This finding is particularly instructive for Calabar. If residents are told to dispose of waste at designated collection points but such points are inaccessible, irregularly serviced or poorly maintained, the communication campaign may create frustration rather than compliance.

Haruna (2023) provides another useful perspective. The study of drainage sanitation communication by the Abuja Environmental Protection Board found that radio was the leading source of information among respondents, but reliance on radio without a wider communication mix was associated with limited behaviour change. The implication is that radio should function as part of an integrated environmental communication system involving interpersonal dialogue, community mobilisation, enforcement and infrastructure. This position is also consistent with evidence from behavioural communication research showing that exposure to several

complementary channels can produce stronger outcomes than reliance on a single channel.

For Calabar, radio sanitation programmes can therefore be organised around practical local concerns: waste collection schedules, illegal dumping points, drainage obstruction, market sanitation, plastic waste, household waste separation, public-space cleanliness and community clean-up activities. Programmes can also use resident testimonies, environmental quizzes, interviews with officials and reports from sanitation locations. Such formats can move environmental communication from abstract instruction towards problem-solving and public participation.

Radio Content and Message Formats

The likely forms of sanitation content include jingles, news stories, interviews, documentaries, public-service announcements, discussion programmes, phone-in programmes, drama and sponsored advocacy. Jingles are useful for repetition and recall, while interviews can provide authority and explanation. Phone-in programmes can create dialogue and identify sanitation complaints. Drama can present everyday sanitation problems in culturally familiar narratives. News reports can draw attention to enforcement and environmental events. A balanced radio strategy should use several of these formats rather than relying exclusively on brief announcements.

Theoretical Framework

Agenda-Setting Theory

Agenda-Setting Theory was developed by McCombs and Shaw (1972) from their study of the relationship between media emphasis and public perceptions of issue importance. The theory proposes that the mass media may not determine exactly what audiences think, but they can influence what audiences think about by giving greater attention to selected issues. When a radio station repeatedly discusses environmental sanitation, reports sanitation failures and provides regular programmes on waste

management, the issue can become more salient in the minds of listeners.

The theory is relevant to this seminar because environmental sanitation competes with many other issues for public attention. Residents may prioritise employment, politics, security, entertainment and family concerns. Radio can place sanitation on the public agenda by giving it consistent and prominent attention. For example, a station that dedicates a weekly programme to drainage problems, waste disposal and community cleanliness may make environmental sanitation a recurring topic of public conversation.

Agenda-setting is particularly useful for explaining awareness and issue salience, but it is less complete as an explanation of actual behaviour. A resident may recognise sanitation as important without changing his or her disposal practices. For this reason, a second theory is useful in explaining how media messages can provide behavioural models.

The conceptual framework for the seminar connects radio communication variables with environmental sanitation outcomes. The independent variable is radio environmental sanitation communication, represented by exposure, frequency, message relevance, credibility, language, programme format and audience participation. The dependent variable is environmental sanitation behaviour, represented by proper waste disposal, use of waste facilities, drainage cleanliness, litter control and participation in sanitation activities. Intervening factors include availability of waste facilities, collection services, enforcement, household income, social norms and community participation.

Research Methodology

The study will adopt the survey research design because it is appropriate for obtaining information from residents of Calabar Metropolis concerning their exposure to radio environmental sanitation messages and the influence of such messages on their sanitation practices. The study population will comprise residents of Calabar Municipality and Calabar

South Local Government Areas. The Cross River State Bureau of Statistics, based on National Population Commission figures, reported projected populations of 313,776 for Calabar Municipality and 327,158 for Calabar South in 2023. For the present study, the populations were projected to 2025 using the approximately 3.2% annual growth reflected in the state's official projection series. This gives an estimated 334,179 residents for Calabar Municipality and 348,431 residents for Calabar South, producing a combined projected population of 682,610 residents. The sample size will be determined using the Taro Yamane formula, $n = \frac{N}{1 + N(e)^2}$, where $N = 682,610$ and $e = 0.05$. Thus, $n = \frac{682,610}{1 + 682,610(0.05)^2} = 399.77$, which will be approximated to 400 respondents. The 400 respondents will be drawn from the two Local Government Areas, with the sample proportionately distributed according to their respective projected populations.

Data were collected through a questionnaire administered to selected residents of Calabar Municipality and Calabar South. The questionnaire will contain questions designed to obtain information on respondents' exposure to radio environmental sanitation messages, their awareness and understanding of such messages, and the extent to which the messages influence their environmental sanitation practices, including participation in the monthly sanitation exercise. A Purposive sampling procedure was used to select respondents from the two Local Government Areas. The completed questionnaires were coded, tabulated and analysed using frequency counts and simple percentages.

Analysis of Research Question One

Research Question One: What is the level of residents' exposure to radio environmental sanitation messages in Calabar Metropolis?

Table 1: How often do residents of Calabar Metropolis hear environmental sanitation messages on radio?

S/N	Responses	Frequency	Percentage (%)
1	Very Often	88	22.6
2	Often	151	38.7
3	Rarely	101	25.9
4	Never	50	12.8
Total		390	100.0

Source: Field Survey, 2026

The findings indicate that radio was a regular source of environmental sanitation information for most residents of Calabar Metropolis, suggesting that radio played a significant role in exposing residents to sanitation messages. However, the proportion of respondents who rarely or never encountered these messages shows that radio exposure was not consistent among all residents.

Table 2: How frequently do residents listen to radio programmes that contain environmental sanitation information?

S/N	Responses	Frequency	Percentage (%)
1	Very Frequently	80	20.5
2	Frequently	145	37.2
3	Occasionally	109	27.9
4	Not at All	56	14.4
Total		390	100.0

Source: Field Survey, 2026

The findings suggest that radio programmes provided regular opportunities for residents to encounter environmental sanitation information. However, occasional or no listenership among a considerable proportion of respondents indicates that exposure to sanitation programmes varied across the population.

Research Question Two: What is the level of residents' awareness and understanding of environmental sanitation messages broadcast on radio in Calabar Metropolis?

Table 3: How would residents rate their awareness of environmental sanitation issues discussed on radio?

S/N	Responses	Frequency	Percentage (%)
1	Very High	103	26.4
2	High	160	41.0
3	Low	82	21.0
4	Very Low	45	11.5
Total		390	100

Source: Field Survey, 2026

The findings indicate that awareness of environmental sanitation issues discussed on radio was generally high among respondents, although a notable proportion remained less aware. This suggests that radio contributed to public awareness, but the reach or effectiveness of sanitation information may not have been uniform among residents.

Table 4: How well do residents understand the environmental sanitation information communicated through radio?

S/N	Responses	Frequency	Percentage (%)
1	Very Well	107	27.4
2	Well	155	39.7
3	Poorly	83	21.3
4	Very Poorly	45	11.5
Total		390	99.9

Source: Field Survey, 2026

The findings show that most respondents had a good understanding of environmental sanitation information communicated through radio. However, the presence of respondents with limited understanding indicates that the clarity of the messages was not uniform across the audience.

Research Question Three: To what extent do radio environmental sanitation messages influence residents' environmental sanitation practices in Calabar Metropolis?

Table 5: To what extent do radio environmental sanitation messages encourage residents to keep their surroundings clean?

S/N	Responses	Frequency	Percentage (%)
1	Very Great Extent	94	24.1
2	Great Extent	165	42.3
3	Little Extent	83	21.3
4	Very Little Extent	48	12.3
Total		390	100.0

Source: Field Survey, 2026

The findings indicate that radio environmental sanitation messages were generally perceived as encouraging residents to maintain cleaner surroundings. However, the varying responses suggest that the influence of the messages differed among respondents, with some reporting limited encouragement towards environmental cleanliness.

Table 6: To what extent do radio environmental sanitation messages encourage residents to participate in sanitation activities?

S/N	Responses	Frequency	Percentage (%)
1	Very Great Extent	98	25.1
2	Great Extent	159	40.8
3	Little Extent	85	21.8
4	Very Little Extent	48	12.3
Total		390	100.0

Source: Field Survey, 2026

The findings indicate that radio environmental sanitation messages generally encouraged residents' participation in sanitation activities. However, the varying levels of reported influence suggest that the messages did not affect all respondents to the same extent.

Discussion of Findings

Research Question One: What is the level of residents' exposure to radio environmental sanitation messages in Calabar Metropolis?

The findings revealed that residents of Calabar Metropolis had a considerable level of exposure to environmental sanitation messages broadcast on radio. The responses showed that most residents encountered sanitation messages regularly and also listened to radio programmes

containing environmental sanitation information. This indicates that radio constituted an important channel through which sanitation information was made available to residents.

This finding agrees with Sani and Aminu (2022), who examined communication and sustainable environmental sanitation in local communities in Zaria and found that radio was regarded by respondents as the most reliable medium for relaying environmental sanitation information. Their study emphasised the role of the media in communicating sanitation risks and providing information that could assist members of the public in making informed decisions about environmental sanitation. The present finding is also consistent with Sanusi et al. (2023), whose study of Offa residents examined the use of radio for public enlightenment on environmental sanitation and recognised radio as an important medium for sanitation awareness campaigns.

The finding is further supported by Linus (2022), who found that residents in Makurdi used broadcast media as a source of environmental sanitation information. The study reported that sanitation information was communicated through programmes, jingles and public service announcements, providing audiences with repeated opportunities to encounter sanitation-related information. Similarly, Nwaerema et al. (2022) found in Port Harcourt that environmental sanitation communication was carried out mainly through radio, television and print media, while respondents demonstrated substantial understanding of the meaning of environmental sanitation.

The present finding therefore suggests that radio provided regular opportunities for residents to encounter environmental sanitation information. Nevertheless, the presence of respondents who reported limited exposure indicates that radio did not reach all residents with the same frequency. This may mean that radio communication alone cannot guarantee universal exposure to sanitation information. Haruna (2023) similarly found

that although radio was a major source of drainage sanitation information in Abuja, reliance on radio alone contributed more strongly to awareness creation than to broader behavioural change, leading the study to recommend a combination of communication methods.

Research Question Two: What is the level of residents' awareness and understanding of environmental sanitation messages broadcast on radio in Calabar Metropolis?

The findings showed that residents generally had a high level of awareness and understanding of environmental sanitation messages broadcast on radio. Most respondents indicated that they were highly aware of sanitation issues discussed through radio and that they understood the information communicated to them. The result suggests that the sanitation messages reaching residents were sufficiently noticeable and understandable to a substantial proportion of the audience.

This finding agrees with Linus (2022), whose study found that broadcast media served as a source of environmental sanitation information and that sanitation-related broadcast content contributed to residents' attitudes and habits concerning the environment. It also corresponds with Nwaerema et al. (2022), who found that respondents demonstrated a strong understanding of environmental sanitation, while stakeholders identified radio, television and print media as major channels for communicating sanitation information.

The finding is particularly relevant to the South-South Nigerian environment because Agada-Mba and Anorue (2021) examined open-defecation-free communication efforts across selected states in the region, including Cross River, Rivers, Delta and Bayelsa. Their study recorded high awareness of the open-defecation-free initiative but also found that understanding was comparatively weaker. They concluded that communication interventions were relevant to sanitation outcomes, although inadequate or inappropriate communication could limit their effectiveness.

The high awareness and generally good understanding found in the present study therefore indicate that radio sanitation communication in Calabar Metropolis may have provided residents with useful information, while the smaller proportion reporting poor understanding shows that message comprehension was not universal.

The result also supports the position of Ezeaka and Bartholomew (2025) that effective environmental sanitation communication in Nigeria requires communication strategies that improve public understanding and engagement. Their study emphasised the importance of localised, culturally appropriate and multimedia communication approaches in addressing sanitation challenges. Thus, the present finding suggests that the effectiveness of radio sanitation communication depended not only on whether messages reached residents but also on whether the messages were presented in forms that the audience could understand.

Research Question Three: To what extent do radio environmental sanitation messages influence residents' environmental sanitation practices in Calabar Metropolis?

The findings revealed that radio environmental sanitation messages generally encouraged residents to maintain clean surroundings and participate in sanitation activities. A greater proportion of respondents indicated that the messages encouraged them to keep their surroundings clean and participate in sanitation activities to a great or very great extent. This suggests that radio communication had a perceived influence beyond awareness and understanding, extending to residents' reported sanitation practices.

The finding agrees with Linus (2022), who reported that broadcast media content contributed to residents' habits concerning waste disposal and environmental sanitation. The study concluded that broadcast media could help shape audience attitudes towards ecological sanitation. It is also consistent with Nwambam and Anorue (2021), whose study examined

audience responses to broadcast media programmes on environmental pollution in South-South Nigeria, including awareness, environmental behaviour promoted by broadcast programming and factors affecting adherence to environmental messages.

The finding further corresponds with Agada-Mba and Anorue (2021), who found that communication interventions were associated with knowledge and sanitation-related practices among residents in selected South-South states. However, their study also identified inadequate communication and structural constraints as factors that could limit sustained sanitation practices. This provides an important explanation for the present finding because although many respondents perceived radio messages as encouraging sanitation practices, a smaller group reported little or very little influence.

Similarly, Haruna (2023) found that radio played a substantial role in creating awareness of drainage sanitation in Abuja, but the concentration on radio without a sufficient mix of communication approaches was more successful in creating awareness than producing behavioural change. This suggests that radio messages may encourage sanitation behaviour, but actual practice can also depend on other conditions, including access to appropriate waste disposal facilities, community participation, enforcement of sanitation regulations and opportunities for residents to act on the information received.

Overall, the findings indicate that radio environmental sanitation communication in Calabar Metropolis performed three related functions. It provided residents with repeated exposure to sanitation information, contributed to awareness and understanding of sanitation issues, and encouraged reported participation in sanitation practices. The findings are broadly consistent with Nigerian studies showing that radio and other broadcast media are important channels for sanitation communication. At the same time, the differences in individual responses indicate that radio communication alone may not be sufficient to produce uniform behavioural

outcomes among all residents. A combination of clear radio messages, community-level communication and supportive sanitation facilities may therefore be necessary to translate awareness and understanding into sustained environmental sanitation practices.

Conclusion

The study examined the role of radio in environmental sanitation communication among residents of Calabar Metropolis. Based on the findings from the 390 correctly completed questionnaires, the study established that residents had considerable exposure to radio environmental sanitation messages. A substantial proportion of the respondents reported hearing sanitation messages often and listening frequently to radio programmes containing environmental sanitation information. This indicates that radio remains a relevant medium for reaching residents with information about environmental sanitation.

The study also established that residents generally had a high level of awareness and understanding of environmental sanitation messages broadcast on radio. The findings showed that many respondents were aware of sanitation issues discussed through radio and understood the information communicated. This suggests that the use of radio for sanitation communication provides residents with accessible information that can improve their knowledge of environmental cleanliness and sanitation responsibilities.

Furthermore, the findings showed that radio environmental sanitation messages influenced reported sanitation practices to a considerable extent. Many respondents indicated that the messages encouraged them to keep their surroundings clean and participate in sanitation activities. The study therefore concludes that radio serves as an important channel for environmental sanitation communication in Calabar Metropolis, particularly in creating exposure, awareness, understanding and encouragement towards sanitation-related practices. However, radio

communication should be complemented by adequate sanitation facilities, effective community mobilisation and appropriate enforcement to support sustained sanitation practices.

Recommendations

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

1. Radio stations in Calabar Metropolis should sustain and increase environmental sanitation programmes. Regular sanitation messages, discussions, interviews, jingles and public service announcements should be broadcast at convenient times so that residents can receive sanitation information repeatedly.
2. Radio stations and relevant environmental authorities should use local examples and understandable language to explain proper waste disposal, cleanliness of surroundings, drainage maintenance and participation in sanitation activities. This would help residents move from awareness and understanding to practical sanitation behaviour.
3. Relevant government agencies and local authorities should provide accessible waste-disposal facilities, regular waste collection and community sanitation activities while using radio to inform and mobilise residents. This would create the practical conditions necessary for residents to act on the sanitation information received through radio.

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