SSAR Journal of Arts Humanities and Social Sciences (SSARJAHSS)

Journal homepage: https://ssarpublishers.com/sarjahss
Abbreviated Key Title: SSAR J Arts Humanit Soc Sci
ISSN: 3049-0340 (Online)
Volume 2, Issue 5, (Sept-Oct) 2025, Page 195-208 (Total PP.14)
Frequency: Bimonthly
E-mail: ssarpublishers@gmail.com

OPEN ACCESS

ARTICLE HISTORY
Received: -30-09-2025 / Accepted: 20-10-2025 / Published: 21-10-2025

Utilizing Media Influence in Promoting Environmental Health Awareness amongst Rural People of Edo North Senatorial District of Edo State, Nigeria

By
Peter Eshioke Egielewa, PhD & Blessed Frederick Ngonso, PhD
Department of Mass Communication Edo State University Iyamho, Nigeria.
(peter.egielewa@edouniversity.edu.ng/ngonso.frederick@edouniversity.edu.ng)
Corresponding author: Peter Egielewa (peter.egielewa@edouniversity.edu.ng)

ABSTRACT: This study explores the role of media influence in promoting environmental health awareness among rural residents of Edo North Senatorial District in Edo State, Nigeria. Edo North, a predominantly agrarian region of 1.4 million inhabitants, is characterized by persistent environmental challenges arising from human activities such as farming, bush burning, mining, deforestation, and poor waste management. These practices have contributed to widespread environmental degradation and the prevalence of diseases such as malaria, cholera, typhoid, and Lassa fever. Despite the health implications, rural communities remain underserved in environmental education and advocacy. Guided by the cultivation theory, the study adopted a cross-sectional survey design using the quantitative approach. Using Taro Yamane's formula, a sample of 400 respondents was drawn from the six local government areas of Edo North Senatorial District of Edo State, Nigeria out of which 350 valid responses were analyzed using the SPSS descriptive and inferential statistics, tables and graphical representations. Findings reveal that environmental health awareness is generally low, with 58% of respondents reporting low or very low knowledge of environmental health issues. Women demonstrated slightly lower awareness than men, reflecting structural and cultural barriers to health information. Farming and bush burning were identified as the leading environmental causes of disease (42%), while malaria and cholera were the most commonly reported illnesses (43%). Education emerged as a critical determinant of behavioral change, as respondents with tertiary education were significantly more likely to adopt environmentally healthy practices following media campaigns. Social media platforms—particularly Facebook, WhatsApp, TikTok, and YouTube—were the preferred channels of environmental health information, especially among younger respondents. Chi-square tests revealed no significant relationship between gender and behavioral change ($p = 0.994$) but confirmed a significant positive relationship between environmental awareness and attitude change ($p = 0.010$). The study concludes that strategically designed media campaigns, integrating social and traditional communication platforms, are essential to improving environmental health awareness and fostering sustainable practices in rural Edo North.

KEYWORDS: Media, Influence, Environment, Health Awareness, Edo North, Nigeria.

INTRODUCTION

Environmental health is an all-important discipline, though many do not know how important it is to their overall well-being. The care for the environment is the care for the health of humanity.

The poor handling of our environmental health indirectly implies the poor handling of human health (Ngonso et al, 2023). Environmental health examines how human health is affected by exposures to harmful agents in the environment and focuses on the direct pathological effects of chemicals, radiation and certain biological agents such as bacteria, viruses, and fungi (Ukhurebor et al, 2023). Environmental health has been defined by the World Health Organization (WHO) as aspects of human health and diseases that are determined by environmental factors. Environmental health also refers to the assessment and control of environmental factors that can potentially affect health.

Environmental problems that affect human health stem from nature and several human activities, such as constant and relentless deforestation to make way for agriculture, infrastructure, and settlements. In this process, the delicate ecosystems are tampered with, and these threaten countless plant and animal species. Industrial activities such as the exploitation and exploration of fossil fuels, such as coal, oil, and natural gas exploitation release copious amounts of greenhouse gases (GHGs) into the atmosphere, and these also impact the environment (Aidonojie et.al, 2023).

Human activities have also contributed to water pollution, which poses a significant threat to the planet's aquatic ecosystems and human health. Overfishing, driven by the increasing demand for seafood, poses a grave threat to marine biodiversity and the delicate balance of marine ecosystems. Also, improper waste generation and management can lead to serious consequences for the environment and for humanity.

In Nigeria, for example, the problem of waste generation and management in the last fifty years has increased more than in any other African country. The situation is worse in the rural areas due to ignorance, and this has also negatively impacted the health of the rural people. The major forms of waste that threaten the health of rural Nigerians are the agricultural, plastic and electronic wastes, and the improper disposal of such wastes poses significant risks to the health of the rural people (Ngonso et al, 2023).

In addition, agricultural practices and soil degradation, such as the application of fertiliser by rural farmers in growing their crops, can contribute to soil erosion and result in the loss of fertile topsoil. This, in turn, leads to diminishing soil quality, impacting crop productivity and the overall health of the ecosystems. Moreover, excessive use of chemical fertilisers and pesticides leads to water pollution as a result of the chemicals leaking into rivers, lakes, and groundwater, thereby causing harmful effects on aquatic life and posing a threat to life (Aidonojie et al, 2023; Ukhurebor et al, 2022). Similarly, open grazing of animals often leaves the environment messed up with animal dungs, which can greatly pollute the environment, such as outdoors parks, homes, workplaces, worship centres and other public places and buildings. The idea of maintaining a healthy environment has been ignored in the rural areas in spite of the tremendous contributions of the rural communities to the economy of Nigeria.

Edo North (the northern part of Edo State, a south-southern state of Nigeria) is known for a poor environment as a result of human activities such as constant farming, burning bushes for games, fishing and mining of quarry. These activities have impacted negatively on the environment with attendant health risks. Aside from natural disasters such as erosion and flooding, Edo North suffers from man-made deforestation and in recent times has had increased cases of Lassa fever, Typhoid fever, Cholera and Malaria due to poor environmental management. A report from the World Health Organisation reported that, in Northern Edo State, Lassa fever is ravaging youths, children and pregnant mothers, and there is poor response in terms of drug supply or even advocacy.

Edo North, which is an agrarian society, relies on peasant land and fish farming for sustenance in addition to mining activities, particularly in Okpella and Iyuku. These activities largely impact the environment and the health of the people. The World Health Organisation has continued to express worry about the health of the rural people in connection with the safety and cleanliness of the environment and uncontrolled agricultural and mining activities, with their attendant devastating consequences.

Statement of the Problem

The rural community has long been neglected in Nigeria. Due to this age-long neglect, everything about the rural environment has been left in the hands of the rural people, who are obviously unable to manage the environment due to ignorance, lack of support from the government. The poor sanitary conditions have bred all kinds of diseases such as respiratory disease, heart disease, and cancer. Prostate cancer, for instance, is said to be one of the five most common types of cancer that affects men. Others are lung, liver, stomach, and colorectal cancers (American Cancer Society, 2018). Pona et al (2021) attribute these diseases to poor environment and averred thus ''the lower respiratory infection associated with air pollution has advanced from the 4th in 2007 to the highest ranked cause of death in 2017". Other predominant causes of death associated with environmental risk factors include chronic respiratory diseases, cardiovascular diseases, enteric infections, diarrheal diseases, communicable, maternal, neonatal, and nutritional diseases, which have resulted in approximately 800,000 deaths and 26 million people living with DALY (Disability-Adjusted Life Year) per annum in Nigeria. The DALY is a public health indicator metric that was developed in the 1990s and widely used by the WHO to measure the overall burden of disease in a population. It quantifies the total loss of healthy years from premature death (YLL - *Years of Life Lost*) and years lived with a disability or less than full health (YLD - *Years Lost to Disability*). The DALY is a composite measure, with one DALY representing the loss of one year of full health. Major environmental risk factors include household air pollution, ambient air pollution, water, sanitation, and hygiene (WaSH). These diseases are predominant in Edo North, Edo State, Nigeria, but the greatest concern to communication and media experts is the fact that media advocacy is also missing, as stated by the WHO. This is, therefore, the problem that this study is aimed at addressing through media advocacy that would address the ignorance amongst the Edo North populace and bring about attitudinal change in Edo North, Edo State, Nigeria.

Objectives of the Study

This study was guided by the following objectives;

1. To determine the current level of environmental health awareness of Edo North populace.
2. To assess Edo North residents' perception of the impact of human activities on the environment.
3. To evaluate the extent to which environmental health awareness changed the attitude of Edo North populace towards their environment.
4. To assess the effectiveness of environmental health awareness campaign on Edo North populace towards their environment.

Hypothesis Test

Two hypotheses will be tested in this study, namely:

1. **$H0_1$** = There is no significant relationship between the gender of respondents and their ability to change their attitude toward environmentally healthy activities.
2. **$H0_2$** = There is no significant relationship between the respondents' level of environmental awareness and their ability to change their attitude toward environmentally healthy activities.

Literature review

Importance of Environmental Health Awareness and Media Potentials

Experts urge that are environments are inexplicably intertwined with our safety and emotional well-being. It has been observed that, good and healthy environment reduces the risk of diseases, enhances the quality and length of life, increases biodiversity and habitat protection, and limits global warming (Perry, 2022). Information and communication have proven to be powerful in the quest to change the attitude and behavior of people towards their environment. To achieve this, media campaigns have been used in many countries of the world, including Nigeria, to change attitudes, behavior, as well as perception of people. Health communicators have used the mass media of communication to create awareness about health situations, change perception about

diseases and change hesitancy attitude towards medication. According to Ngonso (2012, 2023), the mass media of communication are powerful instruments for social change, mobilisation and information dissemination. This means that mass media and social media today are possibly the key information sources to seek formal health information (Egielewa, 2021a, 2021b; Egielewa & Ate, 2020; Ngonso & Egielewa, 2018). According to Amune et al (2024), mass media can be regarded as vital channels in promoting health information and publicizing various health issues and diseases for public awareness. Through their information and education functions, the mass media have often been used to promote healthy practices and prevent some unhealthy behaviors in society. Randolph and Viswanath (2024) confirm that "one major way of promoting health care is by engaging in mass media campaigns, which is believed to reach the target audience". The authors further note that these media campaigns can undoubtedly create cognitive, attitudinal and behavioral changes in the audience. Media messages could improve knowledge, stimulate interest, shift attitude and change behavior's.

Challenges in Promoting Environmental Health among Rural People

Rural dwellers are usually classified as the poor and the less privileged, and also less educated. They are usually tied to their pre-conceived belief system and ardent to their tradition. Poverty has caused rural people to indulge in agricultural activities that affect their environment negatively and breed sickness and diseases (Ngonso & Egielewa, 2023; Ngonso et al, 2020). For instance, in Edo North, they produced *garri*, a local grain flake made from cassava, and if the wastes from the processed cassava are not well disposed of or managed, this can result in the presence of rats, a species of which can carry the Lassa fever virus and cause serious medical harm to the populace, including death. In addition to this, the *garri* is also dried in an exposed place under the sunlight. Again, this can cause rodents to eat up and contaminate the food and thereby disseminate the Lassa fever virus to the people. This traditional means of processing *garri* and other food products is the age-long practice that the people may be very unwilling to change. So, poverty and traditional belief systems lead to an unwillingness to accept a new way of life. Other factors that affect the promotion of environmental health awareness among rural people are the lack of trained health communicators who could educate the people with the right language, message and media channels (communication/media advocacy).

Communication-based strategies for environmental health awareness (advocacy)

In the last decade, we have seen the severe damage that harmful agricultural and other human activities have done to the rural communities and how they have impacted the health of the rural dwellers. For instance, microbes and pathogens have increased due to human activities (e.g. Corona coronavirus). But studies have shown that environmental health awareness can prevent disease outbreaks and reduce the consequences of disease. But there are specific measures that can be put in place to slow diseases down and find solutions, such as the right communication strategies. Nwodu and Fab-Ukozor (2003), commenting on communication strategies for addressing health concerns in Nigeria, assert that posters have helped and are still helping in the dissemination of health information through the use of illustrations. These scholars also advocate for the use of the mother tongue and vernacular (e.g. pidgin English in Nigeria) language in spreading health-related information. Moemeka (2000) sees the radio as a powerful channel for disseminating health information to rural people. In a study conducted in Oyo state, Nigeria, he found that radio increases rural participation in health matters. Similarly, Ngonso and Egielewa (2023b) found out that rural communities in Edo North still communicate through traditional modes such as the use of the town criers, meetings, worship centres (Church and Mosque), and these channels have been effective in Edo North, while several authors (Ngonso & Egielewa, 2023a; Egielewa, 2021a, 2021b; Egielewa & Ate, 2020; Ngonso & Egielewa, 2018) found out that many rural people communicate using social media. This also implies that social media can serve as potent channels of disseminating environmental information. These studies detail communication strategies which shall also be tested in this present study such as (a) behaviour

change communication (interpersonal communication); (b) mass communication (community media and mass media); (c) advocacy communication (interpersonal communication and mass media); (d) participatory communication(interpersonal communication and community media);(e)communication for structural and sustainable social change(interpersonal communication, participatory communication and mass communication.

Theoretical Framework

This study is anchored on the cultivation theory.

Cultivation Theory

The cultivation theory is a sociological concept that was developed in the 1960s by George Gerbner, a professor and dean at the University of Pennsylvania's Annenberg School of Communications, as part of a media-effects research project. The basic tenet of cultivation theory is that television is responsible for determining notions of social reality among viewers. The theory posits that people's perceptions of social reality are significantly shaped by the messages and depictions they view on their television screens. Gerbner believes that the more time people spend watching television, the more likely they are to adopt its portrayals as reflections of real life. This phenomenon can lead heavy viewers to perceive their world as mirroring the often-distorted realities depicted on screen, especially regarding issues such as violence or societal norms (Miller, 2024; Perera, 2023).

Proponents of the cultivation theory identify two types of effects:

i. First-order effects: This involves general beliefs about the world. It encompasses *general viewpoints about the state and behaviour of the everyday world*, such as perceptions of violence in society.
ii. Second-order effects: These pertain to specific attitudes about aspects of society like family dynamics or the rule of law. In other words, the theory holds that the impact of television is more pronounced for individuals with limited personal experience or knowledge about the topics portrayed on television.

Furthermore, cultivation theorists distinguish the degree of the effect based on the amount of time a person spends watching television. The theory posits that individuals who watch television frequently are more likely to be influenced by televised portrayals of the world compared with viewers who spend less time watching television.

However, in recent years, particularly between the 2000s and 2020s, as more people turned to social media networks and online streaming media for news, communication, and entertainment, cultivation theory has also been applied to online media and social networks as viewing habits shift, revealing that heavy engagement with streaming services and platforms can influence users' values and perceptions in contemporary contexts (Miller, 2024; Perera, 2023).

Since this study attempts to understand how Edo people use media in general, whether mainstream or social media, particularly for health awareness about their environment, this theory provides the theoretical foundation for its generalizations.

Methodology

The study employs a cross-sectional survey design using the quantitative approach. The research takes place in Edo North Senatorial District of Edo State, Nigeria, chosen for this study because of the significant outbreak of environmentally transmitted diseases such as Lassa fever. In addition to being a rural region, its residents are renowned farmers, fishermen and also miners, all of which are factors under examination in this study and whose consequences can affect the health of the environment as well as the health of the rural people.

The study population includes all adults living in Edo North, Edo State. Based on the latest population of the six Local Government Areas (LGAs) of Edo North Senatorial District, the total population of Edo North Senatorial District is given as 1,412, 100 (citypopulation.de, 2025) as shown below;

Akoko Edo LGA	– 386, 400
Etsako Central LGA	– 139, 200
Etsako East LGA	– 217, 700
Etsako West LGA	– 294, 000
Owan East LGA	– 228, 500
Owan West LGA	– 146, 300
Total	**1, 412, 100**

Using the Taro Yemane sample size formula (Yamane, 1973), the sample size was 400. However, out of the 400 copies of the Questionnaire distributed between March and June 2025, only 350 were returned for analysis, representing 88% of the sample size, which is sufficient for generalisations in this study. The questionnaire contained eleven (11) demographic, dichotomous and Likert-based questions. The data was analysed using both descriptive and inferential statistics, and the SPSS data analysis tool.

Presentation of data

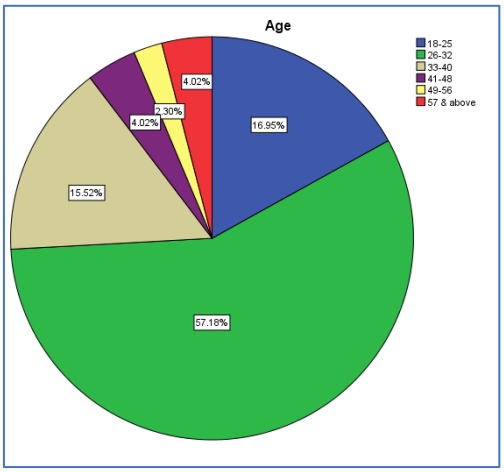

Figure 1: Age of respondents

Figure 1 above shows that younger respondents (18 to 25 years) represented about 17%, the middle-aged respondents (19 to 48 years) represented 77% while the older respondents (49 years and above) represented 6%.

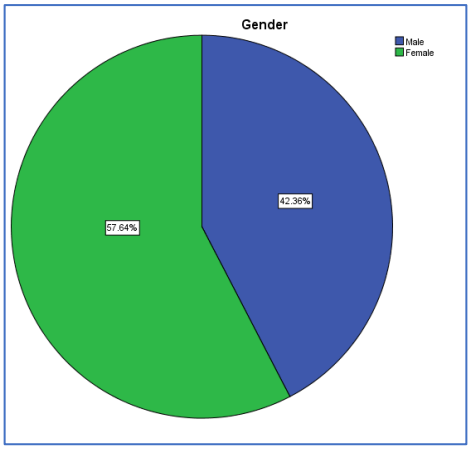

Figure 2: Gender of respondents

In Figure 2, more female respondents (57.6%) took part in the survey than their male counterparts (42.3%).

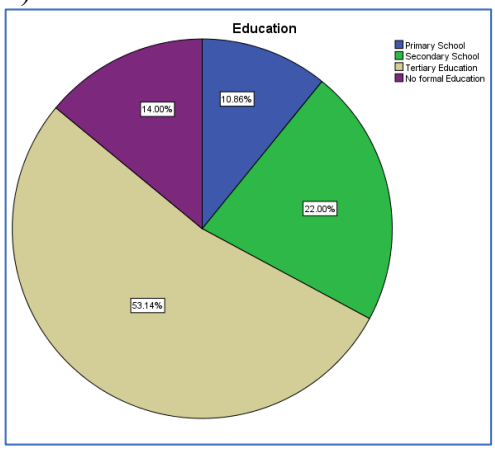

Figure 3: Educational level of respondents

Figure 3 above shows that respondents with no formal education represented about 14%, respondents with a middle level educational background (primary and secondary schools) represented 32.8% while respondents with a tertiary education background represented 53.1%.

Objective 1: To determine the current level of environmental health awareness of Edo North populace.

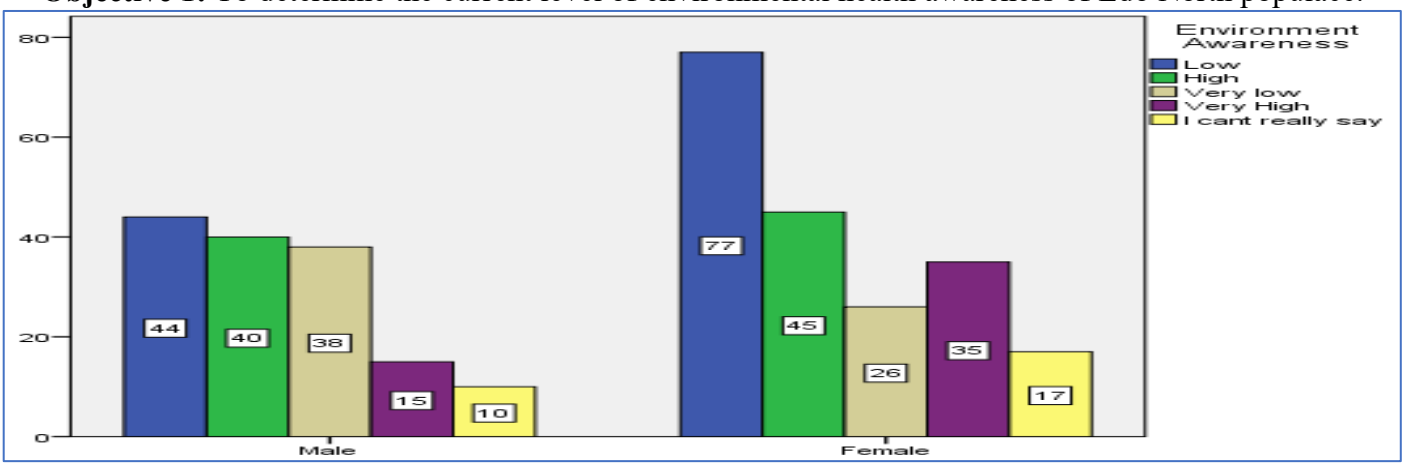

Figure 4: Educational level of respondents

Figure 4 above shows that respondents' awareness of environmental issues and activities was generally low. 185 of 320 respondents, representing 58%, said their knowledge of the environment was either low or very low. However, in terms of gender, women (103 out of 185), representing 56% of the respondents, showed a lower awareness of the environment. Thus, this data indicates that women were less interested in issues of the environment than their male counterparts.

Objective 2: To assess Edo North residents' perception of the impact of human activities on the environment.

		Disease Causes							Total
		Mining Quarry	**Farming**	**Fishing**	**Bush burning**	**Indiscriminate disposal of waste materials**	**Dumping of waste in gutter**	**Indiscriminate urinating /defecating**	
Age	18-25	6	16	13	12	6	5	1	**59**
	26-32	20	42	24	43	31	31	7	**198**
	33-40	9	11	12	10	5	4	3	**54**
	41-48	1	0	4	2	4	1	2	**14**
	49-56	1	4	0	2	0	0	0	**7**
	57 & above	2	0	0	2	3	5	2	**14**
Total		**39**	**73**	**53**	**71**	**49**	**46**	**15**	**346**

Table 1: Environmental causes of diseases

Table 1 above shows that the majority of the respondents believe that farming and bush burning were the major environmental causes of diseases (144 out of 346), representing 42% of the respondents, while mining and indiscriminate urinating/defecating were the least environmental causes of diseases (54 out of 346), representing only 16% of respondents. However, in terms of the age groupings, younger generations (18-32 years) believe the environmental activities cause diseases (257 out of 346), representing 74% of respondents, while the older generations (41 years and above) believe the environmental activities were not the major causes of diseases (35 out of 346), representing a mere 10%. This indicates that while the younger generation ties diseases mainly to environmental factors, the older generation ties them less to environmental activities, perhaps due to other human activities.

		Some diseases caused by environmental activities				**Total**
		Lassa fever	**Typhoid fever**	**Cholera**	**Malaria**	
Age	18-25	9	9	17	24	**59**
	26-32	24	41	49	84	**198**
	33-40	6	13	10	25	**54**
	41-48	1	2	1	10	**14**
	49-56	2	0	5	1	**8**
	57 & above	0	5	3	6	**14**

Total	**42**	**70**	**85**	**150**	**347**

Table 2: Some diseases caused by environmental activities.

In Table 2, which shows the major types of diseases that can result from human environmental activities, the majority of the respondents (150 out of 347), representing 43%, while the least disease caused by human environmental activities was Lassa fever (42 out of 347), representing a mere 12%. In terms of age groupings, just like in Table 1, younger generations (18-32 years) believe the environmental activities cause diseases such as malaria and cholera (257 out of 347), representing 74% of respondents, while the older generations (41 years and above) believe the environment causes diseases such as malaria and typhoid fever (36 out 347), representing a mere 10%. Just like in Table 1, this data indicates that while the younger generation sees the strong relationship between environmental activities and diseases in society, for the older generation, the relationship is loose, perhaps due to other human activities.

Objective 3: To evaluate the extent to which environmental health awareness changed the attitude of Edo North populace towards their environment.					
		Health Awareness Campaign Usefulness			**Total**
		Yes	**No**	**I can't really say**	
Education	Primary School	7	24	7	**38**
	Secondary School	28	31	18	**77**
	Tertiary Education	99	57	29	**185**
	No formal Education	19	19	11	**49**
Total		**153**	**131**	**65**	**349**

Table 3: Diseases caused by environmental activities.

In Table 3 above, most educated people (with tertiary education) said they changed their attitude as a result of an awareness of the environment that they received (185 out of 349), representing 53%, while respondents with primary or no formal education were (87 out of 349), representing 25%. This indicates that the more educated one is, the more likely one changes his/her mind if made aware of environmental activities.

In terms of which media respondents prefer to use to get health information on environmental activities, Table 4 below shows that most of the respondents prefer Facebook, Whatsapp, and YouTube (151 out of 347) representing 44% compared to the least media used by respondents, namely; TV, Town crier and Town Hall Meeting (32 out of 347) representing a mere 9%. However, younger generations (18 to 32 years) preferred Facebook, Whatsapp, TikTok and YouTube for their health information (158 out of 173), representing 91% of respondents, while older generations (49 years and above) preferred Facebook, Whatsapp, YouTube, and Newspapers/Magazines (15 out of 173), representing 9% of respondents. This indicates that while younger generations rely almost entirely on social media for their health information, older generations use both social media and the old media, such as newspapers and magazines.

	Media Preference for Health Awareness	**Total**

		Facebook/ WhatsApp	Tik Tok	YouTube	Other social media	Radio	TV	Newspaper/Magazine	Church/Mosque	Town Crier	Town Hall Meetings	
Age	18-25	15	14	10	6	6	3	1	3	0	1	**59**
	26-32	48	28	43	20	20	7	13	7	8	4	**198**
	33-40	13	8	7	10	4	3	5	2	2	0	**54**
	41-48	3	3	0	1	1	1	2	3	0	0	**14**
	49-56	3	0	2	1	1	0	1	0	0	0	**8**
	57 & above	5	0	2	0	0	0	2	2	2	1	**14**
Total		**87**	**53**	**64**	**38**	**32**	**14**	**24**	**17**	**12**	**6**	**347**

Table 4: Media preference of respondents for health awareness campaigns.

Objective 4: To assess the effectiveness of environmental health awareness campaign on Edo North populace towards their environment.

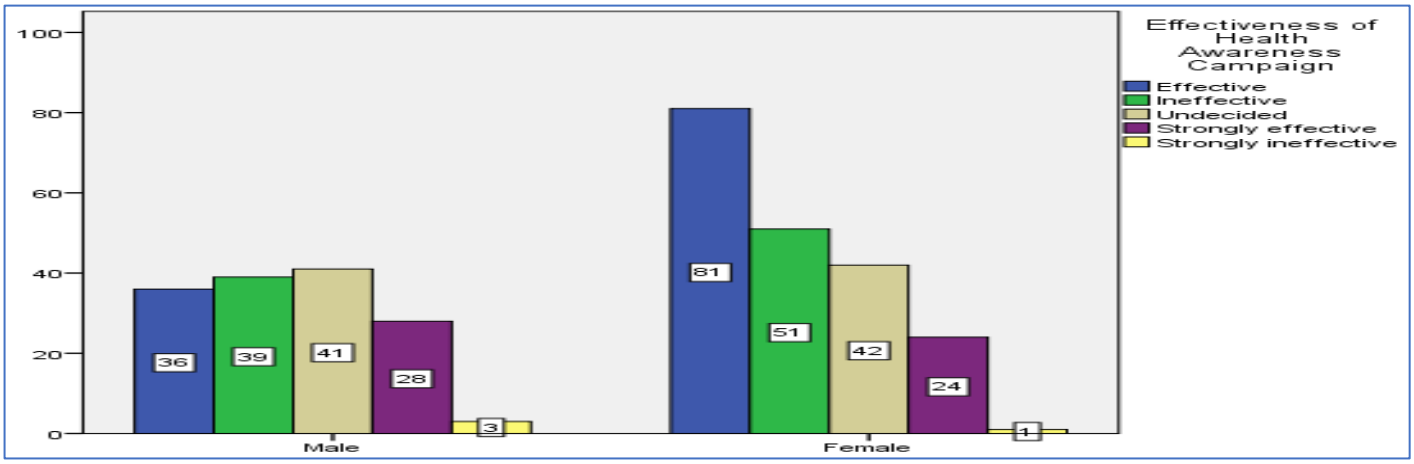

Figure 5: Respondents' perception of the effectiveness of media health awareness campaigns. In

Figure 5 above data shows that shows that the majority of respondents (159 out of 253), representing 63% of respondents, believe that the media health awareness campaigns were effective. However, in terms of gender, females believe that the media health awareness campaigns were more effective (105 out of 159), representing 66% compared to the male gender, where only 54 out of 159, representing 34% expressed belief in the effectiveness of such media health campaigns. This indicates that females believe more in the effectiveness of media health campaigns compared to their male counterparts.

Hypothesis Test

Two hypotheses were tested in this study, namely:

$H0_1$ = There is no significant relationship between the gender of respondents and their ability to change their attitude toward environmentally healthy activities.

$H0_2$ = There is no significant relationship between the respondents' level of environmental awareness and their ability to change their attitude toward environmentally healthy activities.

1. **$H0_1$** = There is no significant relationship between the gender of respondents and their ability to change their attitude toward environmentally healthy activities.

	Value	df	Asymp. Sig. (2-sided)

Pearson Chi-Square	.012[a]	2	.994
Likelihood Ratio	.012	2	.994
Linear-by-Linear Association	.006	1	.938
N of Valid Cases	346		

Table 5: Chi-square hypothesis test showing the relationship between the gender of respondents and their ability to change their attitude toward environmentally healthy activities

From Table 5 above, with a degree of difference at 2, the two-sided chi-square test gives a result of 0.994. This is greater than the p-value of 0.05. Thus, the null hypothesis is accepted. In other words, there is no significant relationship between the gender of respondents and their ability to change their attitude toward environmentally healthy activities. This means that respondents will not change their attitude towards the environment simply because they are male or female.

1. **$H0_2$** = There is no significant relationship between the respondents' level of environmental awareness and their ability to change their attitude toward environmentally healthy activities.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.993[a]	8	.010
Likelihood Ratio	20.565	8	.008
N of Valid Cases	349		

Table 6: Chi-square hypothesis test showing the relationship between the respondents' level of environmental awareness and their ability to change their attitude toward environmentally healthy activities.

From Table 6 above, with a degree of difference at 8, the two-sided chi-square test gives a result of 0.010. This is less than the p-value of 0.05. Thus, the null hypothesis is rejected. In other words, there is a significant relationship between the respondents' level of environmental awareness and their ability to change their attitude toward environmentally healthy activities. This means that the more respondents are made aware of issues of the environment through the media and their implications for their health, the more likely they are to change their attitude towards the environment.

Discussion of Findings

The findings of this study provide significant insight into the role of media in promoting environmental health awareness among rural dwellers of Edo North Senatorial District of Edo State, Nigeria. Generally, the study revealed a low level of environmental health awareness among respondents, a situation consistent with the long-standing neglect of rural communities in Nigeria (Ngonso et al., 2023). More than half of the respondents (58%) admitted that their knowledge of environmental health was either low or very low, and women demonstrated a slightly lower level of awareness than men, with 56% of those reporting low knowledge being female. This gender disparity reflects the broader context of rural Nigeria, where cultural and educational inequalities often limit women's access to environmental and health information (Pona et al., 2021). The implication is that ignorance of environmental health issues remains a significant barrier to disease prevention and sustainable environmental management.

The study further identified human activities as major drivers of environmental health problems. Farming and bush burning were perceived by 42% of respondents as the leading causes of environment-related diseases, while mining and indiscriminate urination or defecation were perceived as less significant (16%) (Table 1). Younger respondents, particularly those between 18–32 years, were more likely to associate human activities with environmental diseases (74%) compared to older respondents, who were less inclined to make such connections (10%). This

generational difference suggests that younger people may be more receptive to environmental health campaigns and more willing to link human behavior to health outcomes, possibly due to greater exposure to education and media content that highlight these issues (Randolph & Viswanath, 2024). This finding underscores the importance of targeting younger populations as agents of change in environmental campaigns.

Consistent with the literature on environment-related illnesses, the study found that malaria and cholera were perceived as the most common diseases linked to environmental degradation, representing 43% of all responses (Table 2). Lassa fever, despite being a serious public health concern in Edo North, was identified by only 12% of respondents as an environment-related disease. This perception gap indicates limited understanding of the environmental pathways of certain diseases, such as the role of poor waste management and rodent infestations in the spread of Lassa fever (Ngonso et al., 2023). The World Health Organization (WHO) has repeatedly expressed concern about the rising cases of Lassa fever, typhoid, cholera, and malaria in Edo North, linking these outbreaks to poor environmental management practices such as indiscriminate waste disposal, open defecation, and bush burning (WHO, 2022). The limited recognition of these links by respondents highlights the need for targeted education to improve disease risk perception.

Education emerged as a key determinant of attitude change. Respondents with tertiary education were more likely to report a positive change in their behavior following exposure to environmental health campaigns (53%) compared to those with primary or no formal education (25%) (Table 3). This aligns with previous research showing that education enhances individuals' ability to process health messages and adopt preventive behaviors (Amune et al., 2024). The finding suggests that while media campaigns can reach wide audiences, their effectiveness is mediated by the educational level of the target population. For rural communities where formal education levels remain low, this underscores the need for simplified, culturally sensitive communication strategies, including the use of vernacular languages and pictorial messages (Nwodu & Fab-Ukozor, 2003).

The study also revealed a clear preference for social media as the dominant channel for environmental health communication, particularly among the younger demographic. Platforms such as Facebook, WhatsApp, TikTok, and YouTube accounted for 44% of preferred media sources, while traditional media such as radio, town criers, and town hall meetings accounted for only 9% (Table 4). Among respondents aged 18–32, a remarkable 91% preferred social media, whereas older respondents relied on a combination of social and traditional media. This generational difference reflects the increasing penetration of digital media in rural Nigeria and supports previous findings that social media now serves as a vital source of health information even in rural contexts (Egielewa, 2021a; Ngonso & Egielewa, 2023a). The result also validates the cultivation theory, which posits that frequent exposure to media content influences perceptions and behaviors (Miller, 2024; Perera, 2023). For younger audiences, heavy engagement with social media appears to cultivate greater awareness of environmental issues and a stronger willingness to adopt environmentally healthy practices.

In terms of campaign effectiveness, the majority of respondents (63%) agreed that media health awareness campaigns were effective in influencing their attitudes and behaviors. Interestingly, women were more likely than men to perceive media campaigns as effective (66% versus 34%) (Figure 5). This suggests that women, despite having lower overall awareness levels, may be more responsive to media advocacy once exposed to targeted messages. This responsiveness provides an opportunity for gender-sensitive communication strategies that empower women as key actors in promoting environmental health at the household and community levels.

The hypothesis tests further support these findings. The first hypothesis, which predicted no significant relationship between gender and the ability to change environmental health attitudes, was accepted ($p = 0.994$), confirming that

behavioral change is not inherently tied to gender. In contrast, the second hypothesis, which predicted no significant relationship between environmental awareness and attitude change, was rejected ($p = 0.010$). This statistically significant relationship indicates that increasing environmental awareness directly enhances the likelihood of adopting environmentally healthy behaviors. This aligns with global evidence that knowledge is a critical precursor to behavior change in health communication (Randolph & Viswanath, 2024).

Overall, the findings reveal a complex but promising landscape. While environmental awareness remains low, particularly among women and less educated groups, the effectiveness of media campaigns—especially social media—demonstrates the potential for large-scale behavioral change. Younger, more educated respondents are emerging as key drivers of environmental health advocacy, and women, once adequately informed, may serve as influential champions of environmental health practices in rural households. To maximize impact, interventions must therefore integrate social media campaigns with traditional communication channels such as radio, town criers, churches, and mosques to reach older, less digitally connected populations (Moemeka, 2000). Moreover, messages should be designed to overcome cultural resistance and low literacy by employing local languages, visual storytelling, and participatory community forums (Ngonso & Egielewa, 2023b).

Summary of findings

This study examined the role of media influence in promoting environmental health awareness among rural residents of Edo North Senatorial District of Edo State, Nigeria. The results reveal a generally low level of environmental health awareness, with 58% of respondents reporting low or very low knowledge of environmental issues. Women demonstrated slightly lower awareness than men, reflecting structural inequalities in access to health information. Younger respondents (18–32 years) were more likely to associate human activities with disease, indicating a generational shift in environmental perceptions.

Farming and bush burning were identified as the leading human activities causing environment-related diseases (42%), while malaria and cholera emerged as the most common illnesses linked to environmental degradation (43%). Lassa fever, despite its prevalence in Edo North, was poorly recognized as an environment-related disease, suggesting limited understanding of disease transmission pathways. Education was a key determinant of behavioral change, with respondents holding tertiary education more likely to adopt environmentally healthy practices following media campaigns.

Media preference data showed a strong reliance on social media platforms—Facebook, WhatsApp, TikTok, and YouTube—particularly among younger respondents, 91% of whom use these platforms for health information. Older respondents preferred a combination of social and traditional media, including radio, newspapers, and town hall meetings. Overall, 63% of respondents considered media health campaigns effective, with women showing a higher belief in their effectiveness than men.

Hypothesis testing revealed no significant relationship between gender and the ability to change environmental attitudes but confirmed a significant positive relationship between environmental awareness and attitude change. This underscores the importance of raising environmental awareness through targeted media campaigns to drive behavioral change.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Strengthen Environmental Education: Government agencies, NGOs, and community leaders should intensify education campaigns targeting rural populations, with special focus on women and less-educated groups. Messages should be delivered in local languages and simplified formats to ensure comprehension.

2. Leverage social media for Advocacy: Given the strong preference for social media among younger respondents, platforms such as Facebook, WhatsApp, TikTok, and YouTube should be prioritized for environmental health campaigns. Interactive content—short videos, infographics,

and live Q&A sessions—can increase engagement and knowledge retention.

3. Integrate Traditional Media for Wider Reach: To reach older and less digitally connected populations, traditional communication channels such as radio, town criers, churches, mosques, and community meetings should complement social media efforts. Radio programmers and town hall meetings remain effective for fostering community discussions and behavioral change.

4. Promote Behavioral Change through Participatory Communication: Community-based interventions that encourage dialogue, peer education, and local ownership should be adopted to overcome cultural resistance and foster sustainable environmental practices.

5. Policy and Infrastructure Support: Edo State government should enforce policies on waste management, bush burning, and open defecation, while investing in sanitation infrastructure such as clean water systems and proper waste disposal facilities to reduce environmentally induced diseases.

REFERENCES

1) Aidonojie, P., Ukhurebor, E., Oaihimire, I., Ngonso**,** B., Egielewa, P., Akinsehinde, B., Kusuma, S. & Darmokoesoemo, H. (2023). Bioenergy revamping and complementing the global environmental legal framework on the reduction of waste materials: A facile review. *Heliyon, 9, Article* e12860.
2) American Cancer Society. (2018). *Cancer facts and figures 2018*. https://www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2018.html.
3) Amune, A., Njoku, C. & Ngonzi, C. (2024). Prostate cancer screening awareness amongst selected men population in North-Central Nigeria. *International Journal of African Language and Media Studies, 4*(1), 13-23.
4) Citypopulation.de. (2025, September 20). *Edo State in Nigeria.* https://citypopulation.de/en/nigeria/admin/NGA012__edo/
5) Egielewa, P. E. (2021a). COVID-19 and fake news on social media: Types, challenges and recommendations. *Kogi State University Journal of Contemporary Social Research, 5*(1), 80-90.
6) Egielewa, P. E. (2021b). Effect of social media COVID-19 awareness messages on behavioural change in Nigeria. *Jos Journal of Media and Communication Studies, 3*(5), 266-283.
7) Egielewa, P. & Ate, A. (2020). COVID-19, misinformation and disinformation: An analysis of Nigerians' perception of social media health awareness campaigns. *Zaria Journal of Communication, 5*(2), 138-159.
8) Miller, S. P. (2024). *Cultivation theory*. https://www.ebsco.com/research-starters/communication-and-mass-media/cultivation-theory
9) Moemeka, A. A. (2000). Rural radio broadcasting for health education: Audience participation and message effectiveness. In A. A. Moemeka (ed), *Development* Communication in Action: Building Understanding and Creating Participation. University Press of America
10) Ngonso, B. (2012). Sustainable development in Nigeria: A communitarian advocacy perspective. *Benin Mediacom Journal, 5*, 64-72.
11) Ngonso, B. F. & Egielewa, P. E. (2018). When values change values: Assessing how social media changes Nigerian youth communication patterns and values. *New Media and Mass Communication, 68,* 1-8.
12) Ngonso, B. F., Egielewa, P. E. & Dauda, J. A. (2020). Social media or socio-economic media: A study of the utilization of social media space by rural artisans in Iyamho and Ogbido villages in Edo State. *Edo Journal of Arts, Management and Social Sciences, EJAMSS, 2*(2), 170-184.
13) Ngonso, B., Sunny-Duke, F., Akpoyovwere, O. & Egielewa, P. (2023)**.** Waste recycling and the Nigerian economy: Utilising social media for environmental Waste management education. *International Journal of African Language and Media Studies, 3(*2), 130-139.
14) Ngonso, B. & Egielewa, P. (2023a). Socio-economic power of social media: An examination of social media usage by rural

artisans in selected villages in Nigeria. *International Journal of Economics, Commerce and Management, 11*(7), 1-17.

15) Ngonso, B. & Egielewa, P. (2023b). African communication matrix: The influence of the secular on the church in Nigeria. *Journal of African Media Studies, 15*(1), 3-25.
16) Nwodu, L. C. & Fab-Ukodu, N. (2003). *Communication imperative for development*. John-Jacob.
17) Ojo, T. & Servaes, A. (2013). Health communication and Nigeria: Sickle cell anemia in nollywood. In C. Onwumechili & I. Ndolo (Eds.), *Re-imagining development communication Africa*. Lexington Books.
18) Perera, A. (2023). *Cultivation theory in media*. https://www.simplypsychology.org/cultivation-theory.html
19) Perry, E. (2022). *What is environmental health and why is it important?* https://www.betterup.com/blog/environmental-health
20) Pona, H., Xiaoli, D., Ayantobo, O. & Tetteh, N. (2021). Environmental health situation in Nigeria: current status and future needs. *Heliyon, 7*(3), Article e0633.
21) Randolph, W. & Viswanath, K. (2024). Lessons Learned from Public Health Mass Media Campaigns: Marketing Health in a Crowded Media World. *Annual Review of Public Health, 25,* 419-437.
22) Ukhurebor, E., Aigbe, U., Onyancha, R., UK-Eghonghon, G., Balogun, V., Egielewa, P., Ngonso, B., Otolorin A. Osibote, S., Imoisi, E., Ndunagu, J., Kusuma, H., & Darmokoesomo,H. (2022). Greenhouse Gas Emission: Perception during COVID-19 Pandemic. *Hindawi Biomed Research International*, Article ID 6166276. https://doi.org/10.1155/2022/6166276
23) Ukhurebor, E., Ngonso, B., Egielewa, P., Cirella, G., & Balogun, V. (2023). Petroleum spills and the communicative response from petroleum agencies and companies: Impact assessment from the Niger Delta Region of Nigeria. *The Extractive Industries and Society, 15*, Article 101331. https://doi.org/10.1016/j.exis.2023.101331
24) Yamane, T. (1973). *Statistics: An introductory analysis*. John Weather Hill, Inc.
25) World Health Organization, WHO. (2022). *World mental health report: Transforming mental health for all*. https://www.who.int/publications/i/item/9789240049338

****