Assessing the Attitude of Residents towards Environmental Deterioration and Factors Influencing their Willingness to Participate in Reducing the Trend in Owerri Municipality, Imo State.

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Abstract

This study examines residents' attitudes in Owerri Municipality, Imo State, towards environmental deterioration and explores factors that influence their willingness to participate in efforts to reduce environmental degradation. Data were collected using a self-reported questionnaire, which assessed respondents' awareness of environmental issues, their concern for environmental protection, and their willingness to engage in initiatives to address environmental decline. The data were presented in tables indicating the frequency of responses. The results show that 62.4% of respondents were aware of environmental deterioration, and 79.4% expressed varying levels of concern about it. Moreover, 48% of respondents were very willing to participate in environmental protection activities, while 32.2% expressed some level of willingness. Demographic factors such as gender, age, and education were found to significantly influence participants' willingness to act, with younger and more educated individuals showing greater enthusiasm for environmental action. Furthermore, 49.6% of respondents rated the environmental quality in Owerri as very low, reflecting widespread dissatisfaction. The study underscores the importance of targeted awareness campaigns and community-based initiatives to engage residents in environmental protection, particularly those who are less willing to participate.

Keywords: Environmental Deterioration, Willingness to Participate, Awareness, Owerri

Introduction

The environment is an interrelated complex web of systems that includes the air we breathe, the land we tread on, the water around us, and all the living things that share this planet with us. It encompasses the sum total of all interactions between the biotic and abiotic elements that affects human survival and economic activity. The environment provides essential resources like air, food, water and shelter for all living things; with the survival of the human race depending largely on the sustainability of these resources. When any component in this detailed system deteriorates, it can set off adverse negative feedback effects that ripples through everything else. Hence, judicious exploitation and utilization of natural resources without disturbing the ecosystem equilibrium is paramount.

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According to Miller and Spoolman (2009), Environmental degradation is defined as depletion or destruction of a potentially renewable resource such as soil, grassland, forest or wildlife that is faster than it is naturally replenished. If such use continues, the resource becomes non-renewable or non-existent. Environmental degradation is mainly driven by human activities, including industrialization, urbanization, agriculture, and consumption patterns. Degradation of the environment happens when the environment starts to deteriorate due to over-exploitation of essential resources like air, water, and soil; wrecking ecosystems and habitats; and wildlife extinction. Additionally, pollutants and activities like inappropriate land use and natural disasters can cause environmental quality to deteriorate (Inyang, 2019).

In Nigeria, the consequences of degradation of the environment are extensive. Widespread environmental damage has been caused by fast population growth, inadequate infrastructure, and bad waste disposal methods. Notable issues that are evident in both urban and rural areas include deforestation, water body contamination, and flooding brought on by clogged drainage systems. Human activities like careless waste disposal, land degradation, and uncontrolled industrial emissions are frequently the cause of these problems (Joos *et al*., 1999). For instance, it is typical in many Nigerian cities, including Owerri, the capital of Imo State, to dispose off household waste in open gutters or drainage channels. In addition to worsening flooding and contributing to inadequate sanitation, this also establishes breeding grounds for disease-carrying insects like mosquitoes (Barr *et al*., 2011).

A major factor in determining whether or not efforts to address these environmental challenges are successful is the public's attitude toward them (Liu and Liu, 2023). Even after countless environmental education campaigns, a sizable section of the populace is still ignorant of how their actions affect the environment. The significance of appropriate waste management, resource conservation, and sustainable practices is still often overlooked by Nigerians. This cycle of environmental neglect and degradation is exacerbated by the lax enforcement of environmental laws and policies (Bodo, 2018; Liu and Liu, 2023).

In light of these issues, environmental education has emerged as a critical instrument for increasing public awareness and cultivating a sense of civic duty. The lack of a well-organized national policy on environmental education has limited the impact of attempts to incorporate environmental education into school curricula. However, implementing environmental education at different educational levels can have a big impact on people's attitudes and behaviors, motivating them to take an active role in environmental protection (Oskamp *et al*., 1991; UNEP, 2020).

Many Nigerian cities are experiencing environmental degradation, and Owerri is a prime example. Residents face issues like soil erosion, flooding, and careless waste disposal. Even though waste collection facilities are available in some places, inadequate planning, a lack of knowledge, and a lack of public involvement have kept the situation essentially unchanged (Taylor, 2000). To tackle these enduring difficulties, it is crucial to evaluate locals' perspectives on environmental deterioration and determine the elements that affect their readiness to participate in initiatives to lessen these problems.

This study aims to investigate the attitudes of Owerri's residents toward environmental degradation and identify the factors that influence their willingness to participate in initiatives to reduce environmental harm. By examining the community's knowledge, awareness, and perceptions, this study will offer valuable insights into how environmental education and public participation can be strengthened to achieve sustainable environmental management in Nigeria.

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Study Area

Owerri, the capital of Imo State, Nigeria, is located in the heart of Igboland and is the largest city in the state, followed by Orlu and Okigwe. The city covers an area of about 100 square kilometers (40 square miles) and has an estimated population of 401,873 as of the 2006 census (FRNOG, 2007). It is bordered by the Otamiri River to the east and the Nworie River to the south, with geographical coordinates at latitude 7.0176°E and longitude 5.4682°N. Owerri is situated within the tropical rainforest zone, benefiting from a climate with consistent rainfall throughout the year, although the Harmattan season brings some dryness during the early dry months. The city enjoys an average temperature of 26.4°C.

The region is known for its agricultural production, including crops like yams, cassava, corn, and palm products. Additionally, Owerri is rich in crude oil and natural gas reserves, like much of the surrounding Igbo region. However, the city's growing population and dense urbanization have placed significant pressure on the environment, leading to various forms of environmental degradation.

Data Collection

A survey with 500 Owerri residents as the target population was used to gather data for this study. Participants were chosen at random, and a questionnaire measuring respondents' awareness of environmental degradation, concern for the environment, and willingness to help address these issues served as the data collection tool. The contact-and-collect method was used to administer the questionnaire, with researchers distributing and collecting the completed forms in person. The survey was administered in English, and the questions were thoughtfully crafted to prevent participant fatigue while collecting crucial information.

The questionnaire was structured after Ohakwe *et al*., 2011b and consisted of 8 questions divided into four sections. This first section gathered demographic information, such as gender, age, level of education, and income, while the second section elicited respondents' concern and awareness of environmental deterioration. The third section presents the respondents' rating of concern for the environment, while willingness to participate in reducing environmental deterioration is captured in the last section.

Results

Table 1: Demography of the respondents

Demographic characteristics	Frequency	Percentage (%)
Sex		
Male	**260**	**52.0**
Female	**240**	**48.0**
Educational Level		
Tertiary	**244**	**48.8**
Secondary	**163**	**32.6**
Primary	**93**	**18.6**
Age Range (years)		
18-30	**330**	**66.0**
31 and Above	**170**	**34.0**

Table 1 outlines the demographic characteristics of the respondents in the study on environmental deterioration in Owerri. The sample is fairly balanced in terms of gender, with 52% male and 48% female respondents. The majority of respondents (48.8%) have attained tertiary education, followed by 32.6% with secondary education and 18.6% with primary education. In terms of age, 66% of respondents are aged 18-30, while 34% are 31

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years and older. This demographic distribution highlights a younger, well-educated sample, which is key to understanding their attitudes and willingness to address environmental issues.

Table 2: Respondents responses on environmental deterioration

Response	Number of Respondents	Percentage
Willingness Of Respondents To Participate In Curbing Environmental Deterioration		
Not Willing At All	**48**	**9.6**
Not Very Willing	**51**	**10.2**
Willing	**161**	**32.2**
Very Willing	**240**	**48.0**
Awareness Of Respondents On Environmental Deterioration		
No	**188**	**37.6**
Yes	**382**	**62.4**
Concern About Environmental Deterioration		
Not Concerned At All	**50**	**10.0**
Not Very Concerned	**53**	**10.6**
Concerned	**160**	**32.0**
Very Concerned	**237**	**47.4**

Table 2 presents the respondents' attitudes toward environmental deterioration in Owerri, covering their willingness to participate in addressing environmental issues, their awareness of the problem, and their level of concern.

A significant 48% of respondents expressed being very willing to take part in efforts to reduce environmental deterioration, showing strong support for environmental action. Additionally, 32.2% indicated they are willing to participate, though with somewhat less enthusiasm. However, 9.6% of the respondents were not willing at all to engage in environmental protection efforts, and 10.2% were not very willing, suggesting that these individuals may need further encouragement or education to get involved.

The majority, 62.4%, of respondents were aware of environmental deterioration, indicating a relatively high level of environmental awareness in the community. On the other hand, 37.6% of the respondents were unaware, highlighting a need for greater awareness campaigns to educate the public on the importance of environmental protection.

Nearly half (47.4%) of the respondents expressed being very concerned about environmental deterioration, reflecting the serious view many hold towards the issue. Another 32% of respondents were concerned, showing that a significant portion of the population is attentive to environmental challenges. However, 10.6% were not very concerned, and 10% were not concerned at all, suggesting that some individuals may either not fully understand the severity of the problem or may not prioritize it as highly as others.

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Table 3: Responses on the rating of environmental quality

Response	No Of Respondents	Percentage
Very High	**46**	**9.2**
High	**57**	**11.4**
Low	**149**	**29.8**
Very Low	**248**	**49.6**
Total	**500**	**100**

Table 3 presents the respondents' ratings of environmental quality in Owerri. A small proportion of respondents, 9.2%, rated the environmental quality as *very high*, indicating that only a few believe the environment is in excellent condition. A slightly larger group, 11.4%, rated it as *high*, suggesting that some respondents perceive the environment to be in fairly good condition. On the other hand, 29.8% of respondents rated the environmental quality as *low*, reflecting a significant portion of the population who believe the environment is in sub-optimal condition. The largest group, 49.6%, rated the environmental quality as *very low*, indicating widespread dissatisfaction and concern about the deteriorating state of the environment in Owerri.

Table 4 Responses on the willingness to participate based on sex, age, and the level of education of respondents

Sex			
Response	**Male (N=260)**	**Female (N=240)**	
Not Willing At All	**26 (10.0)**	**22 (9.2)**	
Not Very Willing	**29 (11.2)**	**22 (9.2)**	
Willing	**84 (32.3)**	**77 (32.1)**	
Very Willing	**121 (46.5)**	**119 (49.5)**	
Age			
Response	**18-30 years (N=330)**	**31 years and Above (N=170)**	
Not Willing At All	**32 (9.7)**	**16 (9.4)**	
Not Very Willing	**38 (11.5)**	**13 (7.6)**	
Willing	**87 (26.4)**	**74 (43.6)**	
Very Willing	**173 (52.4)**	**67 (39.4)**	
Education			
Response	**Primary (N=93)**	**Secondary (N=163)**	**Tertiary (244)**
Not Willing At All	**34 (36.5)**	**14 (8.6)**	**0 (0.0)**
Not Very Willing	**41 (44.1)**	**10 (6.1)**	**0 (0.0)**
Willing	**10 (10.8)**	**61 (37.4)**	**90 (36.9)**
Very Willing	**8 (8.6)**	**78 (47.9)**	**154 (63.1)**

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Table 4 presents an analysis of respondents' willingness to participate in environmental protection efforts based on sex, age, and educational level.

For sex, among male respondents (260), 46.5% were very willing to participate in environmental protection, while 32.3% were willing. A smaller portion, 11.2%, were not very willing, and 10.0% were not willing at all. Among female respondents (240), 49.5% were very willing to participate, slightly higher than males, and 32.1% were willing. 9.2% were not very willing, and 9.2% were not willing at all.

Regarding age, 52.4% of respondents aged 18-30 years (330) were very willing to participate, and 26.4% were willing. 11.5% were not very willing, and 9.7% were not willing at all. For respondents aged 31 years and above (170), 39.4% were very willing, and 43.6% were willing. 7.6% were not very willing, and 9.4% were not willing at all.

In terms of education, among those with primary education (93), 36.5% were not willing at all, and 44.1% were not very willing. 10.8% were willing, and 8.6% were very willing. Among respondents with secondary education (163), 47.9% were very willing, and 37.4% were willing. 6.1% were not very willing, and 8.6% were not willing at all. Among those with tertiary education (244), 63.1% were very willing, and 36.9% were willing. No tertiary-educated respondent expressed any form of unwillingness.

Discussion

The results of the study on the attitudes of residents towards environmental deterioration and their willingness to participate in addressing this issue in Owerri show a significant level of awareness, concern, and willingness to participate. Approximately 80% of the respondents (48% very willing and 32.2% willing) expressed a positive attitude towards taking action against environmental deterioration (Table 2). This finding is consistent with previous studies, such as Ohakwe *et al.* (2011a), who found that over 50% of their respondents were willing to engage in efforts to curb environmental degradation in Nigeria.

In terms of awareness, 62.4% of respondents indicated they were aware of environmental deterioration in Owerri (Table 2), aligning with the findings of Ohakwe *et al.* (2011a), who also reported high levels of awareness about environmental issues among their study participants. Additionally, over 70% of the respondents were concerned about the deteriorating environmental conditions in the region (Table 2). This is consistent with the 79.4% of respondents in this study who rated the environmental quality in Owerri as either low or very low (Table 3), indicating widespread dissatisfaction with the current state of the environment. The levels of concern among respondents further emphasize the need for proactive engagement in environmental protection efforts.

The demographic breakdown reveals that educational level plays a significant role in shaping respondents' willingness to participate in environmental protection activities. Those with at least a secondary education were generally more willing to engage in such efforts compared to those with only a primary school education (Table 4). This finding supports the broader notion that education is a key factor in promoting pro-environmental behaviors, as more educated individuals are typically more aware of the environmental issues at hand (Barr *et al.*,2001, Coles, 2001). However, it is essential to note that the sample in this study is more educated than the general population in Nigeria, particularly when compared to rural areas, where educational levels may be lower. Therefore, the findings may not fully represent the attitudes of less-educated populations in rural areas.

Regarding the willingness to participate based on sex, the study found no significant difference between males and females (Table 4). This suggests that both genders are equally

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likely to engage in environmental protection efforts. A study by Raudsepp in 2001 showed some interesting findings: women are way more likely than men to worry about environmental issues. It turns out that females consistently show a stronger sense of responsibility when it comes to the environment. On the other hand, age doesn't seem to play a big role in how willing people are to help out. However, a larger group of younger folks, specifically those aged 18 to 30 years, indicated they were "very willing" to get involved compared to those who are 31 years and older (check out Table 4). This hints that the younger generation might be more fired up about environmental problems, which aligns with what other studies have suggested (Oskamp *et al.*, 1991, Moreno and Fernández, 2023). The findings also reveal that environmental awareness and concern are important drivers of participation. The significant proportion of respondents who expressed concern about environmental deterioration highlights the need for continued awareness campaigns. Previous research has also emphasized that public awareness is crucial for motivating action, as informed individuals are more likely to engage in sustainable practices (Bickerstaff and Walker, 2022).).

Waste management in Owerri is a big deal, and the lack of proper recycling programs and tech-savvy landfills isn't helping. It is leading to some pretty messy waste management practices and harming the environment (Ajero and Chigbo, 2012). Studies have shown that if we could just get better at treating waste—like cutting down on what we throw away, reusing stuff, and recycling—it could help lessen our environmental footprint (Joos *et al.*, 1999). But there's this NIMBY vibes going on in a lot of communities, where people don't want any waste solutions near them, which makes it tough to get sustainable waste management in place (Leao *et al.*, 2004, Pereira, and Rodrigues, 2021). This "out of sight, out of mind" attitude only makes the problems with waste disposal and protecting our environment even worse.

Besides, the clearing of forests for urban development and the clogging of drainage channels with garbage are major contributors to environmental degradation in Owerri. As Leao *et al.* (2004) emphasized, poor waste management practices, such as uncontrolled waste disposal and deforestation, lead to lasting harm to our ecosystems.

Conclusion and Recommendations

This study reveals that factors like age, gender, education level, and environmental awareness play an important role in how willing people in Owerri are to take part in efforts to fight environmental degradation. Consistent with previous research, education became a major player—more educated individuals tend to engage more in activities aimed at protecting the environment (Barr *et al.*, 2001). The findings emphasize the importance of public awareness campaigns in building a culture of environmental stewardship.

To effectively tackle environmental challenges, we need policy changes that promote reducing waste, recycling, and adopting sustainable waste management practices. Governments must focus on establishing modern landfills equipped with innovative technology to minimize the environmental footprint of waste disposal (Ajero and Chigbo, 2012). In addition, integrating environmental education into school curricula can help nurture a generation that values sustainability. We should also vamp up efforts to inform the public through media campaigns, emphasizing education in local languages about how everyday actions impact the environment.

In conclusion, tackling environmental challenges in Owerri calls for a robust approach, which means boosting public awareness, reforming education, and adopting better waste management practices. It's essential for the government and all key players to collaborate on developing policies that not

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only spread the word but also ensure our environment is managed effectively for generations to come.

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