

SOCIOLOGICAL VARIABLES AND ENVIRONMENTAL SUSTAINABILITY IN IKOM EDUCATION ZONE OF CROSS RIVER STATE.

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abstract

The purpose of this study was to investigate sociological variables as correlates of environmental sustainability among residents of Ikom Education Zone of Cross River State, Nigeria. To achieve the purpose of the study five research questions and five null hypotheses were formulated to guide it. Literature was reviewed in accordance with the variables of the study. Ex-post facto research design was adopted for the study. The population of the study comprised all adult residents of Ikom Education Zone. Stratified random sampling technique was adopted to select the six local government areas, simple random sampling technique was adopted to select the forty seven communities while systematic sampling technique was employed to select the three hundred and forty respondents used for the study. A structured questionnaire was the instrument used for data collection. It was validated by relevant lecturers. The reliability estimate of the instruments was established through Cronbach Alpha reliability coefficient. The reliability coefficient ranges from 0.71 to 0.91 which was high. Descriptive statistic was utilized to answer the research questions raised in the study. Regression analysis, One-Way Analysis of Variance (ANOVA) and Independent t-test analysis were the statistical techniques employed to test the hypotheses under study. Each hypothesis was tested at .05 level of significance. The results of the analysis revealed that, cultural practices, gender, consumption behaviour, income level and people perception of environment significantly influenced environmental sustainability in Ikom Education Zone of Cross River State, Nigeria. Based on these findings, it was recommended among others that Environmental educators should continue to sensitize community leaders and members on the need to promote friendly cultural practices and discourage practices that are detrimental to environmental sustainability in the study area.

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CHAPTER ONE

INTRODUCTION

Background to the study

Human wellbeing and that of other living organisms is closely linked to the quality of the environment they live in. Humans always desire to breathe clean air that is free of pollutants, potable water to drink and places to live that are almost totally free of hazards or toxic substances. As people continue to experience the long term consequences of exponential growth of industries and use of energy, they must take urgent steps to reverse these consequences and prevent further damage, as well as ensure that there are healthy surroundings for several years to come. Environmental sustainability means being committed to environmentally sustainable practices to help build growing communities and secure potentials for future growth and development. Louis (2019) asserted that environmental sustainability is taking responsibility towards the conservation of natural resources and protection of global ecosystems to support health and well-being, now and in the future. The reason is that several decisions that impact the quality of the environment are not felt immediately they are implemented, a key characteristic of environmental sustainability is its forward looking nature.

Across the globe, environmental degradation has become a major concern for governments, policymakers, scientists, and communities. Nigeria, like many other developing nations, grapples with unsustainable practices such as indiscriminate waste disposal, deforestation, overexploitation of resources, and uncontrolled urbanization, all of which contribute to the weakening of ecological systems (Adejobi & Doruninbe, 2024). In regions like Ikom Education Zone of Cross River State, increasing population growth, agricultural expansion, logging activities, and urban development have exerted intense pressure on the environment. The future of environmental sustainability in

such regions depends on how effectively individuals, households, and communities integrate sustainable practices into their daily lives.

Environmental sustainability is one of the key pillars of sustainable development, alongside economic and social sustainability. It emphasizes maintaining ecological balance, preserving natural resources, and ensuring that present needs are met without jeopardizing the ability of future generations to meet their own needs (Hawkes, 2016). While governments and international bodies have developed several frameworks to address sustainability concerns, effective solutions also depend heavily on sociological variables, factors rooted in human culture, behavior, circumstances, and perceptions. Understanding these variables provides deeper insight into how individuals and communities interact with their environment and what influences their choices toward sustainability. This study focuses on five sociological variables: cultural practices, gender differences, consumption behavior, income level, and people's perception towards environmental sustainability. These variables not only shape human-environment interactions but also determine the success or failure of sustainability initiatives.

It is based on these facts that the issue of sustainable development was key in the United Nations Conference for sustainable development held in Rio de Janeiro, Brazil in 2022 had a list of nine recommended actions that would advance environmental sustainability. Sustaining the environment is a disturbing issue in most developing countries like Nigeria. The alarming rate of domestic waste generation, exploiting population and increasing urbanization outweighs the approaches adopted by government around the environment (Adejobi & Doruninbe, 2024). Environmental sustainability forms one of the pillars of sustainable development, the others being social sustainability and economical sustainability.

Statement of the problem

Environmental sustainability remains a critical concern in Ikom Education Zone of Cross River State, Nigeria. The area, known for its rich biodiversity and forest reserves, particularly the Afi Mountain Wildlife Sanctuary, faces increasing environmental degradation due to deforestation, bush burning, poor waste disposal, and unsustainable farming practices. These activities are influenced by various sociological variables. Despite the ecological importance of the area, human-induced activities continue to threaten the sustainability of the environment, leading to soil erosion, loss of biodiversity, and climate variability, which in turn affect the livelihoods of the predominantly agrarian population.

This research, therefore, seeks to explore how sociological variables such as cultural practices, gender, income level, consumption behaviour, income level, and peoples' perception of the environment correlate with environmental sustainability in Ikom Education Zone, Cross River State. By identifying the key sociological drivers of environmental behaviour, the study aimed to provide data-driven insights that can inform more culturally and socially responsive policies and programs.

Purpose of the study

The purpose of this study was to examine sociological variables and environmental sustainability in Ikom Education Zone of Cross River State. In specific terms, the study sought to find out;

1. How cultural practices relate with environmental sustainability in Ikom Education Zone
2. The extent to which gender influences environmental sustainability in Ikom Education Zone
3. How consumption behaviour relates to environmental sustainability in Ikom Education Zone

4. The extent to which income level influences environmental sustainability in Ikom Education Zone
5. How people perception of the environment relates to environmental sustainability in Ikom Education Zone.

Research questions

To achieve the specific purpose of the study, the following research questions were posed;

1. How does cultural practices relate with environmental sustainability in Ikom Education Zone?
2. How does gender influence environmental sustainability in Ikom Education Zone?
3. To what extent does people consumption behaviour relate to environmental sustainability in Ikom Education Zone?
4. What is the extent to which income level influences environmental sustainability in Ikom Education Zone?
5. How does people perception of the environment relate to environmental sustainability in Ikom Education Zone?

Statement of hypotheses

The following hypotheses were formulated for the study;

1. There is no significant relationship between cultural practices and environmental sustainability in Ikom Education Zone
2. Gender does not significantly influence environmental sustainability in Ikom Education Zone
3. There is no significant relationship between consumption behaviour and environmental sustainability in Ikom Education Zone.
4. Income level does not significantly influence environmental sustainability in Ikom Education Zone.

5. There is no significant relationship between people perception of environment and environmental sustainability in Ikom Education Zone.

Significance of the study

The result of this study may be of immense benefits to the ministry of environment, education and health, environmental educationist, residents, policy makers, future researchers etc.

The research could provide insights into how social factors (such as culture, education, and community participation) influence environmental sustainability efforts. It could lead to better-informed community members and promote more effective community-based environmental initiatives.

Local and state government authorities could use the findings to develop or refine policies aimed at promoting environmental sustainability. By understanding sociological factors, policymakers can create strategies that align with the social and cultural realities of the local population.

1.7 Assumptions of the study

The following assumptions are inherent in the study;

- i. The independent and dependent variables in the study are measurable
- ii. The variables are evenly distributed in the population
- iii. The respondents understands the contents of the research instrument
- iv. The respondents are not under any form of pressure to respond to the research instrument in a particular manner
- v. The responses obtained from respondents is a clear reflection of their opinion on each item in the research instrument

1.8 Scope of the study

The study investigated sociological variables as predictor of environmental sustainability among residents of Ikom Education Zone of Cross River State. In specific the study covered sociological variables such as cultural practices, gender, consumption behaviour, income level and people perception in relation to environmental sustainability in the study area.

1.9 Limitations of the study

The limitations of the study are presented thus;

- i. Most parts of the study area are rural in nature and access to some communities was a difficult task. This limited the study to selected communities, which could interfere with the generalization of the findings obtained in the study

LITERATURE REVIEW

The conceptual framework for this study highlights the relationship between sociological variables and environmental sustainability in Ikom Education Zone of Cross River State. The goal of attaining environmental sustainability can be realized when sociological variables are taken into serious consideration. A careful examination of some sociological variables like cultural practices, gender, consumption behaviour, income level, and perception of environment among residents could significantly promote the sustainability of the environment. These behaviours impact on the quality of the environment both positively and negatively, which determines the attainment of environmental sustainability. The goal of environmental education is to raise a citizenry that is aware of the total environment, understands its problems and can provide solution to solving the identified problem now and in the future.

Cultural practices and environmental sustainability

Dallaire (2024) examined the impact of cultural practices on environmental quality in Uganda. The study design was cross-sectional survey. Data collection was from direct field observation, measurement and questionnaire survey of 1,399 households through stratified random sampling. The research questionnaire was adequately developed and tested to ensure unbiased results. It was validated by the researcher's supervisor, a statistician, and environmentalist. The data gathered from the respondents were analysed using Single Linear Regression Analysis. The result showed that there was a positive relationship between cultural practices and environmental quality. The study would constitute policy implications for the implementation of sustainable projects through the verified environmental quality indicators.

The result shows that beliefs, ideas, thought among residents have significant relationship on environmental sustainability in Lagos State. The study recommended that irrespective of culture and tradition of the people, environmental sustainability should be a priority to everyone.

Gender and environmental sustainability

Xiao and McCright (2022) examined the relationship between gender and environmental concern among residents in Unites States. The study employed survey design. The researchers used one thousand one hundred and fifty as sample size of the study. Multivariate ordered logistic regression analysis was employed on surveyed data. The result of the study obtained indicated that women express slightly greater environmental concern than men. This modest gender difference exists whether environmental concern is operationalized via items measuring environment/economic trade-offs, participation in pro-environmental activities, pro-environmental attitudes or an ecological worldview or perceived seriousness of different types of environmental problems.

Consumption behaviour and environmental sustainability

Fredriksson and Wang (2024) investigated the impact of consumerism on environmental sustainability in Pakistan. The study aimed at investigating the impact of consumption behaviour on environmental quality. The study adopted a descriptive survey design and one thousand five hundred respondents as the sample size. The data for the study were collected through questionnaire and oral interview. The findings of the study revealed that consumption behaviour has a direct impact on the quality of the environment. The study further concluded that the level of consumption in the 21st century has a significant impact on environmental aesthetics.

Amin and Khaleque (2022) examined the relationship between consumption behavior and sustainable waste management practices in Dhaka, Bangladesh. The study employed a cross-sectional research design. The population of the study consisted of 1,000 households in urban areas, with a sample of 400 households selected using a stratified random sampling technique. The data collection involved administering a structured questionnaire to assess the consumption patterns of households, particularly in relation to waste generation and recycling behaviors.

It recommended that public awareness campaigns and policy initiatives be designed to promote sustainable water use and conservation practices.

Income level and environmental sustainability

Abang (2021) examined the influence of poverty on environmental sustainability in Akwa Ibom State. The researcher observed that millions of Nigerians still lack access to basic necessities of life like adequate food, shelter, and health such that the quality of life of these group of people is deteriorating and that the poverty gap is widening which results to many depending heavily on environmental resources. These continue to create environmental problems for the society, just as little concern for improvement is given to the environment. This attitude has no doubt retarded the

economic growth of the country. Ensuring that households have access to basic services like water, sanitation and energy is a basic concomitant to development. This will no doubt has impact on human. Johnston (2017) reported that billions of people over the world die annually from lack of access to safe drinking water and environmental hazards that result from poverty and environmental deterioration.

People's perception and Environmental sustainability

Morris and Taylor (2023) investigated the relationship between people's perception of climate change and their willingness to adopt sustainable energy practices in rural Scotland. The study used a cross-sectional research design. The population of the study consisted of 1,500 rural households, with a sample of 500 households selected using a stratified random sampling technique. Data was collected through surveys to assess people's perceptions of climate change, their environmental attitudes, and the adoption of renewable energy sources such as solar panels and wind turbines.

RESEARCH METHODOLOGY

The research design adopted for this study was ex-post facto design. Ex-post facto research design is a non-experimental research design in which the researcher investigates possible cause-and-effect relationships by observing existing or characteristics without manipulating the independent variables.

Area of the study

The study was carried out in Ikom Education Zone of Cross River State. The study area is located in Central Senatorial District of Cross River State, which comprises six local government areas namely: Abi, Boki, Etung, Ikom, Obubra, and Yakurr local government areas respectively. It lies between latitudes 5° 45' North and 5° 55' North of the Equator and longitudes 8°30' East

and $8^{\circ}34'$ East of the Greenwich Meridian with an area of 8237 km². The study area has a population of 1,207, 643 million people (National Population Commission, 2024). Ikom Education Zone is bounded to the north by Ogoja, Obudu and Obanliku Local Government Areas of the State, to the South by Biase and Akamkpa Local Government Areas of the State, to the east by Republic of Cameroun, and to the west by Ebonyi State.

Population of the study

The population of this study consisted of all the farmers, hunters, gathers of forest products and civil servants residing and operating in Ikom Education Zone of Cross River State. The actual population of this study is 396,324 persons who are still actively involved in activities that are directly linked with the environment within the area covered in this study.

Sampling technique. Stratified random sampling technique was used to divide the local government area (Ikom Education Zone) into six Local Government Areas. While simple random sampling was applied to select five wards from each of the six local government areas. Simple random sampling technique was adopted to proportionately select forty one (41) communities representing 15% of the communities in the six local government areas selected for the study.

Instrumentation

The instrument for data collection was a researcher designed questionnaire entitled “Sociological Variables and Environmental Sustainability Questionnaire (SVESQ)”. It was arranged in two sections. Section A was designed to collect the demographic data of the respondents that is, gender and income level. Section B was designed to collect information on respondent's sociological variables. It was developed on a four point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). It contained twenty five items that

measured the variables of the study. Items 1-5 measured cultural practices. Items 6-10 measured consumption behaviour. Items 11-15 measured peoples' perception of environmental sustainability while items 16-25 measured environmental sustainability.

Validity of the instrument

The instrument was subjected to face validation by two lecturers in Environmental Education and two others from Measurement and Evaluation all in the College of Education, University of Calabar. These experts were requested to check for adequacy of the items and suitability of the instrument in line with the purpose of the study and research questions.

Procedure for data collection

The researcher personally approached the respondents in their respective houses, shops and business places. The researcher used direct delivery technique in the administration of the questionnaire

Procedure for data scoring/scoring

Number of response options provided for example item one (1) gender and was coded 1 and 2 for male and female, while item two was income level, which was coded 1-5, such was used for all items in section A. Section B on the other hand was scored in line with the four-points modified Likert scale type of Strongly Agree, Agree, Disagree and Strongly Disagree. Hence, positively worded items were scored 4, 3, 2, and 1 for SA, A, D, and SD. The scores per subsection were summarized into a final score while all codes and scores were transferred into a person-by-item matrix table known as 'Data Bank'. It was from the data bank that data were collated and used for testing all formulated hypotheses that directed the study. The coding schedule is presented in Table 3.

3.9 Procedure of data analysis

The following procedure was used in testing the hypotheses of the study.

Hypothesis one

There is no significant relationship between cultural practices and environmental sustainability in Ikom Education Zone.

Independent variable: Cultural practices

Dependent variable: Environmental sustainability

Statistical tool: Simple regression analysis

General description of variables

This section presents the means and standard deviations for the main variables in the study.

The main independent variable for this study is sociological variables, which are classified into:

- i. Cultural practices
- ii. Gender
- iii. Consumption behaviour
- iv. Income level
- v. Peoples' perception of environment

The dependent variable is environmental sustainability among residents of Ikom Education Zone, Cross River State. The mean and standard deviation of the major variables are calculated and presented in Table 4. Total sample of three hundred and forty (340) students was used for the study. The result in Table 6 shows that 170 representing 50.0% of the total respondents were male, while 170 (50.0%) were female. In terms of income level, 157(45.18%) were earned Less than

N51,000,118 (34.71%) earned between N51,000 - N100,000, while,65 (16.47%) earned Above N100,000.

Presentation of result

In this section each hypothesis is re-stated, and the result of data analysis carried out to test it is presented. Each hypothesis of the study was tested at .05 level of significance.

Research question one

How does cultural practices relate with environmental sustainability in Ikom Education Zone? Descriptive statistic was utilized for data analysis. The result obtained is presented in Table

As presented in Table 5, the information obtained from the respondents on cultural practices and environmental sustainability among residents of Ikom Education Zone revealed that 134(36.4%) of the respondents reported strongly agree. 88(25.9%) indicated agree. 76(22.4%) of the respondents indicated disagree while 42(12.3%) of the respondents indicated strongly disagree. This revealed that majority of the respondent indicated that cultural practices contributed to environmental sustainability in the study area.

Research question two

How does gender influence environmental sustainability in Ikom Education Zone? Descriptive statistic was utilized for data analysis. The result obtained from the analysis is presented in Table 6.

As presented in Table 6, the information obtained from the respondents on gender and environmental sustainability among residents of Ikom Education Zone revealed that 170(50.0%) of the respondents were males while 170(50.0%) of the respondents indicated they were females. This showed that the number of males and females that were used for the study were the same.

5.2 Conclusion

The study's findings lead to the conclusion that environmental sustainability in Ikom Education Zone of Cross River State, Nigeria is significantly influenced by several factors. Cultural practices, such as traditional values and beliefs, play a crucial role in shaping environmental attitudes and behaviors, highlighting the importance of incorporating cultural sensitivity into environmental education and awareness programs.

The study concludes that cultural practices, gender, consumption behavior, income level, and people's perception of the environment are all significant predictors of environmental sustainability in Ikom Education Zone. The findings highlight the need for a multifaceted approach to promote environmental sustainability, incorporating education, awareness, economic incentives, and policy interventions to address the region's environmental challenges.

5.4 Recommendations

To promote environmental sustainability in Ikom Education Zone of Cross River State, Nigeria, the following recommendations are proposed:

1. Environmental educators should continue to sensitize community leaders and members on the need to promote friendly cultural practices and discourage practices that are detrimental to environmental sustainability in the study area
2. Male residents of the study area should be regularly enlightened on the need to develop environment-friendly behaviour that would contribute positively to the attainment of environmental sustainability
3. Environmental educators should continue to engage residents of the study area on the need to adopt friendly consumption behaviour that do not pose any threat to the wellbeing and sustainability of the environment

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