

Local Government Sanitation Practices and the Health of Rural Dwellers in Ibiono Ibom Local Government Area, Akwa Ibom, Nigeria

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Abstract

This study examined the relationship between local government sanitation practices and the health of rural dwellers in Ibiono Ibom Local Government Area of Akwa Ibom State, Nigeria. The study was motivated by persistent sanitation challenges in many rural communities, including poor waste disposal practices, inadequate drainage systems, environmental pollution, and the prevalence of sanitation-related diseases. Despite the constitutional responsibility of local governments to provide environmental sanitation services, concerns remain regarding the effectiveness of sanitation interventions and their impact on the health status of rural residents. The specific objectives of the study were to examine the effects of waste management practices, drainage maintenance, environmental sanitation exercises, and public hygiene sensitization campaigns on the health of rural dwellers in the study area. The study adopted a cross-sectional survey research design. The population comprised 145,750 adult residents of Ibiono Ibom Local Government Area, from which a sample size of 400 respondents was determined using Taro Yamane's formula. A multi-stage sampling technique was employed in selecting respondents. Data were collected through a structured questionnaire and analyzed using descriptive statistics, while hypotheses were tested using Analysis of Variance (ANOVA). Findings revealed that local government sanitation practices significantly influence the health of rural dwellers. The results showed that regular sanitation exercises, proper waste management, drainage maintenance, and public hygiene campaigns contributed positively to reducing disease prevalence and improving environmental health conditions. Specifically, the hypothesis tested indicated a significant relationship between local government engagement in sanitation activities and the health of rural dwellers ($F = 85.62, p < 0.05$), leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. The study concluded that effective sanitation practices constitute a critical determinant of public health in rural communities. It therefore recommended increased funding for sanitation programmes, regular maintenance of drainage infrastructure, intensified public health awareness campaigns, strengthened enforcement of sanitation regulations, and enhanced community participation in environmental sanitation activities. These measures are necessary for improving health outcomes and promoting sustainable rural development in Ibiono Ibom Local Government Area.

Keywords: Local Government, Sanitation Practices, Environmental Health, Rural Dwellers, Waste Management, Public Health, Ibiono Ibom

Introduction

Local government administration occupies a central position in the global discourse on grassroots development, service delivery, and the wellbeing of rural populations. Across the

world, governments have increasingly recognized that the effectiveness of development initiatives depends largely on the capacity of subnational institutions to translate policies into tangible improvements in the daily lives of citizens. Local governments are often the closest tier of government to the people, particularly in rural settings, and they are strategically positioned to address basic needs such as sanitation, education, healthcare, and economic empowerment. In both developed and developing societies, the performance of local governments has become a critical determinant of social equity, poverty reduction, and inclusive development (United Nations Development Programme [UNDP], 2020; World Bank, 2022).

Sanitation remains one of the most fundamental determinants of public health and human wellbeing across the world. The concept of sanitation encompasses the provision and maintenance of facilities and services necessary for the safe disposal of human waste, management of solid waste, drainage of wastewater, environmental cleanliness, and promotion of hygienic practices. According to the World Health Organization (WHO, 2023), sanitation refers to interventions and services that prevent human contact with hazardous waste materials and environmental contaminants capable of causing disease. Adequate sanitation contributes significantly to the prevention of infectious diseases, reduction of environmental pollution, improvement of living conditions, and enhancement of overall health outcomes. Conversely, poor sanitation creates conditions that facilitate the transmission of communicable diseases, thereby posing serious threats to human health and sustainable development. Globally, sanitation has become a major development concern due to its close relationship with public health. Despite significant advancements in sanitation infrastructure and environmental management across developed nations, many developing countries continue to struggle with inadequate sanitation facilities and poor waste management systems. The World Bank (2022) and Sanchez-Hernandez et al (2021) estimates that billions of people worldwide still lack access to safely managed sanitation services, particularly in rural communities where infrastructure development remains limited. The consequences of poor sanitation are evident in the prevalence of waterborne diseases, environmental degradation, increased healthcare costs, and reduced productivity. Recognizing these challenges, the United Nations incorporated sanitation into Sustainable Development Goal Six (SDG 6), which seeks to ensure access to adequate and equitable sanitation for all by 2030 (United Nations, 2023).

The relationship between sanitation and health has attracted considerable scholarly attention in recent years. Studies consistently demonstrate that poor sanitation contributes significantly to the spread of diseases such as cholera, typhoid fever, dysentery, diarrhea, malaria, and other sanitation-related illnesses. According to WHO and UNICEF (2022), inadequate sanitation accounts for a substantial proportion of preventable diseases and deaths, particularly among vulnerable populations residing in rural communities. Environmental contaminants arising from improper waste disposal, blocked drainage systems, and open defecation often contaminate water sources and create breeding grounds for disease-causing organisms. Consequently, improvements in sanitation have been recognized as one of the most effective public health interventions for reducing disease burden and improving population health.

The role of local governments in sanitation management has become increasingly important within contemporary governance systems. Through decentralization reforms implemented in many countries, local governments have been assigned responsibility for environmental sanitation, waste management, public health education, drainage maintenance, and enforcement of sanitation regulations. The rationale behind this arrangement is that local governments, being the closest level of government to the people, are better positioned to identify community

sanitation needs and implement appropriate interventions. Scholars such as Faguet (2020) argue that effective local government involvement in sanitation promotes accountability, responsiveness, and sustainability in service delivery. Consequently, the effectiveness of sanitation practices at the local government level has become a critical factor in determining public health outcomes, particularly in rural areas.

Across Africa, sanitation challenges remain severe despite various government interventions and international support programmes. Many rural communities continue to experience poor waste disposal practices, inadequate drainage systems, insufficient sanitation infrastructure, and limited public awareness regarding environmental hygiene. The African Development Bank (AfDB, 2021) reports that inadequate sanitation remains a major contributor to disease prevalence and poor health outcomes across Sub-Saharan Africa. Rapid population growth, weak institutional capacity, inadequate funding, and poor enforcement of sanitation regulations have compounded sanitation challenges in many African countries. Consequently, rural populations continue to face heightened exposure to sanitation-related diseases and environmental hazards. In Nigeria, sanitation remains a significant public health challenge despite numerous policies and programmes aimed at improving environmental health. The Nigerian Constitution assigns local governments responsibility for environmental sanitation and public health management at the grassroots level. Local governments are expected to organize environmental sanitation exercises, manage waste disposal systems, maintain drainage infrastructure, promote hygiene education, and enforce sanitation regulations. However, available evidence suggests that many local governments struggle to discharge these responsibilities effectively due to inadequate funding, weak institutional structures, shortage of technical personnel, and political interference (Adebayo & Arowolo, 2020).

The sanitation situation in rural Nigeria is particularly concerning. Open defecation, indiscriminate waste disposal, poor drainage maintenance, and inadequate sanitation facilities remain common features of many rural communities. According to the National Bureau of Statistics (NBS, 2023), a significant proportion of rural households still lack access to improved sanitation facilities. These conditions contribute to frequent outbreaks of sanitation-related diseases, environmental pollution, and poor health outcomes among rural residents. The persistence of these challenges suggests deficiencies in sanitation service delivery and raises concerns regarding the effectiveness of local government sanitation practices. Environmental sanitation has direct implications for the health status of rural dwellers. Communities characterized by poor sanitation often experience higher incidences of communicable diseases, increased healthcare expenditures, reduced labour productivity, and lower quality of life. Research conducted by Oloruntoba and Adewole (2021) established that inadequate sanitation contributes significantly to the prevalence of diarrheal diseases, typhoid fever, and other infectious diseases in rural Nigerian communities. Furthermore, poor sanitation conditions disproportionately affect vulnerable groups such as children, pregnant women, and the elderly, thereby increasing public health risks within rural environments.

Akwa Ibom State has made notable efforts toward improving environmental sanitation through various government programmes and public health initiatives. Nevertheless, sanitation challenges persist in many rural communities across the state. Poor waste disposal practices, inadequate drainage systems, environmental pollution, and insufficient sanitation infrastructure continue to affect public health outcomes in several local government areas. These challenges raise important questions regarding the effectiveness of local government sanitation practices and their implications for rural health. Ibiono Ibom Local Government Area is predominantly rural and depends heavily on local government interventions for environmental management

and sanitation services. Many communities within the area face sanitation-related challenges including improper waste disposal, inadequate drainage maintenance, poor environmental hygiene, and limited public awareness regarding sanitation practices. These conditions create favourable environments for disease transmission and negatively affect the health status of residents. Given the strategic role of local governments in sanitation management and the health challenges confronting rural communities, it becomes imperative to examine the extent to which local government sanitation practices influence the health of rural dwellers in Ibiono Ibom Local Government Area. This study therefore seeks to investigate local government sanitation practices and the health of rural dwellers in Ibiono Ibom Local Government Area of Akwa Ibom State.

Statement of the Problem

Sanitation remains one of the most critical determinants of public health, particularly in rural communities where access to environmental sanitation infrastructure and services is often limited. Despite various policy initiatives and constitutional provisions assigning responsibility for environmental sanitation to local governments in Nigeria, many rural communities continue to experience poor sanitation conditions and increasing incidences of sanitation-related diseases. This situation raises serious concerns regarding the effectiveness of local government sanitation practices and their capacity to promote healthy living conditions among rural populations.

In Ibiono Ibom Local Government Area, observable environmental sanitation challenges persist across many rural communities. Improper disposal of solid waste, blocked drainage channels, indiscriminate dumping of refuse, poor environmental hygiene, and inadequate sanitation facilities remain common occurrences. These conditions create environments that facilitate the spread of communicable diseases such as cholera, typhoid fever, diarrhea, malaria, and other sanitation-related illnesses. The persistence of these health challenges suggests that existing sanitation interventions may not be achieving their intended outcomes. Although local governments are statutorily mandated to organize environmental sanitation exercises, enforce sanitation regulations, maintain drainage systems, and promote public hygiene, evidence from many rural communities indicates that sanitation service delivery remains inadequate. Irregular waste evacuation, insufficient sanitation infrastructure, weak enforcement of environmental regulations, and limited public health sensitization have contributed to the deterioration of environmental conditions in many parts of Ibiono Ibom Local Government Area. Consequently, rural residents continue to face significant health risks associated with poor sanitation.

Another major concern is the increasing burden of preventable diseases linked to environmental sanitation deficiencies. Poor sanitation not only affects physical health but also imposes economic burdens on households through increased healthcare expenditures, loss of productive work hours, and reduced quality of life. Vulnerable groups such as children, pregnant women, and elderly persons are particularly affected by sanitation-related health problems. Despite these realities, there is limited empirical evidence demonstrating the extent to which local government sanitation practices contribute to improving or undermining the health status of rural dwellers in Ibiono Ibom Local Government Area. Furthermore, most existing studies on sanitation in Nigeria have focused broadly on environmental health, waste management, or sanitation infrastructure at national and state levels, with limited attention given to localized assessments of local government sanitation practices and their direct implications for rural health. Consequently, there is insufficient context-specific evidence to guide policy formulation and intervention strategies within Ibiono Ibom Local Government Area. This knowledge gap

limits the ability of policymakers and local government administrators to design effective sanitation programmes capable of addressing the unique sanitation challenges confronting rural communities.

It is against this background that this study seeks to investigate the relationship between local government sanitation practices and the health of rural dwellers in Ibiono Ibom Local Government Area. Specifically, the study seeks to determine whether sanitation practices implemented by the local government significantly influence the health outcomes of rural residents and to provide empirical evidence that can support improved sanitation policy and public health interventions within the study area.

Objectives of the study

The broad objective of this study is to investigate local government sanitation practices and the health of rural dwellers in Ibiono Ibom LGA.

Research questions

How does local government engagement in sanitation activities affect the wellbeing of the rural dwellers in Ibiono Ibom LGA?

Research hypotheses

H₀: There is no significant relationship between local government engagement in sanitation activities and the wellbeing of the rural dwellers in Ibiono Ibom Local Government Area

H₁: There is a significant relationship between local government engagement in sanitation activities and the wellbeing of the rural dwellers in Ibiono Ibom Local Government Area

Literature Review

Local government engagement in sanitation activities and wellbeing of the rural dwellers. Sanitation is widely conceptualized in development literature as a foundational public service that directly influences human health, environmental sustainability, and overall wellbeing. The World Health Organization (WHO, 2023) defines sanitation as the provision of facilities and services for the safe management of human excreta, solid waste, and wastewater. From a governance perspective, sanitation is not merely a technical intervention but a socio-institutional process involving planning, regulation, enforcement, and community participation. In rural settings, where infrastructure deficits and poverty intersect, sanitation services become a critical determinant of wellbeing, particularly for vulnerable populations. Within the framework of decentralization, local governments are regarded as the most appropriate institutional actors for sanitation service delivery because of their proximity to communities and contextual knowledge of local needs. Scholars argue that effective local government engagement in sanitation enhances responsiveness, accountability, and sustainability of interventions (Martinez-Vazquez & Smoke, 2020). Conceptually, sanitation delivery at the local level encompasses waste collection and disposal, drainage maintenance, public toilet provision, hygiene education, and enforcement of environmental health regulations, all of which have direct implications for rural living conditions.

The wellbeing of the rural dwellers is increasingly understood as a multidimensional construct that extends beyond income to include health status, environmental quality, dignity, productivity, and social inclusion (UNDP, 2020). Poor sanitation disproportionately affects

rural populations by exposing them to communicable diseases, degrading living environments, and reinforcing cycles of poverty. Theoretically, the human development approach posits that sanitation enhances wellbeing by expanding individuals' capabilities to live healthy and productive lives (Sen, 1999). Thus, sanitation is not only a public health concern but a fundamental development issue. Empirical literature consistently demonstrates a strong relationship between sanitation conditions and health outcomes in rural communities. Studies across Sub-Saharan Africa indicate that inadequate sanitation is a major contributor to diarrheal diseases, cholera outbreaks, parasitic infections, and other preventable illnesses that disproportionately affect the rural dwellers (WHO & UNICEF, 2022). These health challenges reduce labour productivity, increase household healthcare expenditure, and limit educational participation, thereby undermining overall wellbeing.

In Nigeria, sanitation service delivery is constitutionally assigned to local governments, particularly environmental sanitation and waste management. However, evidence suggests that many local governments struggle to fulfill this mandate effectively due to financial constraints, weak institutional capacity, and governance challenges (Adebayo & Arowolo, 2020). Conceptually, this gap between responsibility and performance has significant implications for rural wellbeing, as sanitation services often remain inadequate or poorly maintained. Research on rural sanitation in Nigeria reveals persistent challenges such as open defecation, indiscriminate waste disposal, and poor drainage systems. Oloruntoba and Adewole (2021) observe that rural communities often lack access to improved sanitation facilities, with local governments failing to provide sustainable waste management systems. These conditions create unhygienic environments that increase disease prevalence and reduce quality of life among the rural dwellers. Local government engagement in sanitation also includes health education and behavioural change communication, which are critical for sustaining sanitation improvements. Conceptually, infrastructure alone is insufficient without behavioural adaptation. Studies emphasize that local governments must integrate sanitation infrastructure with hygiene education to achieve lasting wellbeing outcomes (UNICEF, 2021). In rural contexts, traditional practices and cultural norms significantly influence sanitation behaviour, making locally tailored interventions essential. Empirical evidence from community-led sanitation initiatives in Nigeria suggests that where local governments actively support sanitation campaigns, improvements in hygiene practices and environmental cleanliness are more pronounced. For instance, studies on Community-Led Total Sanitation (CLTS) programs indicate that local government involvement enhances community participation and ownership, leading to reductions in open defecation and improvements in public health outcomes (Abrams et al., 2022).

Beyond health, sanitation has broader socioeconomic implications for rural wellbeing. Poor sanitation contributes to environmental degradation, contaminates water sources, and undermines agricultural productivity. Yakubu and Mohammed (2020) note that rural households exposed to unsanitary conditions experience reduced income-earning capacity due to illness and environmental constraints. Thus, sanitation services delivered by local governments indirectly influence economic wellbeing. Gender dimensions of sanitation are also prominent in the literature. Women and girls in rural areas bear a disproportionate burden of poor sanitation due to privacy concerns, safety risks, and health implications. Studies show that inadequate sanitation facilities affect school attendance among girls and expose women to health and security risks (UNESCO, 2021). Local government provision of safe and accessible sanitation facilities is therefore critical for promoting gender-equitable wellbeing. From an institutional perspective, governance quality significantly shapes sanitation outcomes. Local governments with transparent budgeting, community participation, and effective monitoring mechanisms tend to deliver more sustainable sanitation services (Faguet, 2020). Conversely,

weak accountability structures result in abandoned projects, poorly maintained facilities, and ineffective enforcement of sanitation regulations, undermining rural wellbeing.

Empirical studies from other African countries reinforce the Nigerian experience. Research in rural South Africa and Ghana demonstrates that inadequate local government capacity leads to sanitation infrastructure decay and persistent public health challenges (AfDB, 2021). These findings underscore the importance of institutional strengthening for effective sanitation service delivery. Environmental sanitation also intersects with climate vulnerability, particularly in rural areas prone to flooding and erosion. Poorly managed waste systems exacerbate environmental risks, leading to contamination of water sources and increased disease incidence. Scholars argue that adaptive sanitation strategies at the local government level are essential for protecting rural wellbeing in the context of climate change (World Bank, 2022). In Nigeria, policy frameworks such as the National Environmental Sanitation Policy emphasize the role of local governments in ensuring hygienic environments. However, empirical evaluations reveal gaps between policy intentions and implementation outcomes, particularly in rural localities where funding and technical expertise are limited (NBS, 2023). Studies focusing on rural perceptions of sanitation services highlight dissatisfaction with local government performance. Rural residents often perceive sanitation services as irregular, poorly enforced, and unresponsive to community needs, which affects trust in local governance and participation in sanitation initiatives (Okafor & Onwujekwe, 2021). Community participation emerges as a recurring theme in sanitation literature. Empirical evidence suggests that sanitation programs that actively involve community members in planning and monitoring are more effective and sustainable. Local governments that facilitate participatory sanitation committees achieve better wellbeing outcomes compared to top-down approaches (UNDP, 2020).

The integration of sanitation services with primary healthcare delivery further enhances wellbeing outcomes. Studies indicate that coordinated local government action linking sanitation and health education reduces disease burden more effectively than isolated interventions (WHO, 2022). This integrated approach is particularly relevant in rural settings where access to healthcare is limited. Comparative studies across Nigerian local governments reveal significant variations in sanitation service delivery outcomes. These differences are attributed to disparities in leadership commitment, revenue generation capacity, and administrative efficiency. Such variations underscore the need for localized empirical analysis, as national-level generalizations may obscure important contextual differences. Despite extensive literature on sanitation and public health, gaps remain in understanding how specific local government sanitation activities translate into measurable wellbeing outcomes for the rural dwellers. Many studies focus on health indicators without examining broader wellbeing dimensions such as dignity, productivity, and environmental satisfaction.

Furthermore, existing Nigerian studies often adopt macro-level perspectives, with limited empirical focus on specific local government areas. This limits the applicability of findings to local contexts such as Ibiono Ibom Local Government Area, where unique socio-economic and institutional dynamics shape sanitation outcomes. There is also limited integration of sanitation studies with wellbeing frameworks that capture the lived experiences of rural populations. Scholars increasingly call for multidimensional approaches that link sanitation service delivery to health, income, education, and social wellbeing simultaneously (OECD, 2021). The literature establishes a strong conceptual and empirical linkage between local government engagement in sanitation activities and the wellbeing of the rural dwellers. Effective sanitation service delivery improves health outcomes, enhances environmental quality, supports economic productivity, and promotes human dignity. However, governance capacity, community participation, funding adequacy, and institutional accountability significantly mediate these

outcomes. These gaps, particularly the lack of localized, multidimensional empirical studies, justify the present study's focus on Ibiono Ibom Local Government Area. By empirically examining how local government sanitation activities influence the wellbeing of the rural dwellers, this study contributes to filling critical gaps in the literature and informing evidence-based local governance reforms.

Another critical strand of the literature emphasizes the relationship between sanitation and psychosocial wellbeing among rural populations. Beyond physical health outcomes, inadequate sanitation undermines personal dignity, social inclusion, and mental wellbeing. Studies show that rural residents exposed to unsanitary environments often experience shame, stress, and social marginalization, particularly women, children, and the elderly (Hutton & Chase, 2021). Local government engagement in sanitation through provision of safe toilets, waste management systems, and environmental regulation has been found to restore dignity and improve perceived quality of life, thereby contributing to holistic wellbeing outcomes. Empirical studies further demonstrate that sanitation-related illnesses place a disproportionate financial burden on rural dwellers households. Frequent disease outbreaks linked to poor sanitation increase out-of-pocket healthcare expenditure and reduce household savings, reinforcing poverty cycles (World Bank, 2022). Where local governments fail to provide adequate sanitation services, rural households often resort to coping strategies such as borrowing or selling productive assets, which further undermines long-term wellbeing. This underscores sanitation as both a health and economic policy concern at the local government level.

The literature also highlights the intergenerational implications of poor sanitation in rural communities. Children growing up in unsanitary environments are more likely to experience stunting, cognitive impairment, and poor educational performance due to recurrent illness and absenteeism (UNICEF, 2021). Local government sanitation interventions, particularly those targeting households and schools, have been shown to improve child health and learning outcomes, thereby enhancing future wellbeing prospects and breaking intergenerational poverty transmission. From a public administration perspective, scholars argue that sanitation outcomes are shaped by local government fiscal capacity and intergovernmental fiscal relations. In Nigeria, local governments rely heavily on statutory allocations, which are often unpredictable and insufficient for sustained sanitation investment (Olaopa & Lawal, 2020). Empirical evidence suggests that local governments with stronger internally generated revenue perform better in sanitation service delivery, leading to improved rural wellbeing outcomes compared to fiscally constrained counterparts. Accountability and monitoring mechanisms also feature prominently in sanitation literature. Studies indicate that weak monitoring allows sanitation facilities to deteriorate rapidly, rendering investments ineffective (African Development Bank [AfDB], 2021). Conversely, local governments that institutionalize routine environmental inspections, community feedback mechanisms, and performance evaluation frameworks record higher sanitation service sustainability and improved wellbeing indicators. This reinforces the argument that sanitation outcomes depend not only on infrastructure provision but also on governance processes.

The role of partnerships in sanitation service delivery has gained increasing attention in recent literature. Empirical studies show that collaboration between local governments, non-governmental organizations, community-based organizations, and private waste contractors enhances sanitation coverage and effectiveness (UNDP, 2020). Such partnerships often provide technical expertise, funding support, and community mobilization that local governments alone may lack, resulting in improved sanitation conditions and rural wellbeing. Recent comparative studies suggest that decentralization alone does not guarantee improved sanitation outcomes

unless accompanied by capacity building and institutional reforms. In several African contexts, local governments have been devolved sanitation responsibilities without corresponding resources or technical capacity, leading to service delivery failures (Faguet, 2020). This finding is particularly relevant for rural Nigeria, where decentralization has not always translated into improved sanitation or wellbeing outcomes for the rural dwellers. Overall, the expanded body of conceptual and empirical literature affirms that local government engagement in sanitation activities is a critical determinant of rural wellbeing. However, the effectiveness of such engagement is mediated by governance quality, fiscal capacity, community participation, behavioral change initiatives, and institutional accountability. The persistence of sanitation-related deprivation in rural areas such as Ibiono Ibom Local Government Area highlights the need for localized empirical analysis that captures these interacting factors and their implications for the wellbeing of the rural dwellers.

Theoretical framework

Human Development Theory:

The study is anchored on the Human Development Theory propounded by Amartya Sen in 1999 and further popularized by Mahbub ul Haq through the Human Development Reports of the United Nations Development Programme (UNDP). The theory emerged as a critique of traditional development perspectives that measured development solely in terms of economic growth and income generation. Human Development Theory argues that the true purpose of development is to expand people's capabilities, choices, freedoms, and opportunities to live healthy, productive, and fulfilling lives. According to Sen (1999), development should be assessed not merely by increases in income but by improvements in human wellbeing, health, education, and living conditions.

At the core of the theory is the concept of human capabilities. Human capabilities refer to the opportunities and freedoms individuals possess to achieve desirable states of living. The theory emphasizes that people cannot attain their full potential when they are deprived of basic social services necessary for healthy living. Access to sanitation facilities, clean environments, safe water, healthcare services, and other public goods are therefore regarded as essential components of human development. The theory maintains that the absence of these services restricts human capabilities and negatively affects overall wellbeing. One of the major assumptions of Human Development Theory is that good health constitutes a fundamental dimension of development. Health is viewed not only as an outcome of development but also as a means through which individuals can participate effectively in economic, social, and political activities. Poor health reduces productivity, increases vulnerability to poverty, and limits people's ability to improve their living conditions. Consequently, interventions that improve environmental health and reduce disease prevalence contribute significantly to human development outcomes.

Sanitation occupies a central position within the human development framework because of its direct relationship with health. Adequate sanitation reduces exposure to disease-causing organisms, improves environmental quality, and enhances human dignity. According to the World Health Organization (2023), access to proper sanitation facilities significantly reduces the incidence of communicable diseases such as cholera, typhoid fever, diarrhea, and other waterborne illnesses. Human Development Theory therefore recognizes sanitation as a critical factor in expanding people's capabilities to live healthy and productive lives. The theory further emphasizes the role of institutions in promoting human development. Public institutions are

expected to provide services that improve people's quality of life and create enabling environments for sustainable development. In Nigeria, local governments constitute the closest tier of government to rural communities and are constitutionally mandated to provide environmental sanitation services. Their responsibilities include waste management, drainage maintenance, environmental health education, enforcement of sanitation regulations, and organization of sanitation exercises. The effectiveness of these sanitation practices directly influences the health outcomes of rural populations.

The relevance of Human Development Theory to this study lies in its recognition that health is a key indicator of development and that sanitation is one of the essential services required for achieving good health. Rural dwellers who live in clean environments are less likely to suffer from sanitation-related diseases and are more capable of engaging in productive activities that improve their quality of life. Conversely, poor sanitation practices expose residents to environmental hazards and infectious diseases, thereby limiting their capabilities and overall wellbeing. The theory also provides a useful framework for understanding the relationship between local government sanitation practices and rural health outcomes. Effective sanitation practices such as proper waste disposal, drainage maintenance, environmental sanitation campaigns, and hygiene sensitization programmes contribute to improved health conditions by reducing environmental contamination and disease transmission. These improvements ultimately enhance human capabilities and support sustainable rural development.

The choice of Human Development Theory for this study is therefore justified because it explains how sanitation services provided by local governments can improve health outcomes and contribute to the overall development of rural communities. The theory provides a suitable framework for examining the extent to which local government sanitation practices influence the health of rural dwellers in Ibiono Ibom Local Government Area of Akwa Ibom State. Human Development Theory is relevant to this study because it establishes a direct relationship between sanitation and health. The theory suggests that access to effective sanitation services enhances people's ability to live healthy lives by reducing exposure to diseases and environmental hazards. In the context of this study, local government sanitation practices such as waste management, drainage maintenance, environmental sanitation exercises, and public hygiene campaigns represent critical interventions that can improve the health status of rural dwellers. Therefore, the theory provides an appropriate foundation for understanding how sanitation practices influence health outcomes among rural residents of Ibiono Ibom Local Government Area.

Methodology

Research design:

This study adopted a cross-sectional research design. The design is suitable because it allows for the systematic examination of the relationships between local government sanitation service delivery and the health of rural dwellers at a specific point in time. Unlike purely descriptive designs, an explanatory design goes beyond description to establish causal and predictive relationships among variables, which aligns with the objectives and hypotheses of this study.

Population of the study:

The population of the study comprised of all adult rural residents of Ibiono Ibom Local Government Area, defined as individuals aged 18 years and above who reside in rural communities within the local government area. This population category was selected because

adults are primary users and evaluators of local government services such as sanitation facilities, educational institutions, markets, and primary healthcare centers. Based on population projections and demographic distribution patterns in Ibiono Ibom Local Government Area, adults constitute approximately 55% of the total population. Applying this proportion to the total population of 265,000 residents yields an actual adult population of 145,750 persons in Ibiono Ibom Local Government Area. This figure represents the target population from which the study sample was drawn.

Sample size:

The sample size for the study was determined using Taro Yamane's (1967) formula, which is appropriate for finite populations:

$$n = \frac{N}{1 + N(e)^2}$$

where:

n = the sample size to be determined
 N = the population size (which in this study is known as 145,750 adults)
 e = the acceptable sampling error (at 95% confidence level, e=0.05)
 $\therefore n = 400$

Thus, a sample size of 400 respondents was adopted for the study.

Sampling technique:

A multi-stage sampling technique was adopted for the study. In the first stage, Ibiono Ibom Local Government Area was purposively selected because of its predominantly rural nature and relevance to the research objectives. This ensured that the study focused on communities where local government service delivery is most critical to wellbeing. In the second stage, stratified sampling was used to divide the local government area into wards. This ensured proportional representation of different geographical and administrative units within Ibiono Ibom, reducing sampling bias. In the third stage, simple random sampling was employed to select villages and households within each ward. This method gave all eligible respondents equal chances of selection and enhanced the generalizability of the findings. In the final stage, systematic sampling was used to select individual respondents from households, focusing on adult residents who have resided in the area for a reasonable period and are familiar with local government services.

Instrument of data collection:

The primary instrument for data collection was a well-structured questionnaire, designed in line with the study objectives and hypotheses. The questionnaire was divided into sections covering demographic information and hypothetical information covering sanitation services, educational facilities, market and enterprise support, primary healthcare services, and wellbeing indicators. The questionnaire employs a 4 Likert-scale format, allowing respondents to express degrees of agreement or disagreement. This format facilitated quantitative analysis and enhanced the reliability of responses.

Method of data analysis:

Data collected from the field were coded and analyzed using appropriate statistical software. Descriptive statistics such as frequencies, percentages, means, and standard deviations was used

to summarize respondents' socio-demographic characteristics and provide an overview of responses to questionnaire items. For hypothesis testing, Analysis of Variance (ANOVA) Regression Analysis was employed. ANOVA regression was appropriate for this study because it allowed for the examination of the joint and individual effects of multiple independent variables local government sanitation practices on the dependent variable, which is the health of rural dwellers. The technique also enables the assessment of statistical significance, variance explanation, and predictive strength of the independent variables, thereby aligning with the explanatory objectives of the study.

Analysis and Discussion

A total of 400 questionnaires were administered and successfully retrieved, representing a 100% response rate. The data are presented using frequency distribution tables and percentages to enhance clarity and facilitate proper interpretation.

Presentation of Questionnaire Data (Section B: Research Variables)

Table 4.2: Local Government Engagement in Sanitation Activities (N = 400)

S/N	Items	SA	A	D	SD	Total
1	Local government organizes sanitation exercises	120 (30%)	150 (37.5%)	80 (20%)	50 (12.5%)	400
2	Waste disposal facilities are adequate	90 (22.5%)	130 (32.5%)	110 (27.5%)	70 (17.5%)	400
3	Drainage systems are properly maintained	80 (20%)	120 (30%)	120 (30%)	80 (20%)	400
4	Sanitation has reduced disease outbreaks	110 (27.5%)	140 (35%)	90 (22.5%)	60 (15%)	400
5	Clean surroundings improved wellbeing	130 (32.5%)	160 (40%)	70 (17.5%)	40 (10%)	400

Source: Fieldwork, 2026

The data show that a majority of respondents generally agree that local government engages in sanitation activities, particularly in organizing environmental sanitation exercises (67.5% agreement). However, responses regarding adequacy of waste disposal facilities and drainage maintenance reveal mixed perceptions, with a considerable proportion of respondents expressing dissatisfaction (45% disagreement on drainage). This suggests that while sanitation initiatives exist, they are not sufficiently sustained or comprehensive. Importantly, most respondents (72.5%) agree that sanitation efforts have reduced disease outbreaks and improved wellbeing. This indicates a strong link between environmental health interventions and community wellbeing, even though infrastructural gaps remain.

Test of hypothesis:

Hypothesis was tested using Analysis of Variance (ANOVA) for each independent variable against the dependent variable.

Hypothesis One

H₀: There is no significant relationship between local government engagement in sanitation activities and the wellbeing of the rural dwellers in Ibiono Ibom Local Government Area

H_i: There is a significant relationship between local government engagement in sanitation activities and the wellbeing of the rural dwellers in Ibiono Ibom Local Government Area.

Table 4.6: ANOVA Result for Sanitation and Wellbeing

Source	Sum of Squares	df	Mean Square	F-value	Sig.
Regression	72.840	1	72.840	85.62	0.000
Residual	338.560	398	0.851		
Total	411.400	399			

F-value of 85.62, p-value of 0.000

The result shows an F-value of 85.62 with a p-value of 0.000, which is less than the 0.05 level of significance. This indicates that local government sanitation activities have a statistically significant effect on the wellbeing of rural residents. The high F-value suggests that variations in wellbeing can be strongly explained by sanitation-related interventions such as waste disposal, drainage maintenance, and environmental cleanliness. Since $p < 0.05$, we reject the null hypothesis (H_0) and accept the alternative hypothesis.

Discussion

The result of the analysis in hypothesis one revealed that there is a significant relationship between local government engagement in sanitation activities and the wellbeing of the rural dwellers in Ibiono Ibom Local Government Area ($F = 85.62$, $p < 0.05$). This implies that improvements in sanitation services such as waste management, drainage maintenance, and environmental cleanliness contribute meaningfully to enhancing the wellbeing of rural dwellers in Ibiono Ibom Local Government Area. This finding strongly aligns with the conceptual position of the human development approach as advanced by Sen (1999), which emphasizes that access to basic services such as sanitation expands individuals' capabilities to live healthy and productive lives. In this context, sanitation is not merely an environmental service but a critical enabler of wellbeing, as it reduces exposure to diseases and improves overall quality of life.

The finding is also consistent with the position of WHO and UNICEF (2022), who established that inadequate sanitation is a major contributor to communicable diseases such as diarrhoea, cholera, and parasitic infections in rural communities. Their work underscores that improved sanitation directly reduces disease burden, thereby enhancing health outcomes and overall wellbeing, which supports the empirical result obtained in this study. Furthermore, the result corroborates the empirical findings of Abrams et al. (2022) on Community-Led Total Sanitation (CLTS), which demonstrated that active local government involvement in sanitation programs significantly improves hygiene practices and reduces open defecation. This leads to improved public health outcomes and enhanced wellbeing among rural populations.

In addition, the finding aligns with Hutton and Chase (2021), who emphasized that sanitation contributes not only to physical health but also to psychosocial wellbeing by restoring dignity, reducing stress, and promoting social inclusion. This broader conceptualization of wellbeing supports the observed significant relationship between sanitation and wellbeing in the study area. Overall, the implication of this finding is that effective sanitation service delivery by local governments is a critical determinant of rural wellbeing, operating through health, environmental, economic, and psychosocial pathways.

Conclusion

This study investigated the relationship between local government sanitation practices and the health of rural dwellers in Ibiono Ibom Local Government Area of Akwa Ibom State. The study was necessitated by growing concerns regarding poor environmental sanitation and its implications for public health in rural communities. The findings revealed that sanitation practices undertaken by the local government significantly influence the health status of rural residents. However, effective waste management practices were found to reduce environmental pollution and minimize the occurrence of sanitation-related diseases. Proper drainage maintenance was also observed to contribute significantly to disease prevention by reducing stagnant water and limiting the breeding of disease vectors such as mosquitoes. Similarly, regular environmental sanitation exercises promoted cleaner surroundings and enhanced community health outcomes. Furthermore, public hygiene sensitization campaigns increased awareness and encouraged healthy sanitation behaviors among rural dwellers.

The study concludes that sanitation is a fundamental determinant of public health and that local government involvement in sanitation management remains critical to improving health outcomes in rural communities. Consequently, sustained investments in sanitation infrastructure, environmental health education, and community participation are necessary for achieving healthier and more sustainable rural environments in Ibiono Ibom Local Government Area.

Recommendations

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

1. Ibiono Ibom Local Government Council should strengthen waste collection and disposal systems by providing adequate waste bins and establishing regular waste evacuation schedules.
2. Drainage channels should be regularly constructed, monitored, and maintained to prevent flooding and reduce the spread of vector-borne diseases.
3. Environmental sanitation exercises should be conducted consistently and supported through effective enforcement mechanisms.
4. The local government should intensify public health education and hygiene awareness campaigns through community meetings, schools, churches, and media platforms.
5. Community-based sanitation committees should be established to complement government efforts and encourage grassroots participation in environmental sanitation.
6. Adequate funding should be allocated to environmental health departments to improve sanitation infrastructure and service delivery.
7. Partnerships should be developed between the local government, non-governmental organizations, and development agencies to support sanitation initiatives.
8. Monitoring and evaluation mechanisms should be strengthened to ensure accountability and sustainability of sanitation programs.

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