# SOCIO-ECONOMIC STATUS AND ACCESS TO SANITARY FACILITIES IN UGEP URBAN, CROSS RIVER STATE, SOUTH SOUTH, NIGERIA

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The study examined the socio-economic status and access to sanitary facilities amongst households in Ugep Urban located in Yakurr Local Government Council of Cross River State, Nigeria. Findings revealed that low income levels and nature of occupation in the face of limited resources show their impacts on the quality of sanitary facilities available for use. Data was collected through the administration of 500 questionnaires with family heads as points of primary contact. Results indicate regression model summary with coefficients of multiple determination $R^2$=0.605 or 60.5%. This indicates that about 60.5% of households have access to improved toilet and sanitary facilities sources. The F-value of 3.826 was significant at 0.98 level. Since 0.98 is greater than the 0.05 confidence level that was set for this study, we reject the null hypothesis ($H_0$) and accept the alternative hypothesis. Income and occupation significantly impact on access to sanitary facilities in the area. Awareness creation on sanitary practices by health and related government agencies as well as community members themselves should be encouraged. Enforcement of sanitary processes and regulations at the ward level through environmental sanitation days and incentives for compliance and sanctions against non-compliance. Government and private organizations should implement and encourage economic empowerment initiatives to improve the livelihoods of the residents of the community.

**Keywords: Socio-economic status, sanitary facilities, income, basic needs theory, occupation, sustainable development**

## Introduction

The Human Development Index (HDI) is a valid and global criteria used in assessing the state of human well-being among nations of the world and alongside the Gross Domestic Product (GDP) helps to gauge and determine the state of socio-economic development of nations. Various sectors of the economy are reviewed and appraised in terms of performance indices, from contributions in agriculture, international trade and foreign exchange earnings, education, state of general infrastructure, level of unemployment, population growth rate, maternal health, mortality and general life expectancy amongst others.

Recently the Millennium Development Goals with over 35 target sets and accomplishment timeline of 2015 was the creed which developing countries were persuaded to meet. Although much improvement were made especially in the area of improved and reduced rate of infantile mortality as well as progress in maternal health, quite a lot still needs to me accomplished. A reviewed list of 17 targets is again set for 2030 and the global community is galvanizing efforts both human and material to improve human wellbeing especially in the developing parts of the world. The sixth target of ensuring availability and sustainable management of water and sanitation for all and

by implication providing basic sanitation services by 2030 require a doubling of the current efforts and rate of annual progress. (UNO SDG Report, 2019).

Sanitation basically refers to a process in which people demand, effect, and sustain a hygienic and healthy environment for themselves through the erection of barriers to prevent transmission of diseases. Water and sanitation concerns have often been examined as a twin challenge in most research efforts in the developing world. Both cannot be totally divorced from each other. However an attempt is made here to investigate the issue of sanitation as much as possible independently from water especially as it relates to the socio-economic status and access to sanitation services in Ugep Urban.

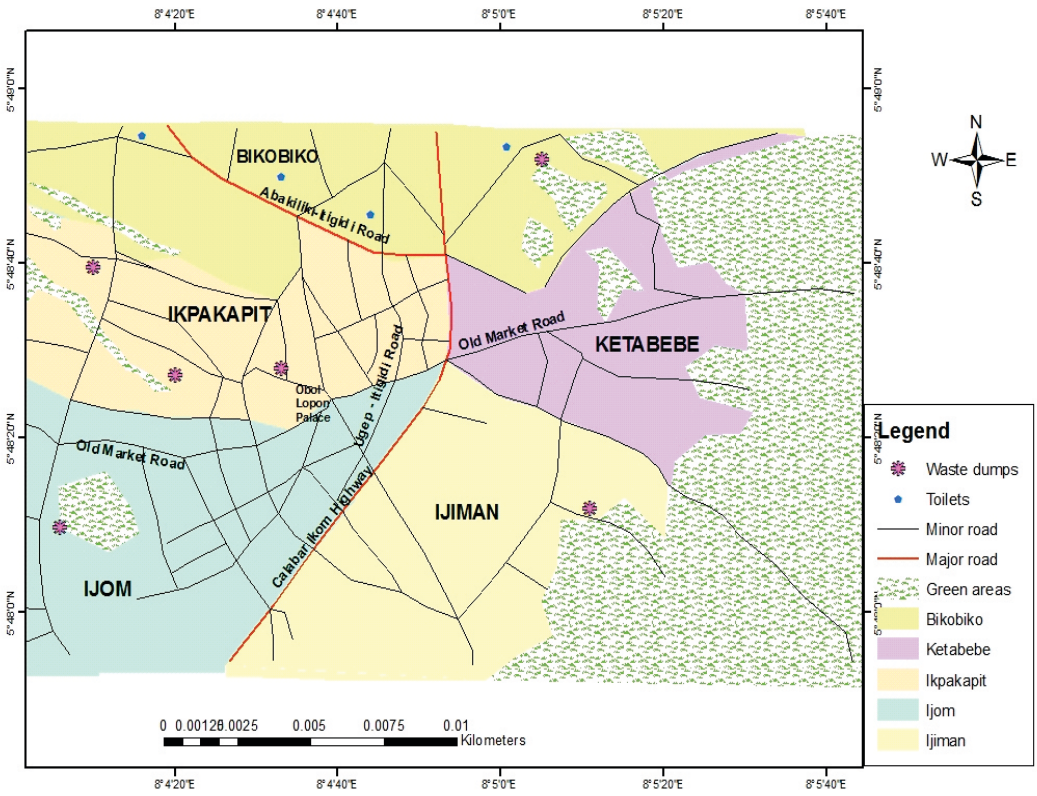
Providing the twin basic needs of sustainable access to clean environment as well as clean and healthy drinking water has been identified as the foremost of the developmental challenges facing all developing countries. Thus, enhancing the quality of sanitation is paramount to realizing the health-related objectives of the Sustainable Development Goals (SDGs), which is aimed at cutting down on child and infant mortality, while also tackling diseases. More than one quarter of the population of people in developing countries live in abject poverty, and one of the major components of this generalized poverty is the lack of adequate sanitation. Several advances have been made by the global community in various fields of development, but none of these has ensured that human basic needs reaches the huge population of deprived people.

People in rural areas lack awareness of the importance of sanitation (Nwaiwu, 2005). Health education programmes have not been sufficiently promoted especially with respect to the safe handling of excreta, in order to prevent disease transmission. Socio-cultural attitudes and beliefs, and inherent hygiene habits have much more influence on the perceived need for and use of sanitation in rural areas than technological issues (Nwaiwu, 2005).

In Nigeria, the National Population Census (2006) document on the distribution of regular household types of toilet facilities in Cross River State showed that out of 645,251 households in Cross River State only about 213,020 can be considered to have what could pass for a modern toilet facility which is about 25 percent. On the other hand, a total of 432,231 households use unhygienic sanitary facilities (pit latrine, bucket/pan and nearby bush, gutters, beach and field) that are not good enough for man, environment and its components. This therefore, sums up to the fact that 75 percent of households in Cross River State make use of these poor sanitary facilities. This has posed a serious problem such as the use of available space for fecal disposal directly or indirectly, which may increase fecal coli form count in the open water sources in the area. (NPC, 2006)

**Study Area**

Ugep Urban is the administrative headquarters of Yakurr Local Government of Cross River State. It is located in the Western part of Cross River State, Ugep Urban lies between longitude $08^0$03'40" and $08^0$05'44"E, and latitude $05^0$47'30" and $05^0$48'33"N. Ugep is about 124km, by road from Calabar, the capital of Cross River State, Nigeria. Ugep Urban lies within the lowland and scarp lands of Cross River State. The relief is gentle aside from places where granite extrusions rise above the general level of the surface. The area rests on a height of 200 to 300 meters above sea level, thus limited incidence of flooding is observed.. The major economic activities for most of the inhabitants is subsistence agriculture, artisan commercial concerns, civil servants and most of the houses are owner-occupier with few rental apartments available to non-indigenes working in the few government and private businesses in the community.




Sanitation and Waste Disposal in Ugep Community
Source: Department of Geography and Environmental Science

**Literature review**

Although sanitation is the foundation of every development, 50 percent of the inhabitants of the world do not have access to a decent toilet. According to Khan (200l), most of the 3 billion individuals who have no access to decent toilets make use of open space and bare grounds to defecate, or wait in queues after payments to use unkempt latrines. Furthermore in many developing countries, the plagues of old are revisiting. The price to be paid for neglecting sanitation is to harvest diarrhea, which thrives in unhygienic conditions, and alongside pneumonia, tagged the biggest child-killer on earth. It kills 2.2 million children each year while others are left both physically and mentally retarded (Nwaiwu, 2005).

Rowan Mnisi in her Master's thesis at the Free state University (2011) in a research titled "Assessment of water and sanitation problems in New Forest, Bushbuckridge, South Africa", indicated that the concerns on improving water supply sources and basic sanitation began over centuries ago, and up to this present times there are countless and complex factors hindering and limiting efforts to make the availability of water and sanitation services accessible to the inhabitants. The summary of the research findings revealed that household accessibility to water and quality sanitation were seriously hindered by their socio-economic status as poverty is very prevalent amongst majority of the inhabitants and income levels are much low due to unemployment.

To achieve success in any low cost sanitation programme, it is necessary to study the sociology of the sanitation challenge: identify collective needs as they interact as a community, requisite technology, fashion-out a model or options to resolve the challenge, in this case improving sanitation and then examine the economics of agreed options on funding sources

as well as maintenance of facilities aimed at providing solutions to their sanitation problems in the community. (Nwaiwu, 2005). This is where the economic status in terms of income and occupation/livelihood of the community members comes into focus and is an indication of perceived needs and obligations to guarantee survival as well as priorities as regards what is considered vital for survival in the face of scare resources and limitless wants.

Maslow's hierarchy of needs takes deserved mentioning for our purpose. Abraham Maslow formulated the Hierarchy of Needs Model in 1940-50 in United States of America. He developed a five-stage model with the foremost being the biological and physiological needs. These include basic life needs like air, food, drink, shelter, warmth, sex, sleep etc. The trust of his argument is that certain fundamental needs like water and basic sanitation stand out as the precursor to which other life motivations depend on, example safety needs, belongingness and love needs as well as esteem and self-actualization.

The Basic Needs Concept Max-Neef, M(1991) defined development objectives in terms of people and their needs as expressed by the people themselves rather than turn to secondary objectives like economic growth, industrialization, increased trade etcetera . Simply the concept is the outcome of ideas which thrives on the dictum that development of certain basic amenities are vital for the survival of a person or group of persons in any given society. It believes that if segments of society's population are too far from essential resources and services and the means like time and income are stretched to obtain them, the people tend to be vulnerable and impoverished. It is an anti-poverty approach to addressing development challenges in Africa.

The identified challenge propelling this research is that there is little or no clear statistics on the number of households with improved sanitary facilities, and by implication general sanitation conditions are poor as the incidence of open defecation and indiscriminate dumping of waste has been an ever prevalent challenge in the Ugep Urban with concerns on human health, environmental pollution and water quality.( Eteng, Okputu and Abetianbe, 2021). Few research works have focused on the issues of water and sanitation,( Ochiche et al, 2007) water supply and access occupying a large segment of the research with little attempt to investigate concerns bothering on sanitation and wellbeing of the inhabitants of Ugep Urban. Investigating the socio-economic aspects of the sanitation problem would very much provide relevant insights to the issues on wellbeing and need for an improved standard of living for a majority of the community and thus help fashion out options and relevant interventions that can best uplift the living standard of the people. This is the aim and target of this research paper.

Household wealth index, categorized into five categories is a measure of household economic status based on ownership of assets such as bank accounts, farmland, livestock, vehicles, radio, TVs, air conditioners, computers, or cell phones. This study found a significant relationship between the type of sanitation facility and household wealth. The poorest households had no access to VIP latrines and modern sanitation facilities (flush to septic tanks or sewer systems), except only one household, and 4.2% of them relied on pit latrine without slab. Whereas 4% of the poorer households used pit latrines without a slab, 1.42% used pit latrines with a slab and a tiny proportion (0.01–0.07%) used the remaining types of facilities. The results further show that 3.4% and 2.7% of middle class households relied on pit latrines with and without a slab, respectively.

**Materials and Methods**

The research design adopted for this study is the meta-analysis design. This design required the researchers to combine empirical findings from various related and relevant studies. These empirical evidences and results are selected from published thesis, journal articles, annual reports from water agencies and establishments, relevant internet sources related to water and sanitation challenges etc. The design also allows

the researcher to utilize both quantitative and qualitative approaches. The purpose of using closed-ended questionnaires in this study was to: quantify data and generalize results from a sample to the population of interest. Measure the incidence of various views and opinions in a chosen sample.

**Procedure for Data Collection**

The study area, Ugep Urban was visited and preliminary survey was conducted to get a feel of the perceived impressions as well as expectations of the inhabitants on the issue of sanitary facilities in the wards that make up Ugep Urban. The major source of data collection for this research was through the administration of structured questionnaire. The questionnaire was drawn up by the researchers and reviewed for correctness to suit the objective of the research. Focus Group Discussions were also held in the course of the surveillance survey and civil servants, artisans as well as farmers were interviewed and relevant data also collected. In order to select the sample of the study, the Yemane, M (1967) formula of sample size determination was employed to determine the sample size for the study.

**Table 1: Population and sample distribution in the study area**

| S/N | Wards | Population | Sample |
|---|---|---|---|
| 1 | Bikobiko | 20782 | 90 |
| 2 | Ketabebe | 24926 | 107 |
| 3 | Ijiman | 18672 | 80 |
| 4 | Ijom | 27893 | 120 |
| | Ikpakapit | 23819 | 103 |
| | Total | 116092 | 500 |

Author's Field Work, 2024

**Data Analysis**

The socio-economic and cultural parameters that were considered for study ranged from occupation, annual income, education, and the household sizes of the respondents. Based on these, the researchers related their status to hygiene practice in terms of sanitary conditions. From the occupational profile of the inhabitants in the study area, it was observed that in Bikobiko, the area was predominantly made up of civil servants as it had the highest value of 39.7%, in the same vein, in Ketabebe, the predominant occupation of the people was also civil service workers with the highest value of 52.4%. Invariably, the trend was also observed in Ijiman, Ijom and Ikpakapit as the option with civil servant had the highest values across the three wards which were given as 36.89%, 39.2% and 35.1% respectively. For the purpose of the research and in line with the variables for the hypotheses tested income and occupation/livelihood were considered while factors like education and household sizes were deemphasized.

Table 2: Occupational profile of respondents across the five wards of Ugep urban

| S/N | Occupation | Bikobiko No of Respts | % | Ketabebe No of Respts | % | Ijiman No of Respts | % | Ijom No of Respts | % | Ikpakapit No of Respts | % | Total Respodants | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Farmer | 20 | 29.4 | 20 | 19.0 | 18 | 28.5 | 35 | 32.7 | 22 | 28.6 | 115 | 27.4 |
| B | Hunter | 5 | 7.4 | 3 | 2.9 | 3 | 4.8 | 3 | 2.8 | 10 | 12.9 | 24 | 5.7 |
| C | Public servant | 10 | 14.7 | 10 | 9.5 | 5 | 7.9 | 2 | 1.9 | 5 | 6.5 | 32 | 7.6 |
| D | Business person | 4 | 5.9 | 13 | 12.4 | 12 | 19.0 | 23 | 21.5 | 8 | 10.4 | 60 | 14.3 |
| E | Artisan | 2 | 2.9 | 4 | 3.8 | 2 | 3.2 | 2 | 1.9 | 5 | 6.5 | 15 | 3.6 |
| F | Civil servant | 27 | 39.7 | 55 | 52.4 | 23 | 36.5 | 42 | 39.2 | 27 | 35.1 | 174 | 41.4 |
| | Total | 68 | 100 | 105 | 100 | 63 | 100 | 107 | 100 | 77 | 100 | **420** | **100** |

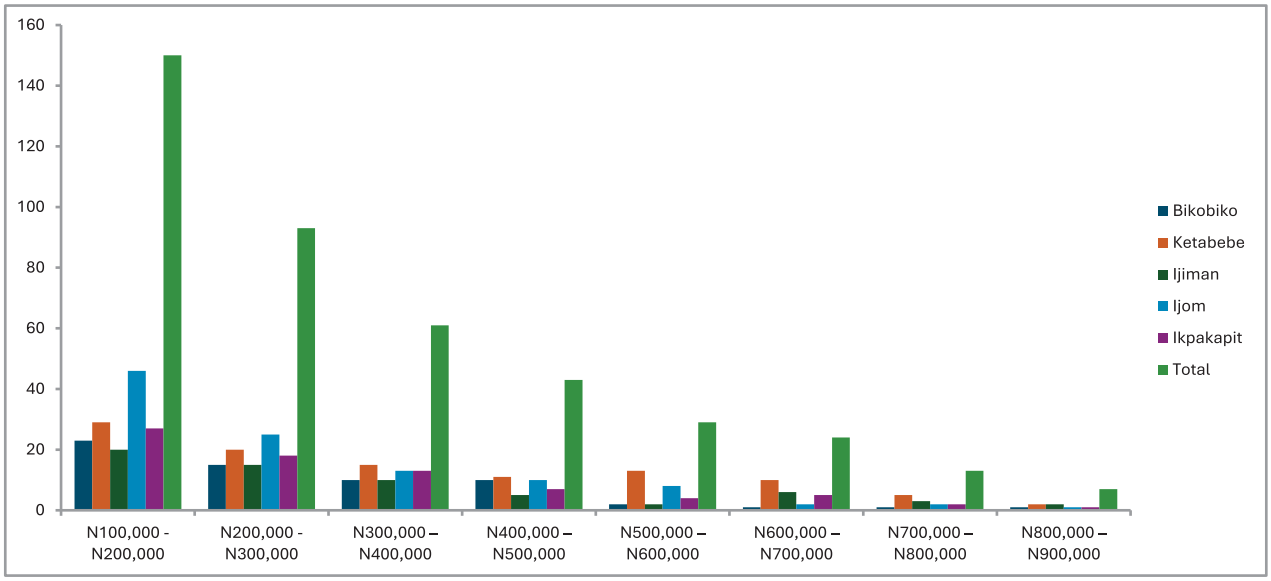
Authors' field report, 2024

Farming that used to be the predominant occupation of the Ugep people is now been overtaken by civil servants other small scale skills and artisan business because of decreasing soil fertility in the face of an ever increasing population growth and urbanization. Generally it observed that the predominant occupation of the people is civil service jobs as these were represented with the highest value of 41.4%. However, it was also noticed that 27.4% of the people were farmers and 14.3% business persons. The annual income of the residents in Bikobiko ward, ranged between ₦100,000 – ₦200,000. This is as a result of the highest value associated with option which was given as 41.2%. In Ketabebe ward, the same scenario was observed as the option with ₦100,000– ₦200,000 and income level had the highest value of 27.6%. Furthermore, the inhabitants of Ijiman, Ijom and Ikpakapit also were found to be within the same annual income level as they had this option of ₦100,000 – ₦200,000 being the highest, and they were given as 31.7%, 42.9% and 35.1% respectively

Table 3: Annual income of respondents across the five wards in Ugep urban

| S/N | Options | | Bikobiko | % | Ketabebe | % | Ijiman | % | Ijom | % | Ikpakapit | % | Total | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | ₦100,000 ₦200,000 | - | 23 | 41.2 | 29 | 27.6 | 20 | 31.7 | 46 | 42.9 | 27 | 35.1 | 150 | 35.7 |
| B | ₦200,000 ₦300,000 | - | 15 | 22.0 | 20 | 19.0 | 15 | 23.8 | 25 | 23.4 | 18 | 23.4 | 93 | 22.1 |
| C | ₦300,000 ₦400,000 | – | 10 | 14.7 | 15 | 14.3 | 10 | 15.9 | 13 | 12.1 | 13 | 16.7 | 61 | 14.5 |
| D | ₦400,000 ₦500,000 | – | 10 | 14.7 | 11 | 10.5 | 5 | 7.9 | 10 | 9.3 | 7 | 9.1 | 43 | 10.2 |
| E | ₦500,000 ₦600,000 | – | 2 | 2.9 | 13 | 12.4 | 2 | 3.2 | 8 | 7.5 | 4 | 5.2 | 29 | 6.7 |
| F | ₦600,000 ₦700,000 | – | 1 | 1.5 | 10 | 9.5 | 6 | 9.5 | 2 | 1.9 | 5 | 6.5 | 24 | 5.7 |
| G | ₦700,000 ₦800,000 | – | 1 | 1.5 | 5 | 4.8 | 3 | 4.8 | 2 | 1.9 | 2 | 2.6 | 13 | 3.1 |
| H | ₦800,000 ₦900,000 | – | 1 | 1.5 | 2 | 1.9 | 2 | 3.2 | 1 | 0.9 | 1 | 1.3 | 7 | 1.7 |
| | Total | | 68 | 100 | 105 | 100 | 63 | 100 | 107 | 100 | 77 | 100 | 420 | 100 |

Authors' field report, 2024




Annual income of respondents across the five wards in Ugep urban

The annual income of respondents across the five wards of Ugep Urban shows that people living at #100,000 - #200,000 range were highest. This range per annum indicates a very low standard of living. Although a good percentage of the people live an average standard of life. Consequently, from a general point of view, it was observed that the inhabitants of the study area's annual income level was within the range of ₦100,000 – ₦200,000 as the option had the highest value of 35.7%. On the other hand, it was also seen that there were people who lived within the income range of ₦200, 000 – ₦300, 000 annually as the option was second highest with a value of 22.1%. However, those who were within ₦800, 000.00 and above income level were very negligible in the area with a total percentage value of 1.7.

## Results

### Testing of Research Hypothesis

$H_0$: Income and occupation does not significantly impact on access to toilet facilities in the study area.

$H_1$: Income and occupation significantly impact on access to toilet facilities in the study area.

The analysis was carried-out using the Multiple Regression Analysis (MRA) technique.

Table 4 Model Summary

| Model | | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|---|
| Dimension 0 | 1 | .778[a] | .605 | .447 | 39.26841 |

- Predictors: (Constant), occupation, Income
- Dependent Variable: Toilet

The table shows the regression model summary with coefficients of multiple determination $R^2$=0.605 or 60.5%. The results indicate that about 60.5% of household location can be attributed to access to toilet facilities sources.

Table 5: ANOVA[b]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 11799.959 | 2 | 5899.980 | 3.826 | .098[a] |
| | Residual | 7710.041 | 5 | 1542.008 | | |
| | Total | 19510.000 | 7 | | | |

a. Predictors: (Constant), occupation, Income

b. Dependent Variable: Toilet

As presented here the analysis of variance (ANOVA) of the regression model, shows the sum of squares of the regression and residual, the degree of freedom, the means of squares, the F-ratio and its significance level. The F-value of 3.826 was significant at 0.98 level. Since 0.98 is greater than the 0.05 confidence level that was set for this study, we accept the null hypothesis ($H_0$) and reject the alternative hypothesis. Income and occupation do not significantly impact on access to sanitary facilities in the area.

| Model | | Un-standardized Coefficients | | Standardized Coefficients | | | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | T | Sig. | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 2.729 | 22.737 | | .120 | .909 | -55.720 | 61.177 | | | | | |
| | Income | .326 | .253 | .376 | 1.291 | .253 | -.324 | .976 | .531 | .500 | .363 | .931 | 1.074 |
| | occupation | .622 | .307 | .589 | 2.022 | .099 | -.169 | 1.412 | .688 | .671 | .568 | .931 | 1.074 |

a. Dependent Variable: Toilet

The regression coefficients are presented in the above table shows the unstandardized and standardized coefficients for the independent variables (income and occupation) and the constant (intercept) value. It further shows the t-value for the individual independent variables together with their corresponding significant levels.

Based on the above, the regression model is given as;

$$Y=2.729+0.326+0.622+e$$

This means that given a unit increase in income level while holding the effect of occupation, the access to sanitary facilities will increase by 0.326 units. However, if the effect of occupation is held constant, there is a unit increase in occupation; the access to sanitary facilities will increase by 0.622 units. From the standardized coefficients, it can be concluded that occupation with beta coefficient of 0.622, contributes more to total access to sanitary facilities than income with beta coefficients of 0.326.

**Discussion of Findings**

This study sought to investigate the relationship between socio-economic status and access to sanitary facilities in Ugep, a gradually transforming human settlement, presently experiencing increasing population growth, and expanding built environment with implications for quality of life and well-being.. The result of the research has shown that socio-economic status plays a significant role in determining access to sanitary facilities in urban areas. Ugep

urban, in Cross River State being one of such areas. The findings indicate that low-income households have limited access to modern sanitary facilities with many having to rely on shared facilities or public toilets as well as open defecation being an unfortunate option. Middle income families have a better and improved access to sanitary facilities with quite a high percentage having private and unshared facilities. High income households have the best access to sanitary facilities with almost all having more options and very private access to toilet facilities. These findings aligns with earlier findings on Ibadan, Ogunbode et al, 2023 who found that households with high socio-economic status had better access to improved facilities. Related studies in Accra, Ghana indicate that low-income households were more likely to used shared or public sanitation facilities (Ghana Statistical Services, 2014). The findings imply that low-income households are disproportionately affected by limited access to sanitary facilities, which portends negative impacts on the health and well-being of the families and the neighborhood.

**Conclusion**

The low income level, amongst most inhabitants has denied majority of households the needed empowerment to invest in the effort at making quality and improved sanitation facilities readily available within their living premises. Also access to quality human waste disposal facilities are hampered due to poverty as there is little or no savings left to enable them improve their position in line with modern standards.

Again, in spite of the increasing level of urban development, sanitation level is generally poor in the area. Therefore, issues such as the non-provision of good toiletry system and bathrooms, housing and the perceived overcrowding in the area as fallout of household size, are reasonable conclusions that have led to the observed general poor sanitation in Ugep Urban

Thus the objectives of the sustainable development goals as it concerns water availability and particularly sanitation facilities has not been achieved in the study area. Awareness creation of sanitary practices by health and related government agencies as well as community members themselves should be encouraged to participate on sanitary and environmental issues especially taking cognizance of the consequent impact on health and general well-being., Enforcement of sanitary processes and regulations at the ward level through environmental sanitation days and incentives for compliance and sanctions against non-compliance should be prioritized. Government and private organizations should implement and encourage economic empowerment programmes to improve the livelihoods of the residents of the community. The study further recommends that the government at various levels (Federal, State and Local Government) and other stakeholders should prioritize the provision of sanitary facilities in low-income communities. Non-governmental organizations (NGOs) and community-based organizations (CBOs) should support the government in providing sanitary facilities in low-income communities. Households should be educated on the importance of using improved sanitary facilities to maintain good health and hygiene.

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