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The effects of waste pollution on property value and residents around Igando dumpsite, Nigeria

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ABSTRACT

The environment plays a significant role in human existence and therefore should be treated with utmost priority; apart from being an abode to any creature it also contributes to the quality of life of such creature. The environment is bedevilled by the challenges of solid waste pollution which thus affect the ecosystem. Several attempts have been made by the government of developing countries to address the problem of environmental health hazards but do not yield meaningful results, given the menace this research is aimed at examining the effect of waste pollution on residents around Igando dumpsite (Solous) along Lasu-Isheri Expressway, to describe the concern of the residents on the pollution of the dumpsite, to identify the health implication of the dumpsite on the residents, and the cost implication on house rent and property value around the dumpsite. The research thus involves the use of a structured questionnaire, the researcher uses systematic random sampling techniques where the first twenty streets were carefully chosen around the dumpsite and houses were randomly chosen to start from the second house on each street. The research thus reveals there is considerable potential for hazardous exposure to occur through improper management of waste in the environment. The research proves beyond reasonable doubt that the presence of the dumpsite in the neighbourhood has negatively affected the residents and the residence respectively. Poor management and control of the dumpsite endanger public health by encouraging the spread of odours, diseases and rodents in the residence, particularly when rain falls, which often makes the environment non-conducive. The research thus recommend Government should provide more sanitary and health personnel, The vehicles saddled with the responsibility of waste collection should be properly supervised, Parking space should be created for the PSP vehicles and the drains around the dumpsite should be channelled as most of the drains are already blocked by residue from the dumpsite which often leads to flooding when there is heavy rainfall.

Keywords: Solid waste, Recycling, Dumpsite, Pollutant, Waste Management, Health

1.1 Introduction

The environment is an important entity to human existence, apart from the fact that it serves as a place of abode to any creature; it also contributes to a large extent to the quality of life of such creature (Oreyomi, 2005). Several attempts have been made by the government of developing countries to address the problem of environmental health hazards but do not yield meaningful results due to various factors such as; unhealthy socio-cultural practices, poor environmental sanitation education and awareness, low literacy level, bad governance, disregard to the rule of law and other forms of indiscipline even on the part of the citizen (Omotosho, 2005). Solid Waste Management involves the professional collection, storage, transportation, treatment and disposal of waste in such a way that it renders such substance harmless to human and animal life, ecology and the environment generally. Poor solid Waste Management exposes humans to several diseases that are associated with solid wastes and contamination of the sub-surface water by the leachates from solid wastes which are heavily laden with toxic chemicals and pathogenic organisms which contaminate the water and make it unhygienic for human consumption (Adedibu, 2008).

Waste management is at its lowest ebb in most towns and communities in Nigeria; most parts of the city centres do not benefit from public waste disposal services and therefore have to bury or burn their waste or dispose of it haphazardly without having to consider its health implication on both human and animal life, Other hazards, like flooding, ensued from improper disposal of waste, especially in the open dumpsites which end up blocking the drains which invariably results to flooding of a neighbouring residence. The situation get worrisome during the rainy season as the wastes get directly exposed to the rain; the water makes the waste wet and gets drains out, thus polluting the streets and nearby stream percolating into the underground water resulting in contamination or sometimes ended up blocking storm-water drains and thereby results to flooding. The precarious and most immediate problems facing developing countries and their cities are the health impact of urban pollution that are derived from inadequate water services, poor urban and industrial waste management, as well as air pollution, especially from particulates.

Among the pressing environmental and public health challenges facing Nigeria today is the problem of solid waste generation and disposal which requires urgent attention, as many of the landfills are not well structured and are poorly managed such as the case of Olusosun dumpsite in Lagos, where there was inferno on 14th March 2018, which ended up destroying properties around the site such as LAGBUS where about ten (10) of their buses were destroyed. The problem of solid waste is a historical one, as the existence of man is inextricably linked to the generation of waste. The problem is becoming intractable as cities of developing countries cannot keep pace with urbanization, pollution, and the increasingly concomitant generation of garbage due to changing lifestyles and consumption patterns. Understandably, it would require the effective mobilization of resources such as involving all stakeholders in regular countermeasures to suppress uncontrolled solid wastes generation and irregular disposal outside city confines altogether.

1.2 Statement of the problem

The urban environment is usually competed for by different land uses ranging from residential to institutional and industrial uses. In addition, the increasing urbanization and adverse land use of the urban area impact a high generation of waste emanating from

industrial, institutional and domestic sources. How to manage the huge wastes being generated in the urban area of Nigeria is a great challenge to both state and municipal governments (Aliu et.al 2014). In all communities in Lagos, efforts are made to control and manage urban wastes through many strategies (Aliu et.al 2014).

One of them is the creation of dumpsites semi-engineered landfills. In Lagos, some of these dumpsite facilities have been established notably Solus in Ojota and Igando. These dumpsites have assisted in solid waste management substantially for some time but have over time been a source of pollution to the immediate communities around them. Several studies have recently noted the hazardous state of the Igando and Solus dumpsites to public health. The level of environmental pollution, air, soil and groundwater contamination in Igando has been recently found to be high. While these existing studies have dwelled on the impact of Igando's dumpsite pollution on the physical environment, only scanty research has been conducted on the impact of the polluted dumpsite on the resident's wellbeing. Given this knowledge gap, the present study intends to contribute to the debates on the risks posed by obnoxious facilities like dumpsites on the resident's well-being.

1.3 Aim and Objectives

This research, therefore, aims to critically examine the effects of waste pollution on residents around Igando dumpsite. To achieve the aim, below are the objectives:

1. To describe the attributes of the respondents in Igando
2. To describe the level of concern by the residents on the pollution of Iganda dumpsite.
3. To identify the health implication on the people around the dumpsite.
4. To identify the psychological impact of the dumpsite on the residents
5. To identify the cost implication on house rent and property value around the dumpsite
6. To recommend possible solutions to achieve a minimum standard of sustainable environmental management.

1.4 Research questions

1. What are the attributes of the respondents?
2. What is the level of concern by the residents on the pollution of Igando dumpsite?
3. What are the health implications of the people around the dumpsite?
4. What is the psychological impact of the dumpsite on the residents?
5. Does the dumpsite have any cost implication on house rent and property value?
6. What are the possible solutions to achieve a minimum standard of sustainable environmental management?

1.5 Statement of the research hypotheses

These hypotheses are statements drawn from the specific objectives of the study to test if the statements are true at a particular level of significance.

Hypothesis one

H0: Pollution concern does not depend on health implications of pollution

H1: Pollution concerns depend on the health implication of pollution

Hypothesis Two

H0: The dumpsite does not have a psychological impact on the residence.

H1: The dumpsite is having a psychological impact on the residence.

Hypothesis Three

H0: The dumpsite does not have cost implications on house rent and property value.
H1: The dumpsite has cost implications on house rent and property value.

1.6 Scope of the study

This research work is majorly focused on Igando dumpsite being one of the major dumpsites in Lagos and the proximity to the researcher for effective coverage. The research thus emphasized the health and psychological implication of the dumpsite on the residence and does it over the years influence the house rent or the cost of property around the study area.

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1.7 Significance of the study

The research will be of immense benefit to many people, organizations, and governments. It will be of immense benefit to the residents around the dumpsite, as the outcome of the research will contribute to their knowledge on the health implication of their closeness to the dumpsite, also analyzing the impact on rent and property value in the area, recommending to the residence on different measures to be taken to curtail or minimize the psychological impact on them. The research will also contribute positively to the existing literature, constituting a new platform on which to evaluate the hypotheses that closeness to a dumpsite will have health implications as most of the leachate will find its way to the underground water which when consume will invariably have health implication.

1.8 The Study Area

Igando is a community located in Alimosho local government area of Lagos State, in South-Western part of Nigeria, is located at Latitude 6° 33' 00", and Longitude 3° 15' 00", the popular Lasu-Isheri road cut across the community which makes the popular Igando bus-stop a notable landmark over the years, Igando happens to be the domicile of the popular Lagos state general hospital. Igando is majorly occupied by the low-income class who majorly engages in commercial activities such as trading, one of the major commercial markets is located at the intersection between Igando-Ikotun Road and Lasu-Isheri road respectively which makes it viable for commercial activities.

Figure 1.1: Map showing the study area
Source: Lagos State University GIS Laboratory

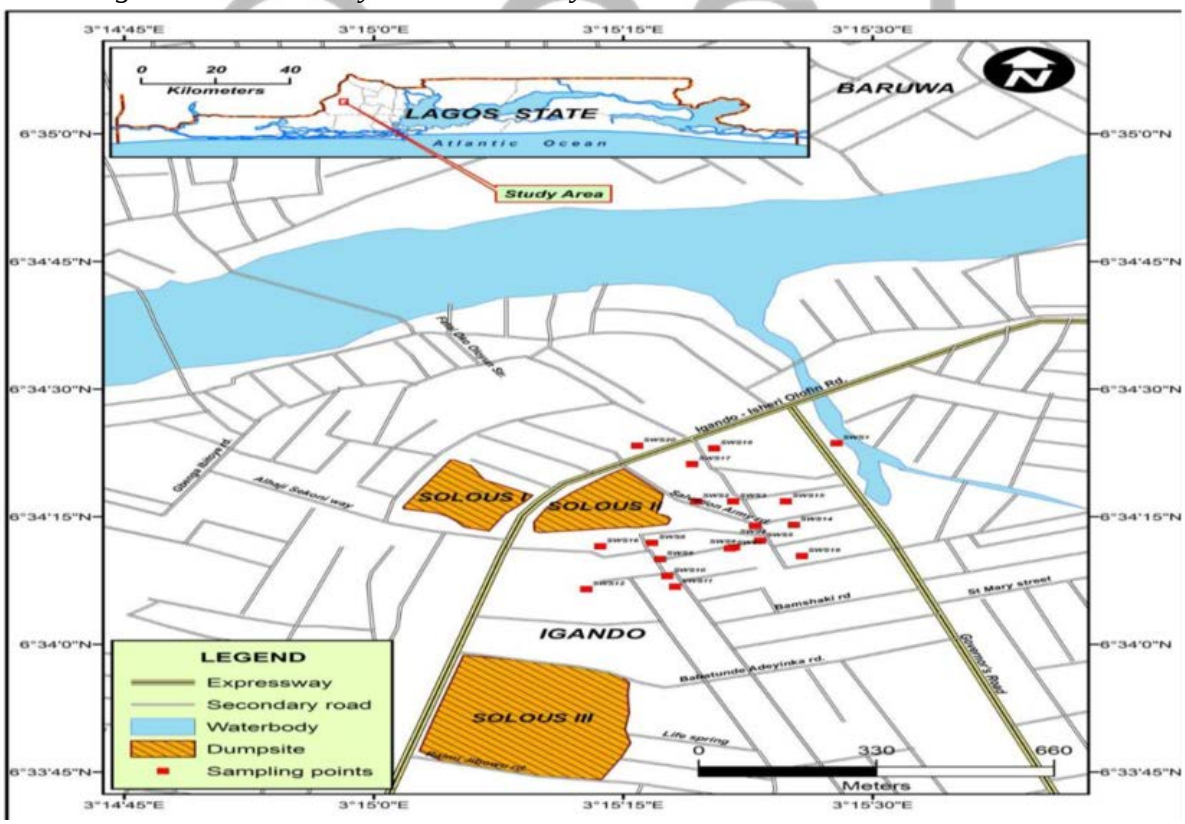

Figure 2.2: Map showing the study area
Source: Lagos State University GIS Laboratory

2.1 Literature Review

2.1.1 Perspectives on the meaning of environmental pollution

The UK Environment Agency classifies waste as either controlled waste or non-controlled waste. Controlled waste includes waste generated from households (municipal solid waste), commercial and industrial organizations and construction and demolition. Non-controlled waste includes waste generated from agriculture, mines, quarries and dredging operations. These are also generated by commercial and industrial organizations although large volumes of chemical and mineral waste are produced in addition, depending on the sector. Agricultural waste comprises mainly slurry and farmyard manure with significant quantities of straw, silage effluent, and vegetable and cereal residues. Most of this is spread on land. Certain types of waste are defined as hazardous because of the inherent characteristics (e.g. toxic, explosive). The three largest waste streams in this category are oils and oily wastes, construction and demolition waste and asbestos, and wastes from organic chemical processes (Khan, 2010).

2.1.2 Environmental pollution

According to the definition adopted by the UN organization, “pollution is exogenous chemical substances encountered in a suitable place, at the appropriate time and in inadequate quantities.” According to the analysis (taken in the early 20th century), it is concluded that the most polluted spheres are the atmosphere and hydrosphere. Even the state of cosmic space around our planet raises serious concerns (Fereidoun, 2007). To define the concept of the environment, we must consider the basic ecological unit that has its laws, which is characterized by complex factors of animate and inanimate nature. This unit is called an ecosystem. The man as a conscious being has a great influence on the environment. According to the methodology of the World Health Organization, there are 26 risk factors to health, some dating from the environment that is considered to cause many diseases in the population of children aged 0 to 19 years.

Unfavourable changes in the environment are caused by human activities, causing a change in the inflow of energy, radiation levels physicochemical and microbiological composition of the environment. The harmful effect of pollution, their effect is manifested in the anatomical and morphological structure, metabolism, growth process, at all levels of cellular organization, from the molecular to the cellular level, through individuals and population to biocenosis and ecosystems (Fereidoun, 2007).

2.1.3 Waste Management

In the middle Ages, food waste was dumped on the streets, so the rodents and insects transmitted many infectious diseases and dangerous epidemics. Today, because of inadequate treatment of waste could be a higher number of infectious diseases. The general interest of society in our country, governed by the Law on Waste Management is the management of waste. The objective of this law is to provide and ensure the conditions for waste management in a way that does not endanger human health and the environment. Law relating to waste management is based on the following principles:

1. The principle of optimal choice of options for the environment
2. The principle of proximity and regional approach to waste management
3. The principle of hierarchical waste management
4. The principle of accountability

5. The 'Polluter Pays Principle.

Methods of waste management

Waste management is now tightly regulated in most developed countries and includes the generation, collection, processing, transport, and disposal of waste. In addition the remediation of waste sites is an important issue, both to reduce hazards whilst operational and to prepare the site for a change of use (e.g. for building). The major methods of waste management are:

- ***Recycling:*** the recovery of materials from products after they have been used by consumers.

• ***Composting:*** anaerobic, the biological process of degradation of biodegradable organic matter.

• ***Sewage treatment:*** a process of treating raw sewage to produce a non-toxic liquid effluent which is discharged to rivers or sea and semi-solid sludge, which is used as a soil amendment on land, incinerated or disposed of inland fill.

• ***Incineration:*** a process of combustion designed to recover energy and reduce the volume of waste going to disposal.

• ***Landfill:*** the deposition of waste in a specially designated area, which in modern sites consists of a pre-constructed 'cell' lined with an impermeable layer (man-made or natural) and with controls to minimize emissions.

Techniques of Solid Waste Disposal Management

The known or popular means of solid waste disposal or management are

(1) Refuse to compost

(2) Incineration and

(3) Sanitary landfill/dumpsites.

Refuse composting requires, on the one hand, a relatively high temperature for mechanical composting, while on the other hand, the most notable process in rural and urban areas involves dug pits, wherein the collected refuse is disposed of off to rot or ferment. The end product is called “compost” and is used as common manure in farms. A variant of composting is compacting or solid wastes reduction through the mechanical process of 'squeezing' to ensure smaller sizes and packages which enhances disposal/management time and space. **The other method is incineration**: This process involves the burning of collected solid wastes from households, offices, and markets. The main objective is size reduction and conversion of refuse to other uses without grossly affecting the environment. The only slight drawback of solid waste incineration is the stench or odour emanating from there. Waste incineration is a much easier process because of dryness and easier combustion. The third variety in solid waste management is the **sanitary landfill.** This is a process of collecting solid wastes and conveying them by using vehicles, heavy-duty dumpsters, Lorries and tippers to designated dumpsites. The accumulating wastes are carefully and concisely laid or layered into specified depression or valleys or dug borough pits (as sites) with the intent to fill and reclaim these exact locations for future uses (Adedibu, 2008).

2.1.4 Impact of waste management practices on health

There is a large body of literature on the potential adverse health effects of different waste management options, particularly from landfills and incineration. There is little on potential problems resulting from environmental exposures from composting and very little on recycling. Although much research has focused on the health of the general population, particularly those living near a waste disposal site, occupational health problems of the workforce involved in waste management are also important to consider (Adegboye, 2006).
Much of the health literature on the toxicity of the individual substances highlighted above relates to occupational or accidental exposure and thus generally to higher levels of exposure than those expected from waste disposal methods. Many of the substances, such as cadmium, arsenic, chromium, nickel, dioxins, and PAHs are considered to be carcinogenic, based on animal studies or studies of people exposed to high levels. Evidence that these substances cause cancer at environmental levels, however, is often absent or equivocal. In addition to carcinogenicity, many of these substances can produce other toxic effects (depending on exposure level and duration) on the central nervous system, liver, kidneys, heart, lungs, skin, reproduction, etc. For other pollutants such as SO2 and PM10, air pollution studies have indicated that there may be effects on morbidity and mortality at background levels of exposure, particularly in susceptible groups such as the elderly. Chemicals such as dioxins and organochlorines may be lipophilic and accumulate in fat-rich tissues and have been associated with reproductive or endocrine-disrupting endpoints (Adedibu, 2008).

Landfill sites one of the most widely known and publicized landfill sites is that of Love Canal in New York State. Large quantities of toxic materials, including residues from pesticides production, were deposited in the 1930s and 1940s, followed by the building of houses and a school on and around the landfill in the 1950s. By the mid-1970s, chemicals leaking from the site were detected in local streams, sewers, soil and indoor air houses. This site and the subsequent studies of the health of the population in the vicinity fuelled public opinion on the problems of waste disposal practices and raised public concern more generally. Since then there have been many studies of populations living near landfill sites, frequently carried out near one specific site in response to public concern. These studies have varied in design and include cross-sectional, case-control, retrospective follow-up and ecological (geographical comparison) studies. The last of these have often been initiated after apparent clusters of specific diseases have been reported near a site. In addition, several large studies have been carried out investigating health outcomes near hundreds of sites (Adedibu, 2008).

2.1.5 Domestic Waste Management challenges

The Problems in Nigeria Waste management simply means the collection, keeping, treatment and disposal of waste in such a way as to render them harmless to human and animal life, the ecology and the environment generally. It could also be said to be the organized and systematic dumping and channelling of waste through or into landfills or pathways to ensure that they are disposed of with attention to acceptable public health and environmental safeguard. Proper waste management will result in the abatement or total elimination of pollution. Domestic Waste Management has become an area of major concern in Nigeria today. It appears to be a losing battle against the harmful consequences of unguided waste and the attainment of a clean healthy environment for all Nigerians. It is a common sight in Nigeria today to see heaps/accumulation of festering waste dumps in our urban and commercial cities.

All sides of residential apartments, the drains, the highways, corners of major or and minor streets, undeveloped plots of land have all become waste dumps for many households. As one writer puts it, waste increases in a geometrical progression and collection and disposal are at an arithmetical progression. It does not appear to be a problem in the absence of a legislative framework for domestic waste management. Other factors have been identified as being responsible for penetrating the crises experienced in the management of domestic waste in Nigeria.

Lack of Adequate Funding and Excessive Population: Waste management is by nature both capital and economic intensive. This requires a huge capital outlay. Many state governments spend a good percentage of their funds on domestic waste management. For example, Lagos State Government spends between 20 - 25% of its funds on waste management. But what this amount could accomplish is dwarfed by the population it caters for. Lagos State, for instance, has a projected population of 12-18 million persons. It is estimated that the average individual in such megacities as Lagos generates an average of 0.115kg of waste daily. It is that the funds available or at least earmarked for domestic waste management is grossly inadequate, to fund the public agencies and other private sector participants (PSP) involved in the collection and disposal of domestic waste; to fund the procurement of equipment and materials required for effective domestic waste disposal.

Lack of Trained / Professional Waste Managers: There are just a few sanitation and environment Engineers in Nigeria. Most private sector operators in waste management are mainly party stalwarts; know little or nothing about waste management.

Lack of Effective Monitoring and Control: The Waste regime in the UK provides a quintessence of a system that makes for effective monitoring of domestic waste before disposal and the steps to be taken on disposal. The regime distinguishes between controlled and special waste. Under section 30 of the EPA, 1990, waste authorities in charge of waste administration have three basic functions: regulation, collection, and disposal. Waste disposal authorities are to award waste disposal contracts through competitive tendering and are to make contracts with waste disposal contractors who may be private sector companies or companies set up by the local authority which must be at arm's length from the waste authority.

The Waste regulation authority is responsible for issuing a waste management license. Under the regime, controlled waste may not be deposited, treated, kept or disposed of without a license. The licensing method is issued as a means of controlling waste. Section 33(1) (a) of the EPA provides that it is an offence to “treat, keep or dispose of controlled waste in a manner likely to cause pollution of the environment or harm to human health” The offence is notable for its breath.

Research Methodology

3.1 Types and Sources of Data used

The data for this study were primary data and secondary data. The primary was sourced from a field survey conducted between April and November 2017 in Igando. The instrument of data collection was a structured questionnaire. The questionnaire was constructed by the researcher aimed at providing answers to some of the research questions, the participants were asked to furnish information with regards to their gender, educational level, age, marital status, monthly income, size of household and the distance of respondents residence from the

dumpsite which are categorized as demographic characteristics and the second section is aimed at identifying the health implication on the people around the dumpsite, the psychological impact the dumpsite is having on the residence, the cost implication on house rent and property value.

It also focused on different suggestions and recommendations to achieve a minimum standard of sustainable environmental management. The secondary data consisted of Maps of the study area and were collected from the GIS unit of the Centre for planning studies of the University.

3.2 Sample and Sampling Techniques

The sample size for the field survey was 200 respondents; a systematic random sampling technique was used. The first twenty streets were carefully chosen around the dumpsite and houses were randomly chosen to start from the second house on each street. Thereafter one resident per house was chosen till the whole two hundred respondents were sampled. Statistical sampling is an important research tool for several disciplines because it allows people to learn more about a population without studying every single individual in the population. For this type of research that involve selected few people around the dumpsite, their opinion was sorted through the use of a questionnaire. The sample population that was used for this study comprised 200 respondents.

3.3 Research Instrumentation and administration

Research instruments are tools used in obtaining, gathering, measuring or assessing information. The critical research instrument which was used for this study is a questionnaire, which was distributed to the sample population, aimed at generating information from them based on the research objective. The questionnaires were designed into 5 sections, A, B, C, D and E. Section “A” of the questionnaire focused on the demographic information of the respondents, such as the Gender of respondents, age, marital status, qualifications, occupation, marital status, monthly income and size of household. Meanwhile, section B focused on health-related information's, section C focus on the psychological impact of the dumpsite on the respondents, section D focus on the cost implication of the dumpsite on house rent and property value around the dumpsite, and section E focus on recommendations and suggestions by residence and other research on the possible solutions to achieve a minimum standard of sustainable environmental management.

3.4 Techniques of Data analysis

The data collected was sorted out to identify the ones that were not correctly filled, that might constitute a problem during analysis. The data analysis was based on the questionnaire computed for the research work, as the research questions were analyzed using Statistical Package for Social Sciences (SPSS) computing software. Both descriptive and inferential statistical analyses were utilized in the study.

The generated frequencies of the answered questions from the respondents were presented in simple percentages in a tabular form and graphs for easy interpretation. Afterwards, the earlier stated hypotheses were tested using Regression analysis. In statistics, regression analysis is a statistical process that involves the test of relationships among variables that are dependent and independent. More specifically, regression analysis helps one understand how

the changes in one of the independent variables affect the typical value of the dependent variable while the other independent variables are held constant

This sought to investigate the impact of the dumpsite on the health, psychological and property value in the residence. The basic idea behind survey methodology is to measure variables by asking people questions and then examine the relationship among the variables, to conclude from the generated responses of the respondents, thereby using the generated data to test the earlier stated hypothesis to validate it and decide if the null hypothesis is to be accepted or forgone to go for the alternative hypothesis.

Data Presentation, Analyses and Interpretations

4.1 Demographic Characteristics of Respondents

The analysis is divided into three categories, the first category contains the demographic characteristics of the participant, while the second category contains research questions aimed at analyzing the impact of the dumpsite on the resident, while the third category is aimed at providing answer to the research questions, in order to test the null hypothesis if to be rejected or accepted. The generated tables that elucidate each question are presented as follows:

Table 4.1.1: Sex

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Male	76	38.0	38.0	38.0
Female	124	62.0	62.0	100.0
Total	200	100.0	100.0	

Source: Research work, 2017

The research also shows the gender distribution of the respondents who participated in the survey, 38% are males while 62% are females, we have more of female respondents as majority of them are engaged in commercial activities around the study area as represented with table 4.1.1 above.

Table 4.1.2: Age:

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Below 18 years	15	7.5	7.5	7.5
18-25 years	41	20.5	20.5	28.0
26-35 years	39	19.5	19.5	47.5
36-45 years	49	24.5	24.5	72.0
46-55 years	37	18.5	18.5	90.5
above 55 years	19	9.5	9.5	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

The research reveals the age range of the respondents as 7.5% are below 18 years, 20% are between 18-25 years, 19.5% are between 26-35 years, 24.5% are between 36-45 years, 18.5% are between 46-55 years while 9.5% are above 55 years respectively, the research, however, shows the majority of the participant who participated in the research process is between 36-

45 years of age as they were the most available respondents during the sampling as represented with table 4.1.2 above.

Table 4.1.3: Marital Status:

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Single	23	11.5	11.5	11.5
Married	130	65.0	65.0	76.5
Divorced	21	10.5	10.5	87.0
Widow/Widower	26	13.0	13.0	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

The research also shows the marital status of the respondents, 11.5% are single, 65% are married, 10.5% are divorced, while 13% are widow/ widower respectively, it thus shows more married respondents as represented with table 4.1.3 above.

Table 4.1.4: Occupation:

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Business	90	45.0	45.0	45.0
Trading	97	48.5	48.5	93.5
Civil servant	13	6.5	6.5	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

The research shows 45% are into business, 48.5% are into trading, while 6.5% are civil servants, the analysis shows a larger percentage of traders, it thus shows traders participated more in the research process because they were available more during the survey as represented with table 4.1.4 above.

Table 4.1.5: Education level:

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Primary 6	7	3.5	3.5	3.5
WAEC	87	43.5	43.5	47.0
OND HND/ BSC	98	49.0	49.0	96.0
Post Graduate/M.Sc.	8	4.0	4.0	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

Education level of the respondents are as follows, 3.5% holds primary 6 certificate, 43.5% holds WAEC certificate, 49% holds OND/HND/BSC certificate while 4% of them holds post graduate/M.Sc. certificate respectively it thus shows majority of them are OND/HND/BSC holders as represented with table 4.1.5 above.

Table 4.1.6: Income level monthly

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Less than N50,000	48	24.0	24.0	24.0
N51,000 – 100,000	58	29.0	29.0	53.0
N101,000-150,000	66	33.0	33.0	86.0
N151,000 – 200,000	21	10.5	10.5	96.5
N201,000 – 250,000	7	3.5	3.5	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

The education level of the respondents are as follows, 3.5% holds primary 6 certificate, The research shows the income level of the respondents 24% earn less than 50,000 29% earn between N51,000 – 100,000, 33% earn between N101,000-150,000, 10.5% earn between N151,000 – 200,000 3.5% earn between N201,000 – 250,000, the research thus shows that majority of the respondents earn between N101,000-150,000 as represented with table 4.1.6 above.

Table 4.1.7: Respondent residence distance from the dumpsite

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
below 100 meters	19	9.5	9.5	9.5
101-500 meter	111	55.5	55.5	65.0
501meter-1 kilometer	50	25.0	25.0	90.0
over 1kilometer	20	10.0	10.0	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

The research shows 9.5% of the respondents are below 100 meters away from the dumpsite, 55% are 101-500 meters away from the dumpsite, 25% are 501 meters to 1 kilometer away from the dumpsite while 10% are over 1 kilometer away from the dumpsite as represented with table 4.1.7 above.

Table 4.1.8: Reasons for staying in the area

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Job Opportunity	10	5.0	5.0	5.0
Free from Traffic	13	6.5	6.5	11.5
Assess to infrastructural Facilities	13	6.5	6.5	18.0
Cheaper accommodation	63	31.5	31.5	49.5
Personal property	101	50.5	50.5	100.0
Total	200	100.0	100.0	

Source: Research work, 2020

Those close to the dumpsite were asked despite the stinks from the site while doing they still retain their current location, 50.5% claimed it is their personal property and which they said has been before the existence of the dumpsite while some said the condition of the dumpsite was not as bad as that before, 5% are there because job opportunity warrants their stay, 6.5% said because the area is free from traffic, 6.5% also said access to infrastructural facilities while 31% said because of cheaper accommodation as represented with table 4.1.8 above.

Table 4.2: Socio economic impacts of waste dumpsite on the Residents

Improper management of Solid Waste poses serious danger to the handlers.		
	Frequency	**Percentage**
Agree	67	33.5
Strongly Agree	82	41.0
Undecided	15	7.5
Disagree	28	14.0
Strongly Disagree	8	4.0
Total	200	100.0
Solid waste pollution is associated with disease and contamination of the sub-surface water by the leachate from polluted dumpsite.		
Agree	48	24.0
Strongly Agree	89	44.5
Undecided	19	9.5
Disagree	32	16.0
Strongly Disagree	12	6.0
Total	200	100.0
Chemicals and pathogenic organisms contaminate the water and makes it not fit for human consumptions		
Agree	53	26.5
Strongly Agree	78	39.0
Undecided	22	11.0
Disagree	34	17.0
Strongly Disagree	13	6.5
Total	200	100.0
The improper management of the dumpsite leads to pollution of streets and nearby stream		
Agree	50	25.0
Strongly Agree	69	34.5
Undecided	23	11.5
Disagree	43	21.5
Strongly Disagree	15	7.5
Total	200	100.0
Poor Governance in Nigerian cities leads to the continuous dumpsite pollution in Igando.		
Agree	50	25.0
Strongly Agree	66	33.0
Undecided	26	13.0
Disagree	46	23.0

Strongly Disagree	12	6.0
Total	200	100.0
Poor management and control of the dumpsite endangers public health by encouraging the spread of odours, diseases and breed of rodents		
Agree	49	24.5
Strongly Agree	88	44.0
Undecided	19	9.5
Disagree	35	17.5
Strongly Disagree	9	4.5
Total	200	100.0
I feel terribly bad once rain falls because of the terrible odour that is associated with the dumpsite		
Agree	67	33.5
Strongly Agree	82	41.0
Undecided	15	7.5
Disagree	28	14.0
Strongly Disagree	8	4.0
Total	200	100.0
I find it difficult to invite friends to my resident due the heap and odour from the dumpsite		
Agree	61	30.5
Strongly Agree	85	42.5
Undecided	18	9.0
Disagree	28	14.0
Strongly Disagree	8	4.0
Total	200	100.0
Indiscriminate parking of PSP vehicle by the road side often inhibit free flow of vehicular movement in streets and the highway		
Agree	48	24.0
Strongly Agree	86	43.0
Undecided	22	11.0
Disagree	32	16.0
Strongly Disagree	12	6.0
Total	200	100.0
Activities of the scavengers often constitute nuisance in the residence		
Agree	54	27.0
Strongly Agree	85	42.5
Undecided	22	11.0
Disagree	31	15.5
Strongly Disagree	8	4.0
Total	200	100.0
The mountainous heaps of solid wastes constitute aesthetic nuisance in the resident		
Agree	52	26.0
Strongly Agree	64	32.0
Undecided	26	13.0

Disagree	43	21.5
Strongly Disagree	15	7.5
Total	200	100.0
Residue from the dumpsite block water drains and thereby causing flooding.		
Agree	50	25.0
Strongly Agree	68	34.0
Undecided	30	15.0
Disagree	39	19.5
Strongly Disagree	13	6.5
Total	200	100.0
The situation becomes worse in the rainy season as the wastes get directly exposed to the rain		
Agree	54	27.0
Strongly Agree	83	41.5
Undecided	19	9.5
Disagree	35	17.5
Strongly Disagree	9	4.5
Total	200	100.0
Government appears to be unable to combat unlawful and haphazard dumping of hazardous commercial and industrial wastes		
Agree	46	23.0
Strongly Agree	86	43.0
Undecided	23	11.5
Disagree	33	16.5
Strongly Disagree	12	6.0
Total	200	100.0
Government officials have not tried enough in the recycling and management of solid waste in the resident		
Agree	50	25.0
Strongly Agree	66	33.0
Undecided	26	13.0
Disagree	46	23.0
Strongly Disagree	12	6.0
Total	200	100.0

Source: Research work, 2020

The research discovered improper management of solid waste poses a danger to the handler as 33.5% of the respondents agree, 41% strongly agree, 7.5% undecided, 14% disagree while 4% strongly disagree respectively, the research reveals a larger percentage of agreed respondents, which thus shows if solid waste is not properly handled it poses a danger to the handler, 24% agreed that solid waste pollution is associated with diseases and contamination of the sub-source water while 44.5% strongly agree, 9.5% undecided, 16% disagree while 6% strongly disagree respectively, it thus shows leachate from solid waste contaminate the sub-surface water and it is associated with diseases.

The research is also aimed at revealing if chemicals and pathogenic organisms contaminate the water and make it not fit for human consumption 26.5% of the respondents agree, 39% strongly agree, 11% undecided, 17% disagree while 6.5% strongly disagree respectively, the

research reveals a larger percentage of agreed respondents, which thus shows chemicals and pathogenic organism contaminate the water and makes it unfit for human consumption. The research is also aimed at revealing if improper management of the dumpsite leads to pollution of streets and nearby stream, 25% of the respondents agree, 34.5% strongly agree, 11.5% undecided, 21.5% disagree while 7.5 % strongly disagree respectively, the research reveals a larger percentage of agreed respondents, which thus shows improper management of solid waste leads to pollution of streets and nearby stream.

The study showed that poor Governance in Nigerian cities leads to continuous dumpsite pollution in Igando as 25% of the respondents agree, 33% strongly agree, 13% undecided, 23% disagree while 6% strongly disagree respectively. The research reveals a larger percentage of agreed respondents, which thus shows poor governance in Nigerian cities leads to the continuous dumpsite pollution in Igando. The research indicated that poor management and control of the dumpsite endangers public health by encouraging the spread of odours, diseases and breed of rodents, 24.5% of the respondents agree, 44% strongly agree, 9.5% undecided, 17.5% disagree while 4.5% strongly disagree respectively. The research reveals poor management and control of the dumpsite endangers public health by encouraging the spread of odours, diseases and breeds of rodents in the study area which the residents confirm.

The research revealed residents feel bad when rainfalls which are often associated with terrible odour, 33.5% of the respondents agree, 41% strongly agree, 7.5% undecided, 14% disagree while 4% strongly disagree respectively, the research reveals a larger percentage of agreed respondents, which thus shows residents feel bad once rain falls because of the terrible odour that is associated with the dumpsite. The research is also aimed at revealing if poor management and control of the dumpsite endangers public health by encouraging the spread of odours, diseases and breed of rodents, 30.5% of the respondents agree, 42.5% strongly agree, 9% undecided, 14% disagree while 4% strongly disagree respectively, the research reveals the residents find it difficult to invite friends due to the heap of refuse and odour from the dumpsite.

The research discovered that indiscriminate parking of PSP vehicle by the roadside often inhibit the free flow of vehicular movement in streets and the highway, 24% of the respondents agree, 43% strongly agree, 11% undecided, 16% disagree while 6% strongly disagree respectively. The research reveals a larger percentage of agreed respondents, which thus shows indiscriminate parking of PSP vehicles by the roadside often inhibits the free flow of vehicular movement in streets and the highway while some even lead to accidents. The research also revealed the activities of the scavengers often constitute nuisance in the residence as 27% of the respondents agree, 42.5% strongly agree, 11% undecided, 15.5% disagree while 4% strongly disagree respectively. The research reveals the activities of scavengers often constitute nuisance in the residents and some even use the avenue to perpetrate robbery attacks.

The research also found that the mountainous heaps of solid wastes constitute an aesthetic nuisance to the resident as 26% of the respondents agree, 32% strongly agree, 13% undecided, 21.5% disagree while 7.5% strongly disagree respectively. The study reveals a larger percentage of agreed respondents, which thus shows the mountainous heaps of solid wastes constitute an aesthetic nuisance to the resident. The study found that residue from the dumpsite blocks water drains and thereby causes flooding, 25% of the respondents agree, 34% strongly agree, 15% undecided, 19.5% disagree and 6.5% strongly disagree respectively.

This means that the residue from the dumpsite blocks water drains and thereby causing flooding.

In addition, this discovered that Government appears to be unable to combat unlawful and haphazard dumping of hazardous commercial and industrial wastes in the study area as 23% of the respondents agree, 43% strongly agree, 11% undecided, 16.5% disagree while 6% strongly disagree respectively. The study reveals a larger percentage of agreed respondents, which thus shows the Government appears to be unable to combat unlawful and haphazard dumping of hazardous and commercial and industrial wastes in the area. The research also discovered Government officials have not tried enough in the recycling and management of solid waste in the resident, 25% of the respondents agree, 33% strongly agree, 13% undecided, 23% disagree while 6% strongly disagree respectively. The study reveals that Government officials have not tried enough in the recycling and management of solid waste in the study area, as they claim the recycling plant at the dumpsite it's not working at full capacity as presented in table 4.2 above.

4.3 Impact of Dumpsite on Property value

Accommodations are left vacant in the resident due to constant relocation of residence due to the dumpsite.		
	Frequency	**Percentage**
Agree	49	24.5
Strongly Agree	88	44.0
Undecided	19	9.5
Disagree	35	17.5
Strongly Disagree	9	4.5
Total	200	100.0
Shops are left vacant because of low patronage from customer		
Agree	67	33.5
Strongly Agree	82	41.0
Undecided	15	7.5
Disagree	28	14.0
Strongly Disagree	8	4.0
Total	200	100.0
Cost of land has drastically reduced over the years due to the dumpsite		
Agree	8	0.4
Strongly Agree	28	14
Undecided	18	9.0
Disagree	85	42.5
Strongly Disagree	61	30.5
Total	200	100.0
House rent agents are finding it difficult because of low patronage		
Agree	48	24.0
Strongly Agree	86	43.0
Undecided	22	11.0
Disagree	32	16.0
Strongly Disagree	12	6.0
Total	200	100.0

Source: Research work, 2020

The study further revealed that accommodations are left vacant in the resident due to constant relocation of residence due to the dumpsite, 24.5% of the respondents agree, 44% strongly agree, 9.6% undecided, 17.5% disagree while 4.5% strongly disagree respectively. The research reveals a larger percentage of agreed respondents, which thus shows accommodations are left vacant in the resident due to constant relocation of residence due to the dumpsite. The study also discovered shops are left vacant because of low patronage from the customer, 33.5% of the respondents agree, 41% strongly agree, 7.5% undecided, 14% disagree and 4% strongly disagree respectively. The research reveals many shops have been left vacant because of low patronage due to the odour emanating from the dumpsite.

Interestingly the study found that the cost of the property (land and houses) has not reduced over the years due to the dumpsite, 4% of the respondents agree, 14% strongly agree, 9% undecided, 42.5% disagree while 30.5% strongly disagree respectively. The research reveals a larger percentage of disagreed respondents, which thus shows the cost of purchasing land, are still on the increase despite the presence of the dumpsite. The research showed that house

rent agents are finding it difficult because of low patronage, 24% of the respondents agree, 43% strongly agree, 11% undecided, 16% disagree and 6% strongly disagree respectively. The study, therefore, concludes that the majority of the house rent agents are finding it difficult because of low patronage resulting from the negative effects of the polluted dumpsite in Igando as presented in table 4.3 above.

4.4 Test of Hypothesis

To test the Hypothesis, the independent variable will be regressed against the dependent variable. A regression tool is used to estimate the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable.

Hypothesis one

H_0: Pollution concern does not depend on health implication of pollution

H_1: Pollution concern depend on health implication of pollution

Analyzed Variables	Value
R	.861
R-Square	.741
Significant	.000

Source: Research work, 2020

The table above provides the *R* and *R*2 values of the tested research hypothesis. The research reveals an R-value of 0.861, which means there is a strong positive correlation between pollution and health implication of pollutants in the study area and R-Square value of 0.741, it explains the total variation of the dependent variable (Health) that can be explained by the independent variable (Pollution) while the remaining 26% are other health implications that are not explained by the independent variable. The research also reveals $p<0.000$ (Significant), which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). Therefore the null hypothesis should be rejected while the alternative uphold because it lacks statistical support.

Hypothesis two

H_0: The dumpsite does not have psychological impact on the residence.

H_1: The dumpsite is having psychological impact on the residence.

Analyzed Variables	Value
R	.715
R-Square	.512
Significance	.000

Source: Research work, 2020

This table provides the *R* and *R*2 values of the tested research hypothesis. The research reveals R value of 0.715, which means there is strong positive correlation between dumpsite and psychological impact of the dumpsite on the residence, and R-Square value of 0.512, it explains the total variation of the dependent variable (psychological) that can be explained by the independent variable (Dumpsite) which shows dumpsite will have 51% on the psychology of the people while the remaining 49% are other variables aside the dumpsite presence which are psychologically affecting the resident. The research also reveals $p< 0.000$ (Significant), which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the

data).Therefore the null hypothesis should be rejected while the alternative uphold because it lacks statistical support.

Hypothesis Three

H_0: The dumpsite does not have cost implication on house rent and property value.

H_1: The dumpsite has cost implication on house rent and property value.

Analyzed Variables	**Value**
R	.918
R-Square	.843
Significance	.000

Source: Research work, 2020

This table provides the *R* and *R*2 values of the tested research hypothesis. The research reveals an R-value of 0.918, which means there is a strong positive correlation between dumpsite and house rent and property value in the study area, and R-Square value of 0.843, which shows pollution will have 84%, it explains the total variation of the dependent variable (house rent and property value) that can be explained by the independent variable (Dumpsite) which shows dumpsite will have 84%impact on the house rent and property value in the study area, while the remaining 16% are other variables aside from the dumpsite presence which are also affecting house rent and property value in the study area. The research also reveals $p<$ 0.000 (Significant), which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). Therefore the null hypothesis should be rejected while the alternative uphold because it lacks statistical support.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 SUMMARY OF FINDINGS

There is considerable potential for hazardous exposure to occur through improper management of waste in the environment. The research proves beyond reasonable doubt that the presence of the dumpsite in the neighbourhood has negatively affected the residents and the residence respectively. The research reveals the improper management of waste in the study area poses a serious health danger to the handlers as most of the handlers are seen handling the waste negligently, some of them are even seen using their bare hands to do the sorting of waste. The research reveals majority of the water around the study area has been contaminated as a result of leachate from the dumpsite which finds its way into the underground water thereby contaminating it making it unsafe for drinking, some of the waste is sometimes not properly disposed of where the vehicles leave hurriedly thereby leading to the pollution of drains and nearby streams. Poor management and ineffective control of the dumpsite endanger public health by encouraging the spread of odours, diseases and rodents in the residence, particularly when rain fall, which often makes the environment non-conducive. For instance workers and patients at the General Hospital which is a few meters from the dumpsite narrate their ordeal as they find it difficult staying outdoor. Another nightmare for the residents is the indiscriminate parking of PSP vehicles along the road which often inhibits the free flow of traffic on the road, some even result in an accident.

5.3 RECOMMENDATION

Based on the findings the following recommendations were made:

1. Government should provide more sanitary and health personnel to adequately and sufficiently cover the whole community for proper monitoring and education on waste management.
2. The vehicles saddled with the responsibility of waste collection should be properly supervised to ensure they dispose of the waste in the right place to prevent the pollution of streets and nearby streams.
3. Parking space should be created for the PSP vehicles as most of the parks along the road constitute a nuisance, causing traffic which sometimes results in accidents.
4. The drains around the dumpsite should be channelled as most of the drains are already blocked by residue from the dumpsite which often leads to flooding when there is heavy rainfall
5. Government should ensure the recycling plant is put to optimum use and operate efficiently
6. The people should be properly sensitized on waste management so they can be well equipped as to how to handle their wastes and even generate income from them.

5.5 CONCLUSION

It appears that a polluted environment is a global issue and the immediate community bears the brunt more. Policymakers in developing countries need to design programs, set standards, and take action to mitigate the adverse health effects of environmental pollution. Healthy people mean a successful business or country. These societal beneficial efforts need to carefully adapt available knowledge from other settings, keeping in mind the differences in pollutant mixtures, concentration levels, exposure patterns, and various underlying population characteristics and ways of mitigating their impact on the environment.

REFERENCES

Adedibu A. A. (2008). Environmental Problems Associated with Urbanisation of Rural Areas in Nigeria; Environmental Issues, vol. 15. pp. 229 – 235.

Adegboye K. (2006). Scavenging 2006: Making a “Lucrative” Living from a Hazardous Dump Sites. *Vanguard*, Tuesday, February 28, 2006, P. 36.

Aliu, I. R., Adeyemi, E. O., & Adebayo, A. (2014). Municipal household solid waste collection strategies in an African Megacity: Analysis of public private partnership in Lagos Nigeria. Waste Management and Research, Vol. 32 (9): 67-78 (SAGE, London)

Fereidoun, H., Nourddin, M. S., Rreza, N. A., Mohsen, A., Ahmad, R. & Pouria, H., (2007). The Effect of Long-Term Exposure to Particulate Pollution on the Lung Function of Teheranian and Zanjanian Students, *Pakistan Journal of Physiology*, 3(2), pp. 1-5.

Khan, A. (2010). Air pollution in Lahore, The Dawn, Retrieved fromhttp://news.dawn.com/wps/wcm/connect/dawn-content-library/dawn/the newspaper/letters-to the-editor/air-pollution-in-lahore-070

Omotosho O. S. (2005). Nigerian Environmental Issues; A Statistical Approach. *Journal of Environmental Research*, vol. 4(6): pp. 54 – 59.

Oreyemi, M.K. (2005). Ecological Sanitation of Water and Environmental Conservation Technology Option: The case of slums in Oyo State, Nigeria. *Journal of African Environmental Issues*. Vol. 3 pp. 12 -15.