

Environmental Nuisance and Quality of Life of Residents of Rivers State, Nigeria

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Abstract.

Human activities have devastating impacts that affect physical environment in several ways. These trigger changes that continually constitute environmental nuisance which negatively affect the quality of life of the people. This study therefore aimed at examining some environmental irritants to determine their effect on quality of life of residents in Rivers State, Nigeria. Three research questions and three research hypotheses were formulated to guide the study. The design adopted was correlational descriptive research. A sample size of 780 residents was selected from a population of about 7.8 million using a simple random sampling technique. Data collection was done using instruments adopted from the standard Environmental Nuisance Questionnaire (ENQ) and Quality of Life Scale (QLS). Data collected was analyzed with the Pearson Product Moment Correlation Coefficient formula. Findings from the study showed that environmental irritants had an inverse and strong relationship with quality of life of residents in the different domains; physical domain ($r = -.162, p = .00$) social domain ($r = -.279, p = .00$), psychological domain ($r = -.203, p = .00$), environmental domain ($r = -.275, p = .00$). Based on this finding, it was recommended that human activities in the environment be regulated to minimize or control their inverse effect on human life.

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I. Introduction

The natural environment from evolution was divinely structured to meet the needs, interest and healthy living condition of man devoid of hazardous consequences. However, human insatiable needs necessitated by the thirst for economic empowerment has negatively impacted on the environment. Human activities geared towards improvement of the environment and quality life that meets international standard of industrialization have resulted in the alteration of the natural landscape and ecosystem. Consequently, the pre industrialization peaceful relationship between the environment and human existence, now poses threat to the quality of life.

From peripheral, lateral and analytical perspectives, daily human efforts for economic empowerment and improved quality healthy living condition through incursion into natural environment may attract total condemnation. Nevertheless, the consideration of God's divine admonition to man to go into the world and multiply, replenish and subdue the earth (Genesis 1 vs 28), tends to grant man a legitimate approval to carry out his insatiable activities on the environment. This line of thought underpins the activities of man towards the natural environment, and this appears to be detrimental, threatening and hazardous to the quality healthy human existence in the environment. Human unguided practices, mal-administration, inappropriate legislation and instability of interest in the environment have led to unguided combustion, loud noise, indiscriminate blockage of drainages, pollution, wrong siting of life stock farms among others.

The prevalence of these sharp, unguided and greedy practices constitutes environmental nuisance that threatens quality of life of people in the environment. Environmental nuisance can thus be described as any absurd interference or anything that can cause interference with the value of the environment (Queensland Government 2019). It can also be termed as any unhealthy, offensive conditions that caused deterioration of the environment by destroying the ecosystem and affect wildlife (Etuonovbe 2009). In a nutshell, any circumstance capable of altering the ecosystem, affecting human and animal life; and requiring immediate and adequate attention constitute an environmental nuisance. Nuisance could be in form of emissions such as aerosols, fumes, artificial light, noise, particulate matters and smoke, unhealthy or unsightly conditions caused by contamination at dump sites, foul smelling stagnant or obstructed water, life stock farms and poor state of living environment.

Globally, the negative effects of environmental nuisance on life have been enormous. Hitherto the World Health Organization (WHO) reports that 92% of the world's population is exposed to unsafe air, judging from its air quality model. In addition, some 3 million people die yearly from exposure to outdoor air pollution. Indoor air pollution has killed nearly 6.5 people; while both indoor and outdoor pollution have caused up to 11.6% of all global deaths, with majority occurring in low-income countries (WHO, 2017).

Kephart, et al (2020) put the number of deaths globally from air pollution alone at 4.9 million, and this has continued to pose great threat to health in low- and middle-income countries. The risk population is mostly women and children who spend most times cooking, clearing and cleaning the environment. Furthermore, European region exposure to particulate air pollution is estimated to reduce the life expectancy of every individual by an average of nearly 1 year. This may be due to associated increased risk of cardiovascular diseases, respiratory diseases and lung cancer (Dept of Health, 2010; Jamrozik 2005).

Nigeria and in particular the Niger Delta region, is not exempted from the disastrous effect of air pollution; more so, there has been a lot of bush burning and burning of crudes and tires which produce soot and other particulate matters that pollute the air. The attendant change in phenology, biodiversity and significant climate change that interfere with ecosystem balance and unfavourable climatic condition are all the results of these unwholesome practices (Yakubu 2019). This does not only threaten the sustainability of the natural landscape and ecosystem but constitute eminent danger to quality health of the inhabitants. This is particularly the case in Rivers State, where the quality of life and life expectancy is put under threat by pollutants.

Pollutants originating from automobiles in densely populated urban city of Port Harcourt include carbon monoxide (CO), Sulphur oxide (SO₄), nitrogen oxide (NO₂), and hydrocarbons (HC); with average concentration exceeding the Federal Environmental Protection Agency (FEPA) now Federal Ministry of Environment (FME) standards (Robinson-Basse 2020). Ede and Edokpa (2015) in a study obtained air samples from 16 communities in Niger Delta including Port Harcourt to analyze the content. Findings showed that CO, SO₂, NOs, HC and suspended particulate matter (SPM) composition exceeded the WHO Air Quality Guidelines. Among the 16 locations, Port Harcourt had the highest mean SPM. The high SPM had been found to be associated with such factors as high numbers of oil fields and gas flare sources ongoing construction activities, location on proximity to highly engaged roads, and industrial facilities (Ede et al 2015).

The same goes for disposition of waste in landfills and designated dumps which spill into drainages and block water ways. Open dumping of wastes attracts flies, rats, snakes and other creatures that spread disease. Wet waste like rotten vegetables and fruits putrefy, emit odour and attract flies which may eventually perch on food or water consumed by man, posing health risks. This type of environmental nuisance also contributes to the world's anthropogenic greenhouse gas (GHG) emissions with the production of enormous amount of CH₄ and CO₂ which are generated from the degrading process of deposited waste (Vetter & Peter 2017). Some solid wastes that are not evacuated on time find their ways into drainages and cause blockage of water ways leading to flooding, water contamination; breeding grounds for mosquitoes, flies and other disease carrying rodents. Based on this premise, it becomes expedient for the researchers to investigate the relationship between environmental nuisance and quality of life of residents of Rivers State.

Statement of Problem

Man's dependency on environment for support of the entire life system borders on the well-being of all environmental factors such as quality air, clean water, food and friendly surroundings. Hence, Government and

some Non-Governmental Organizations show concern on the maintenance of natural environment; and have advertently warned against any action or activities that may lead to environmental degradation.

However, in Rivers State, the practice of unguided combustion, indiscriminate blockages of drainages and loud noise have been on the increase with consequent air pollution. In recent time, there has been a lot of hue and cry on the massive air pollution by soot. More so, the continuous and exceedingly increasing rates of oil and kerosene bunkering are posing significant hazards. These hazards directly or indirectly affect residents, leading to diseases, injuries and disabilities which affect the quality of life, thereby reducing life expectancy.

II. Aim and Objectives.

The aim of this study is to determine the relationship between Environmental Nuisance and quality of life of residents of Rivers State. Specifically, the study intends to achieve the following objectives;

1. Determine the relationship between unguided combustion and quality of life of residents of Rivers State.
2. Ascertain the relationship between indiscriminate blockage of drainages and quality of life of residents of Rivers State.
3. Determine the relationship between loud noise and quality of life of residents of Rivers State.

Hypotheses

The following null hypotheses were formulated to direct the study.

1. There is no significant relationship between unguided combustion and quality of life of residents of Rivers State.
2. There is no significant relationship between indiscriminate blockage of drainages and quality of life of residents of Rivers State.
3. There is no significant relationship between loud noise and quality of life of residents of Rivers State.

Significance of the Study.

The findings from this study will be beneficial to residents of Rivers State, government, policy makers, students and researchers in the field of environmental study. Residents' awareness on how their daily activities contribute to environmental degradation and the attendant risks to health and well-being will increase. Knowledge of their contribution to environmental degradation and the attendant risk will quicken the zeal to work towards improving their surroundings.

Findings from the study will also enable government and policy makers to propose plans that will ensure the abolition of activities that are detrimental to the environment and capable of affecting or changing the natural flow of the ecosystem.

III. Literature Review.

Human activities have caused changes in earth's atmosphere, contributing to climate change. The amount of greenhouse gases, aerosols and cloudiness brought about by the activities is manifold. They include the burning of fossil fuels, indiscriminate burning of bushes to clear debris to build homes, parks, industries, for planting and hunting, and for fresh grazing sites. All these activities aim at providing food and making life more comfortable in his environment. Incineration of refuse in landfill sites have led to the release of black soot as a result of incomplete combustion of organic matters in turn affecting the quality of air, water, clothing, and shelter (Izah, et al 2017; Adekola 2018).

Abdulmumeen et al (2010) noted that bush burning has adversely affected the environment and health of mankind with the release of air pollutants, such as carbon monoxide, hydrocarbons, hydrogen sulphide, nitrogen oxides, Sulphur oxides and other substances like dust, fume, moist and smoke.

In Nigeria, Rivers State in particular and some states in the Niger Delta region, there are cohorts of young men and women who specialize in primitive burning of crude, referred to as local refinery and known by the local communities as 'kpofire'; all in the bid to get refined petroleum and its products. The name kpofire is derived from the sound made by fire whenever it explodes as the crude is cooked and eventually results in a fierce inferno, leading to massive destruction of the area of operation, including lives and properties. This kpofire activity has adverse effects on residents in terms of pollution of land, water ways and air.

The process of getting the crude oil usually leads to breakage of pipes and subsequent leakage of crude into the sea which affects aquatic life. When this same crude is refined and the needed products (petrol, kerosene and diesel) are extracted the ruminants are discarded into the sea and surrounding environment leading to land and water pollution. These pollutants (oil and its chemical components) as reported by Nriagu (2011) seep into marsh and subtidal sediments, persist there for decades and negatively affect marsh vegetation, marine worms, and other aquatic life forms that live on or near the sediments. Again, the local method of extraction of petroleum products consists of cooking the crude in an open drum, with the products separating at their

temperature into different containers. The left overs are burnt or thrown into the sea. This whole process sends out aerosols and fumes into the atmosphere which releases carbon dioxide to the atmosphere, causing pollution.

At this juncture, it is pertinent to point out that the oceans are the lifeblood of planet earth and humankind. They flow over nearly three-quarters of planet earth and hold 97% of the planet's water. They produce more than half of the oxygen in the atmosphere, and absorb carbon. They also regulate the weather and form the clouds that bring in fresh water.

These make the oceans critical players in the basic elements needed for survival. Ocean plants produce half of the world's oxygen; these amazing waters absorb nearly one-third of human-caused carbon dioxide emissions (Sargren, 2017; Rosane, 2019). Recurrent burning in and around Rivers State, is gradually becoming a norm, with its attendant risk on quality of life and subsequent affectation of life expectancy of residents of the oil rich city.

This is because noxious gases and particulate matters produced by the process into the atmosphere become the pollutants that constitute health hazards when inhaled into the respiratory and cardiovascular systems. This danger places demand on enlightenment of the general public—a paradigm shift.

A decent environment impacts life positively; therefore, the importance of living in a clean environment free from waste, rodents and insects should not be underestimated. Effective management of both liquid and solid wastes has been of public health concern globally, as poor handling of any form of waste constitute nuisance that affect quality of life of residents in an environment and adjoining areas. In most cities in Nigeria, Port Harcourt in particular, poor management of waste as in indiscriminate road side dumping of waste had led to blockage of drainages, causing waterlog which constitute breeding grounds for rodents, vectors and other pathogenic agents (Oyebode, 2013). It has therefore become more imperative for waste in all forms to be properly managed. Poor sewage disposal is capable of both surface and deep-water contamination resulting in water-borne diseases, and poorly managed solid waste products have constituted a problem with many tentacles in man's immediate environment. These require urgent attention in order to prevent the risk of water, air and land pollution with associated increase in vector-borne diseases and other infectious diseases known to contribute to decrease in the quality of life of inhabitants of such environment (Ogden, 2017). Guilhemet al (2012) in their study on the 'Emergence and prevalence of human vector-borne diseases in sink vector populations' reported that the slightest amount of pathogens is capable of causing infection where they persist, because of their self-sustaining ability which promotes growth and multiplication. Most times poor drainage provides these pathogens favourable environments to thrive. Drainages are built to ease removal of water and other forms of liquid from the surrounding environment. However, most drainage systems in urban areas function poorly or do not function at all due to several causes ranging from accumulation of refuse such as leaves, plastics, earth and household waste materials in the drainage pathway. For example, the erection of structures such as houses or bridge on the drainage pathway obstruct the flow of water, presence of weeds and other vegetation growing excessively around the area of the drain and in the drainage channels, deposits of sediments in lower sections of the drain due to poor alignment in areas of inadequate slope and where cleaning is not done regularly, block effective drainage (Adams 2020).

Poorly or non-flowing drains allow for stagnant waters which make good breeding grounds for mosquitoes, sand flies, ticks, fleas and other aquatic insects that bite and cause infection in man Marsollier, et al (2002) opined that Buruli ulcer, a chronic skin ulcer which occurs in otherwise healthy people living in tropical African countries has been linked with water, and could be common in large drains with stagnant water. Blocked drainages also increase the risk of diseases transmissible by these aquatic insects, especially when close to homes and living places leading to reduction in quality of life.

The same goes for noise pollution which has been shown to have adverse effect on quality of life of residents. Noise is a confused or inharmonious sound. Any sound, particularly one that is disordered and irregular, is unwanted because it interferes with the ability to hear (Peters 2013). Noise can accumulate and present as environmental nuisance. Principally, noise from motor vehicles, aircraft, trains and industries to which millions of people are exposed to create both annoyance and significant health hazards like hearing loss and cardiovascular disease (Hammer, et al 2014). Urban noise can interrupt sleep, disturb communication and interfere with other human activities.

Ad Hoc Expert Group on Noise and Health (2010) reported that exposure to prolonged and excessive noise and vibration cause a range of health problems such as hypertension, stress, deafness sleep disturbance and hyperacusis. There is an association between community exposure to transport noise and elevated blood pressure, increased blood concentrations of stress hormones and small increase in cardiovascular disease risk. There is also growing evidence supporting a link between exposure to environmental noise and impaired cognitive performance in children (Stansford & Clark 2015)

Environmental noise exposure from road traffic noise and aircraft noise is said to be associated with a range of adverse health outcomes in children. Children have also demonstrated annoying responses to noise when there is noise related to significant lowering of well-being and stress responses, such as increased levels of

adrenaline and noradrenaline. Studies have also shown association with increased hyperactivity symptoms; and that noise might cause changes in cardiovascular functioning and also have effect of lowering birth weight. School noise exposure affects children’s cognitive skills such as reading and memory, as well as standardized academic test scores. This is particularly the case with children exposed to noise during the time of their rapid growth and cognitive development because they have less coping repertoires than adults (Stansford & Clark 2015)

A study by WHO (2011) on “Burden of Disease from Environmental noise, revealed that at least one million healthy years of life are lost each year in Europe alone due to noise pollution, this figure does not include noise from industrial work places. It was further reported that exposure to environmental noise ranked second among environmental threat to public health, the first being air pollution. Construction sites in cities add even more noise to the general traffic.

Sound exposure during sleep may also affect hearing in human because of extreme sensitivity of the human ear to noise; the ear picks up and transmits sounds that are filtered and interpreted by different parts of the brain which include sounds from traffic, air craft and music from the neighbourhood. These are continually processed reaching an individual in different ways via the nerves that travel to all parts of the body and hormones released from the brain. The obvious effect of this sound is interrupted sleep with flow-on-effects of tiredness, impaired memory and creativity; impaired judgement and weakened psychomotor skills leading to poor quality of life.

IV. Materials And Method

Research design

The research design adopted was the correlational design. The design is useful for this study as it seeks to establish the relationship between two variables.

Participants: All the 7.8 million residents of Rivers State form the target population for this study. This includes all indigenes and non-indigenes who reside in the State. A total of 780 residents, representing 10% of the total population were drawn as sample size for the study. The simple random sampling technique was used to select the sample size.

Instrumentation

Two instruments were adopted for data collection for the study. These are the Environmental Nuisance Questionnaire (ENQ) and Quality of Life Scale (QLS). The instruments for the study were validated by two community health experts in the Department of Community Medicine, College of Medical Sciences, Rivers State University, Port Harcourt.

The test-re-test method was used to establish a reliability coefficient value of 0.70 and 0.75 for the ENQ and QLS respectively with the application of the instruments to 30 respondents who were not part of the study sample. Data was collected using a face-to-face administration of the questionnaire with the help of five research assistants. Data generated were analyzed using the Pearson Product Moment Correlation Coefficient formula. A total of 780 copies were administered and 771 were retrieved and used for data analysis.

Method of Data Analysis

Quantitative data from the questionnaires were coded and entered using Statistical Package for Social Sciences (SPSS) version 23 data entry program. Research questions were analyzed using descriptive statistics of mean and standard deviation while hypothesis was tested using Pearson Product Moment Correlation Coefficient.

V. Results

Table 1: Analysis of respondents’ mean rating on unguided combustion n=771

SN	Unguided Combustion	\bar{x}	SD	Decision
1	There is indiscriminate burning of refuse in the surrounding environment.	2.25	1.00	
2	Used tyre and tubes are burned indiscriminately in the environment.	2.29	1.06	
3	Indiscriminate bush burning causes air pollution.	3.61	0.49	*
4	Hydrocarbons are perceived to be released during combustion (burning of fuels).	3.57	0.55	*
5	Burning of crude is perceived to release soot into the environment.	3.53	0.57	*
	Grand mean	3.05	0.47	*

*agreed

The finding in Table 1 shows the descriptive statistic over respondents’ mean rating of unguided combustion. It showed that the grand mean rating of the respondents of unguided combustion was $\bar{x}=3.05$,

SD=0.47. Specifically, the respondents strongly indicated that indiscriminate bush burning causes air pollution ($\bar{x}=3.61$, SD=0.49), this was followed by Hydrocarbons are perceived to be released during combustion (burning of fuels) ($\bar{x}=3.57$, SD=0.55) and burning of crude is perceived to release soot into the environment ($\bar{x}=3.53$, SD=0.57).

Table 2: Analysis of descriptive statistic of respondents' rating of blockage of drainagesn=771

SN	Blockage of Drainages	\bar{x}	SD	Decision
6	People throw refuse indiscriminately into drains within the environment.	2.54	1.09	*
7	Blocked drainages constitute nuisance to the environment and can cause flooding.	2.63	1.12	*
8	Stagnant water increases breeding of mosquitos.	2.75	1.05	*
9	Piles of refuse in drainages create nesting and reproductive environments for rodents.	3.68	0.47	*
10	Stagnant waters in drainages contribute to pollution of watersheds.	3.64	0.49	*
	Grand mean	3.05	0.62	*

*agreed

The result in Table 2 shows the descriptive statistic of respondents' rating on blockage of drainages. It shows that the grand mean rating of the respondents on blockage of drainages was $\bar{x}=3.05$, SD=0.62. Specifically, the results showed that the respondents strongly indicated that piles of refuse in drainages create nesting and reproductive environments for rodents ($\bar{x}=3.68$, SD=0.47). This was followed by the fact that stagnant waters in drainages contribute to pollution of watersheds ($\bar{x}=3.64$, SD=0.49), stagnant water increases the breeding of mosquitos ($\bar{x}=2.75$, SD=1.05), blocked drainages constitute nuisance to the environment and can cause flooding ($\bar{x}=2.63$, SD=1.12) and people throw refuse indiscriminately into drains within the environment ($\bar{x}=2.54$, SD=1.09).

Table 3: Summary of descriptive statistic over respondents' mean rating on loud noise n=771

SN	Loud Noise	\bar{x}	SD	Decision
11	Loud noise from construction sites cause disturbance in the environment.	2.72	1.01	*
12	There is always the presence of loud noise even at prohibited hours like in the night, in the environment.	2.57	1.02	*
13	High-pitched noise from music sellers always litter the surrounding environment and cause disturbance of leisure and sleep.	2.71	0.98	*
14	Loud noise from private sources in the environment, such as community events, filling stations are offensive	2.01	0.66	
15	Loud noise from heavy duty vehicles cause disturbance of sleep and relaxation.	1.84	0.55	
	Grand mean	2.37	0.53	

*agreed

The result in Table 3 shows the descriptive statistic of respondents' rating of loud noise. It shows that the grand mean rating of the respondents on loud noise was $\bar{x}=2.37$, SD=0.53. Specifically, the respondents indicated that loud noise from construction sites cause disturbance in the environment ($\bar{x}=2.72$, SD=1.01), high-pitched noise from music sellers always litter the surrounding environment and cause disturbance of leisure and sleep ($\bar{x}=2.71$, SD=0.98) and there is always the presence of loud noise even at prohibited hours like in the night, in the environment ($\bar{x}=2.57$, SD=1.02).

Table 4: Analysis of Coefficient on the relationship between Environmental nuisance and Quality of life (QoL). (n=771).

		Correlations									
SN	Variable		1	2	3	4	5	6	7	8	9
1	Unguided Combustion	Pearson Correlation Sig. (2-tailed)	1								
2	Blockage of Drainages	Pearson Correlation Sig. (2-tailed)	.535**	1							
3	Loud Noise	Pearson Correlation Sig. (2-tailed)	-.505**	-.690**	1						
4	Environmental Nuisance	Pearson Correlation Sig. (2-tailed)	.763**	.725**	-.201**	1					
5	Physical Domain	Pearson Correlation Sig. (2-tailed)	-.072*	-.085*	-.051	-.162**	1				
6	Social Domain	Pearson Correlation Sig. (2-tailed)	-.234**	-.198**	.070	-.279**	.775**	1			
7	Psychological Domain	Pearson Correlation Sig. (2-tailed)	-.068	-.094**	-.100**	-.203**	.492**	.515**	1		
8	Environmental Domain	Pearson Correlation Sig. (2-tailed)	-.223**	-.211**	.081*	-.275**	.587**	.712**	.401**	1	
9	Quality of Life (QoL)	Pearson Correlation Sig. (2-tailed)	-.189**	-.184**	.006	-.284**	.840**	.909**	.732**	.827**	1
		N	771	771	771	771	771	771	771	771	771

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The result from Table 4 shows the Pearson Product Moment Correlation on the relationship between environmental nuisance and Quality of life(QoL). It shows that environmental nuisance had an inverse and strong relationship with Quality of life ($r=-.284, p=.00$). The environmental nuisance had an inverse relationship with QoL in terms of physical domain ($r=-.162, p=.00$), social domain ($r=-.279, p=.00$), psychological domain ($r=-.203, p=.00$), environmental domain ($r=-.275, p=.00$) respectively. Specifically, unguided combustion ($r=-.189, p=.00$) and blockage of drainages ($r=-.184, p=.00$) respectively had an inverse relationship with the QoL of residents in the area of study. However, the loud noise ($r=.006, p=.870$) had no significant relationship with the QoL of residents. In more specific terms, unguided combustion had an inverse association with QoL in terms of physical domain ($r=-.072, p=.045$), social domain ($r=-.234, p=.00$), psychological domain ($r=.223, p=.00$) and environmental domain ($r=-.189, p=.00$). Blockage of drainages had an inverse relationship with QoL in terms of physical domain ($r=-.085, p=.018$), social domain ($r=-.198, p=.00$), psychological domain ($r=-.094, p=.009$), and environmental domain ($r=-.211, p=.00$). Loud noise only had inverse relationship with QoL in terms of physical domain ($r=-.051, p=.157$) and psychological domain ($r=-.100, p=.005$).

H_{01} : there is no significant relationship between unguided combustion and quality of life of residents of Rivers State

Table 5: Pearson Product Moment Correlation on the relationship between unguided combustion and quality of life of residents of Rivers State

Variable	n	Pearson's r	r ²	p-value
Unguided combustion	771	-.189	0.0357	.000*
Quality of life	771			

*Significant

The result shows that Unguided Combustion (UGC) had an inverse relationship with Quality of Life (QoL) of residents ($r=-.189$). It showed that UGC yielded roughly 3.6% of the observed changes in QoL. The relationship is significant at .05 level of significance ($p=.000$).

H₀₂: there is no significant relationship between indiscriminate blockage of drainages and quality of life of residents of Rivers State.

Table 6: Pearson Product Moment Correlation on the relationship between indiscriminate blockage of drainages and quality of life of residents of Rivers State

Variable	n	Pearson's r	r ²	p-value
Blockage of drainages	771	-.184	0.0339	.000*
Quality of life	771			

***Significant**

The result shows that Blockage of Drainages (BoD) had an inverse relationship with Quality of Life (QoL) of residents ($r=-.189$). It showed that BoD yielded roughly 3.4% of the observed changes in QoL. The relationship is significant at .05 level of significance ($p=.000$).

H₀₃: there is no significant between loud noise and quality of life of residents of Rivers State.

Table 7: Pearson Product Moment Correlation on the relationship between loud noise and quality of life of residents of Rivers State

Variable	n	Pearson's r	r ²	p-value
Loud Noise	771	.006	0.000036	.870
Quality of life	771			

The result shows that Loud Noise (LoN) had a direct but very weak relationship with Quality of Life (QoL) of residents ($r=.006$). It showed that LoN yielded roughly 0.00% of the observed changes in QoL. The relationship is not significant at .05 level of significance ($p=.870$).

VI. Discussion Of Findings

Relationship between unguided combustion and quality of life of residents of Rivers State.

The result on Table 1 showed a grand mean rating of the respondents on unguided combustion as $\bar{x}=3.05$, $SD=0.47$. Specifically, the respondents strongly indicated that indiscriminate bush burning causes air pollution ($\bar{x}=3.61$, $SD=0.49$), releases hydrocarbons ($\bar{x}=3.57$, $SD=0.55$) and soot into the environment ($\bar{x}=3.53$, $SD=0.57$). When put to statistical test, the result showed that Unguided Combustion (UGC) had an inverse significant relationship with Quality of Life (QoL) of residents ($r=-.189$). It showed that UGC yielded roughly 3.6% of the observed changes in QoL. The null hypothesis was therefore rejected at .05 ($p=.000$). This is in agreement with the report of Ghorani-Azam, et al (2016) that air quality index of as low as zero upwards is capable of constituting health risks to man. Again, reports have also shown that some world megacities exceed World Health Organization's guideline levels for air quality by more than 5 times; which poses a major risk to people's health, especially those living in the vicinity of the pollutants. Exposure to this high level of air pollution can cause a variety of adverse health outcomes such as increase in the risk of cardiovascular diseases like respiratory infections, heart and lung cancer and even death in children and the elderly who are more susceptible (Abdulmumeen, et al 2010).

Relationship between indiscriminate blockage of drainages and quality of life of residents of Rivers State

The result on Table 2 showed that the grand mean rating of the respondents on blockage of drainages was ($\bar{x}=3.05$, $SD=0.62$). This was positively affirmed by all the respondents on indiscriminate blockage of drainages. Specifically, the results shows that the respondents strongly indicated that piles of refuse in drainages create nesting and reproductive environments for rodents ($\bar{x}=3.68$, $SD=0.47$). This was followed by the fact that stagnant waters in drainages contribute to pollution of watersheds ($\bar{x}=3.64$, $SD=0.49$), stagnant water increases the breeding of mosquitos ($\bar{x}=2.75$, $SD=1.05$), blocked drainages constitute nuisance to the environment and can cause flooding ($\bar{x}=2.63$, $SD=1.12$) and that all these happen because people throw refuse indiscriminately into drains within the environment ($\bar{x}=2.54$, $SD=1.09$). When put to statistical test, the result showed that Blockage of Drainages (BoD) had an inverse relationship with Quality of Life (QoL) of residents ($r=-.189$). It showed that BoD yielded roughly 3.4% of the observed changes in QoL. The relationship is significant at .05 ($p=.000$), thus the null hypothesis was rejected. This result agrees with the findings of Guilhem, et al (2012) who reported that vector-borne diseases are prevalent in humans because most drainage in homes provides the pathogens favourable environments to thrive.

Disease vectors like mosquitoes, sand flies, ticks, fleas and other aquatic insects that breed in stagnant or non-flowing drains bite and cause infection in man. Poor drainage has also been implicated in buruliulcerin tropical African countries and the increase in other forms of diseases transmissible aquatic insects (Guilhem, et al 2012; Marsollier, et al 2002.).

Relationship between loud noise and quality of life of residents of Rivers State.

The result on Table 3 showed the mean rating of respondents on loud noise within the environment. It showed the grand mean rating of (\bar{x} =2.37, SD=0.53). Specifically, the respondents indicated that loud noise from construction sites cause disturbance in the environment (\bar{x} =2.72, SD=1.01), high-pitched noise from music sellers always litter the surrounding environment and cause disturbance of leisure and sleep (\bar{x} =2.71, SD=0.98) and that there is always the presence of loud noise even at prohibited hours like in the night, in the environment (\bar{x} =2.57, SD=1.02).

When put to statistical test, the result showed that Loud Noise (LoN) had a direct but very weak relationship with Quality of Life (QoL) of residents ($r=.006$). It showed that LoN yielded roughly 0.00% of the observed changes in QoL. The relationship is not significant at .05 ($p=.870$). Therefore, the null hypothesis was retained. The finding disagrees with the finding of (Hammer, et al 2014) which stated that noise pollution creates both annoyance and significant health hazards like hearing loss and cardiovascular disease in millions of people. The possible interpretation of the way this result came out is the fact that most people are able to block off unwanted sounds or events and select what they want to hear from the environment; these individuals can hold conversation in noisy environments, concentrate on what they are talking about and block every other noise from the environment (Mazarin 2013). Another reason for the weak relationship is the fact that people could also choose to walk away from noisy environment if possible. In this case, a noisy construction site could be avoided when there are alternatives to going to the site; or even relocating to alternative residence to ward off health risk associated with loud noise.

VII. Summary/Conclusion

Human insatiable needs led to unguided, greedy practices that have no doubt interfered with environmental values, constituting nuisance and threat to human existence. This study was conducted to delineate environmental irritants that affect quality of life of residents of Rivers State using correlational descriptive research design. Three research questions and corresponding hypotheses were set to guide the study. Instruments for data collection for the study were administered to all the 780 respondents with 771 retrieved. Data analysis revealed an inverse and strong relationship between environmental nuisance and quality of life. Based on the findings, it was recommended that indigenes of Rivers State be given enough sensitization and education on appropriate waste disposal methods, there should be re-enforcement of the monthly environmental sanitation exercise and that government should enact and enforce adequate and appropriate legislation on waste disposal in the State.

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