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Neighbourhood Characteristics and Health Status of Residents in Lagos Metropolis

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Abstract: This study investigated the neighbourhood characteristics and ill-health status in Lagos metropolis. Purposeful sampling technique was employed to select three LGAs (Apapa, Ikeja, and Oshodi-Isolo) where all categories of residential densities were found. One thousand and twenty-eight households were randomly selected out of 14,273. A structured questionnaire containing information on socio-economic characteristics of the households (marital status and household size), neighbourhood characteristics (condition of buildings, availability of drainage, buildings setback, frequency of waste collection, availability of potable water, waste disposal methods, presence of disease vectors) and number of reported diseases was administered on the selected household heads. Descriptive statistics and multiple regression were used for data analyses at $p<0.05$. Majority (63.3%) contravened statutory 15 metres setback from canals. Sixty-two per cent of buildings did not have potable water, while 54.3% had disease vectors. Respondents who reported pneumonia were 3.0%, 6.1% reported cholera, 23.5% had diarrheal, 31.5% had infectious hepatitis and 35.9% reported malaria. The contributions of neighbourhood characteristics to ill-health was statistically significant, *(*$F_{(6, 831)} = 872.31$, $R^2=0.86$). Neighbourhood characteristics contributed to number of reported diseases in Lagos Metropolis. Regular environmental sanitation at the neighbourhood level should be intensified.

Keywords: Neighbourhood characteristics, Diseases, Building conditions, Lagos metropolis

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I. Introduction

There has been global concern about the quality of environment in which human beings live (Ruijsbroek, 2017). Many international conferences, workshops and seminars have been held on the impact of degraded environment on human beings and the need to promote healthy environment. It is a known fact that human health is contingent among other things, on the quality of air he breathes, the food he eats, the water he drinks and the environment in which he lives (Michael, 2016). Hence, the hazard of neighbourhood situations on health in metropolitan Lagos cannot be over-stressed and its consequent health dangers on the inhabitants warrant to be discovered for public education and rapid appropriate consideration (Macintyre, *et al.,* 2015). Going by Oluba's (2012) observation, a lot of urban areas such as metropolitan Lagos; water source, housing facility, sewerage, hygiene, drainage, transportations, power supply and waste dumping are factors to be reckoned with. These are coupled with the identical difficulties of fast population progression and urbanisation.

Other factors that make the city of Lagos vulnerable to health challenges include increased urbanisation, inadequate implementation of planning laws, unregulated and indiscriminate urban physical development in hazard-prone areas, inadequate enforcement of building codes, inadequate health facilities and dearth of hygienic neighbourhood (Okpanachi, 2008; Lagos Water Corporation, 2008; Aderogba, 2012b and Aderogba, 2012; Mair, 2015). Lagos metropolis develops from relatively a rural town to a country's urban centre and like most other traditional Yoruba cities in the country; it predated advent of British colonial rule in the country. The rapidness of its growth within the last two decades arose from the political and educational status of the city which now has numerous higher educational institutions, commercial outfits, and government establishments. In corroboration with this, Ojolowo and Wahab (2018) emphasised that neighbourhood incorporates far more than corporeal space lodging; its nature and importance are determined by the amenities it provides. These amenities and conveniences

are wide-ranging including neighbourhoods facilities, access to education and health services, safety and public facilities. This position implies that neighbourhood is inadequate without features that enhance its functions properly. The metropolis like Lagos under research requires to be duly examined in order to prevent the outbreak of epidemics in the near future. This becomes vital going by the political, climate, social and economic status and the associated population inflow are influencing the advancement of the cities.

Many researchers have employed income (Okafor, 2013), social stratification (Olanrewaju *et al*, 1990), access to health facilities (Iyun, 1993; Soligbo, 2011), and anxiety from crime (Foster, 2016) among others to determine exposure to ill-health without considering the issue of spatial disparities in the incidence of diseases in metropolitan Lagos. This study investigated the influence of neighbourhood characteristics on well-being of residents in Lagos metropolis, with a view to influencing policy on urban environmental management.

1.1 Health and Neighbourhood

In recent times, renewed interest and increasing concern by both local and global bodies over the health of key cities of the emerging nations is increasing. 'Health' as a term is not easy to define. By WHO's (1995) general definition, health is a state of complete physical, mental and social well-being and not a simply absence of disease or infirmity. This description of health suggests that health is certain only when specific fundamental needs are met: these include housing, water and a contamination free environment (Egunjobi, 1993). Environmental health is the subdivision of public health that is bothered with the various aspects of the natural and built environment that touch human health (Humphreys, 2016). World Health Organization (2001), defines environmental health as those aspects of the human body, human health and illnesses that are determined by influences in the surroundings. Housing standard is in most cases a pointer of health conditions. This implies that poor housing conditions can have a lot of effects on health. Poor neighborhood conditions can be defined as having abandoned buildings, vacant lots, no access to quality schools, and high levels of poverty (Auchincloss, 2017).

Agreeing further, Agbola *et al* (1993) reported that housing and health challenges in the emerging countries are varied and multifaceted and are principally severe in the urban centers due to gravity of urbanisation. In addition, Patrick (2003) states that there is an increasing body of scientific literature signifying that children in America and around the world suffer from health challenges from poor housing conditions and security hazards. The quality of the environment (e.g. safe from hazards), the accessibility to local services and amenities, (e.g. health, transport, employment, shops) as well as the spatial arrangement of housing and types of accommodation are all important for good physical and mental well-being (Mujahid, 2017).

Poor quality environment can be the cause of numerous physical and mental health problems which can result in unnecessary ill-health (Royal College of Nursing, 2012). Recently, a wealth of evidence has been collected to demonstrate specific links between poor environment and a number of mortality and morbidity indicators. However, health is also affected by social and community influences, living and working conditions and broad socioeconomic, cultural and environmental conditions (Diez and Mair, 2010). A clean and safe environment, adequate income, meaningful roles in society, good housing, population-based services and utilities, affordable nutritious food, education and social support within the neighbourhood all contribute towards good health (Lawson, 2004).

Desirably, residential environment (homes, Neighbourhoods and communities) should play an important role in determining individuals' well-being (Lorenc, 2012). The World Health Organisation (WHO) reckons that it is the home, not the clinic that is the key to a better healthy delivery system. However, in the developing countries according to Nwaka (2005), only about 25 to 30 percent inhabitants, mainly top Government officials and other rich and privileged people in the society enjoy decent quality housing. The vast majority of households especially those in informal settlements, live in overcrowded conditions, within defective physical dwellings sometimes located on areas which did not provided defense against diseases and other health or hazards because many people do not have secure tenure with respect to land and houses they occupy (Lawanson, 2005; Van Holle, 2012).

Table 1: Summary Distribution of Deaths by Causes year and Sex (2011-2016) in Lagos

Disease	2011		2012		2013		2014		2015		2016	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Cholera	24	55	65	73	61	52	13	15	2	3		1
Diarrhea Water Without Blood	6000	14697	6976	6579	5637	5462	6531	5603	3370	4054	4075	4753
Diarrhea With Blood	26	34	35	53	24	31	52	72	-	-	-	-
Hepatitis B	135	299	202	452	204	360	580	752	421	184	2	3
Malaria	53807	40686	84727	66568	59007	49446	26421	20191	36328	51674	64	56
Measles	201	182	210	220	53	122	274	226	232	252	-	-
Meningitis	72	88	84	126	25	36	32	33	64	56	134	115
Pneumonia	220	235	304	280	235	212	262	251	2390	2750	-	-
Tuberculosis	1902	2034	1957	2265	1727	1910	3093	2574	1618	1702	-	-

Source: National Bureau of Statistics, 2017

Custom upholds that home is a shelter, where individuals are safe and cherished. For the poor however, home is a health hazard where factors such as poverty, pollution, and poor design join together to cause or aggravate infections. Ojolowo (2016), established that housing is a stimulating component of the national economy and as a part of the neighbourhood; it carries weighty effect on everyone's standard of living, competence, communal behaviour, fulfillment, over-all safety of the neighbourhood as well as wellbeing. In other words, decent neighbourhood is a vital element for safeguarding a strong community since the significance of neighbourhood encompasses beyond its conventional functions such as shelter, safety and privacy to its broader consequences for health, efficiency and over-all economic growth (Alabi, 2004). Soligbo (2011) held in his own estimation that the standard of neighbourhood regulate the health status of the environment (Harpham and Tanner, 1995, Fajemirokun, 2005, Olutuah, 2006, Emmanuel and Ayo- Odifiri, 2013, Owoeye and Emmanuel, 2013)

II. METHODOLOGY

2.1 The Lagos Metropolis

Lagos State has 20 Local Government Areas (LGA), out of which 16 Agege, Ajeromi-Ifelodun, Alimosho, Amuwo-Odofin, Apapa, Eti-Osa, Ifako-Ijaiye, Ikeja, Kosofe, Lagos Island, Lagos Mainland, Mushin, Ojo, Oshodi-Isolo, Shomolu, and Surulere) make up the metropolis. Lagos metropolis lies within latitudes 6°23′N and 6°41′N and longitudes 2°42′E and 3°42′E in Lagos state. The metropolis is bounded in the north and north-east by Ogun State and Ikorodu LGA respectively; east by Epe and Ibeju-Lekki LGAs, in the west by Badagry LGA and the south by the Atlantic Ocean/Gulf of Guinea.

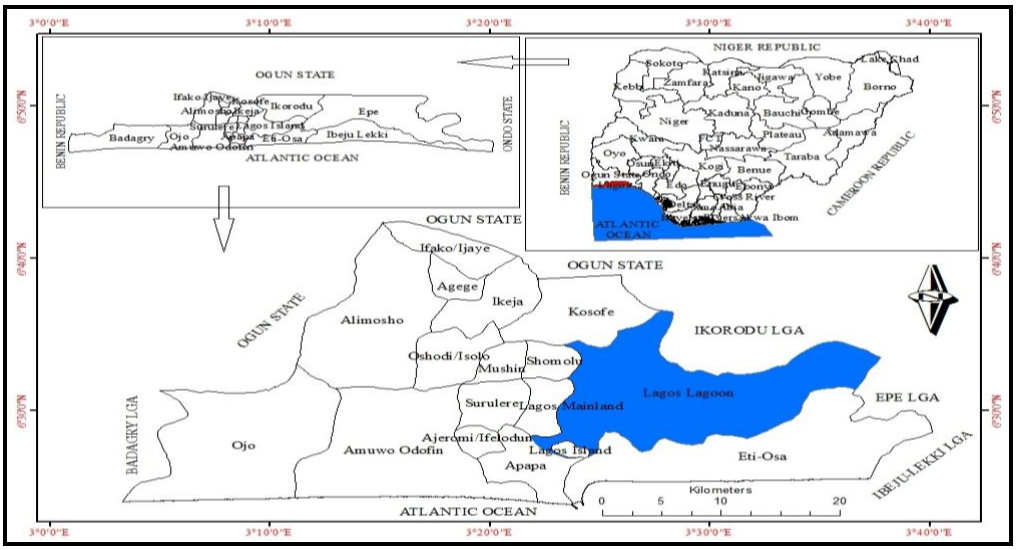

Figure 1.1: The 16 metropolitan LGAs of Lagos State in National and State context.
Source: Lagos State Ministry of Physical planning and Urban Development, 2017

2.2 Data types and sources

Primary and secondary data were used in this study. The primary data were sourced through questionnaire administration, interviews and personal observations. The secondary data were sourced from published and unpublished books, dissertations, journals, internet websites and seminar papers of selected authors, which are relevant to this study. The categorisation of neighbourhoods and the number of households in metropolitan Lagos were obtained from the National Population Commission (NPC). Relevant maps and other information were collected from Lagos State Ministry of Physical Planning and Urban Development.

2.3 Sample frame, size and sampling procedure

Three Local Government Areas (LGAs) (Apapa, Ikeja and Oshodi-Isolo) were purposefully chosen, being those where all categories of residential neighbourhoods were found. As presented in Table 2, there are 31 neighbourhoods and 14,273 households in the selected LGAs (National Population Commission (NPC), 2006). A total of 1,028 (7.2% of 14,273) household heads were randomly selected using Table of random numbers. A total of 1,025 (98.9%) of the 1,028 copies of the questionnaire were successfully completed and used for analysis.

Table 2: Selected LGAs, residential neighbourhoods and sampled households

NO	LGA	Total No. of Residential Neighbourhoods	High Density (H)	Medium Density (M)	Low Density (L)	Total No. of Households in the selected neighbourhoods	Households to be sampled in the Neighbourhood (H,M,L) 7.2%
1	Apapa	10	3	3	4	2,881	207
2.	Ikeja	10	1	7	2	4,341	313
3.	Oshodi-Isolo	11	6	4	1	7,051	508
	Total	31	10	14	7	14,273	1,028

Source: National Population Commission (2006), National Bureau of Statistics, Author's Construct, 2017

III. RESULTS AND DISCUSSIONS

3.1 Marital status, household size and building characteristics

The information obtained on marital status showed that a majority of the respondents-896 (87.4%)-were married; 98 (9.6%) were single; 1 (0.1%) was divorced, 7 (0.7%) were separated; while 23 (2.2%) were widowed. The high percentage of married residents implies that the population of residents in the sampled neighbourhoods will continue to rise through birth, leading to congestion that may trigger a number of environment-related diseases. Concurrently, generation and indiscriminate disposal of municipal solid and liquid waste, and spread of diseases will persist unabated owing insanitary physical conditions of buildings. The information obtained on size of households was a reflection of the marital status of the respondents. A most of them-738 (72.0%)-had 3-6 members; 116 (11.3%) had more than 10; 99 (9.7%) had 7-9 members; while 72 (7.0%) had 1-2 members. By inference, room occupancy ration would remain high and may lead to spread of communicable diseases, thereby increasing demand for hospital visitation and associated services, as observed during the fieldwork and corroborating Caspi, (2012) study. Besides, the size of the households facilitated the generation of waste of all descriptions. In the case of metropolitan Lagos where collection and management of waste is poor, the presence of waste in the undesignated part of the neighbourhoods would facilitate the spread of diseases. Population congestion and insanitary waste management would not only caused the spread of communicable disease, but also increased the pressure on available health facilities and services.

Those buildings that were constructed 20-29 years ago were 448 (43.7%); 25 (2.4%) were built 30-39 years ago; while only 12 (1.2%) were developed 40-49 years ago. The information revealed that the sampled neighbourhoods have been destinations choices of residents till the present time, and was aggravating the exposure of inhabitants of the Lagos metropolis to risks of environmental-related diseases, as postulated by Hallegatte *et al*., (2013). The materials used to construct these buildings were also captured and indicative of poor earnings, as revealed in the residents' monthly income. For walls, 150 (14.6%) were made of concrete; 19 (1.9%) of mud; while 856 (83.5%) were made with sandcrete blocks. Those buildings that had their floors made of mud with cement were 663 (64.7%); while 350 (34.1%) had their floors made of cement concrete (Plate 1). As expected, the common roofing material was corrugated iron sheets, with 822 (80.2%) frequency, which implies that almost all the buildings

had corrugated iron sheets for their roofs. Those buildings with roofs made of slates were 125 (12.2%); 26 (2.5%) had concrete roofs in anticipation of mounting another floor; while 52 (5.1%) had roofs made of sheet metal.

As reported by O'Campo, (2015), this study also revealed that, in spite of the appalling environmental conditions of the neighbourhoods, the respondents had long years of residency. For instance, while only 33 (3.2%) of the sampled residents had been residing in the areas for more than 25 years, 6 (0.6%) had been in the study areas for 21 to 25 years; 129 (12.6%) had been residing in the sampled neighbourhoods for 16-20 years; and 143 (14.0%) had been residing in the areas for between 11 and 15 years. Surprisingly, 682 (66.5%) of the sampled residents moved into the neighbourhoods in the last ten years, out of which only 32 (3.1%) of them moved into the areas in the last five years, indicating that the metropolis continued to experience upsurge in population and subsequent demand for services, including health.

The analysis of the physical conditions of the buildings revealed that close to a half-500 (48. 8%)-of the buildings had dampened walls; 468 (45.7%) had cracked walls; and 57 (5.5%) were generally poor and dehumanising owing to the material of construction. Conditions of the floors did not fare better: 275 (26.8%) had unpaved floors; while 62.3% had paved floors that were in the advanced stage of dilapidation (Plate 1). In the case of the condition of the roofs of the buildings, 695 (67.8%) had leaking roofs; 227 (22.1%) had roofs that were loose; and only 103 (10.0%) of the buildings had roofs that were in good condition.

Plate 1: A typical residential building in high density zone in metropolitan Lagos
Source: Author's Field Survey, 2017

3.1.1 Housing Sanitation Facilities

Majority-52.0% (533)-of the respondents had access to pipe-borne water during the wet seasons; those who sourced water from boreholes were 390 (38.0%); hand-dug wells were indicated as sources of water by 34 (3.3%) of the respondents; while those who relied on rainwater harvesting were 68 (6.6%). Three sources of water-pipe-borne water, borehole and hand-dug well-were, respectively indicated by 556 (54.2%), 422 (41.2%) and 47 (4.6%), as means of obtaining water during the dry seasons. The consumption of unwholesome water had contributed to the spread of diseases, such as malaria, dengue fever, cholera, and chikungunya. Therefore, sourcing domestic water from sources other than pipe-borne during the wet season could be hazardous to public health.

Lack of adequate and sanitary toilet facilities led to persistent indiscriminate defecation in drainage channels, open/vacant land, canals, lagoons, communal waste dump grounds, and road verges. Ventilated improved pit latrine (VIP) was the common type of toilet found in 473 (46.2%) of the sampled buildings, followed by 313 (30.5%) buildings with water closet system. In spite of the extant public health law, that had abolished the use of pit toilet in Lagos State, the study still discovered 107 (10.4%) buildings with pit toilet. The majority of the respondents-1,018 (99.3%)-indicated the presence of disease vectors, such as rodents, mosquitoes and their breeding venues such as exposed water containers and public drains. Only seven (0.7%) were free of all these disease vectors.

Most of the public drainages were watery, as indicated by 70.1% (718) of the respondents; while 11.7% (120) said the public drainages in their respective streets were without water during the survey. Out of those public

drainages with water, only 22.9% (234) had their water flowing, while water was stagnant in the remaining 484 (47.2%). The stagnant water not only polluted runoff and served as medium of spreading cholera, diarrhoea, typhoid fever, and ascariasis, but it also provided opportunities for mosquitoes to breed and, which, in turn, sustained the spread of malaria, one of the most killer diseases in Africa.

3.1.2 Frequency of Diseases reported at the Hospital

The investigations on types and frequency of diseases reported at the hospital revealed that 60 (5.9%) of the respondents had been treated for fever (Table 3). A total of 105 (10.2%) respondents had been treated for diarrhea; 74 (7.2%) for typhoid, 49 (4.8%) for cholera and 29 (2.8%) for Infectious hepatitis. A total of 35 (3.4%) respondents had been treated for polio; 19 (1.9%) for cryptosporidiosis; 34 (3.3%) for Ascariasis; 33 (3.2%) for Measles; 78 (7.6%) for Fluorosis; and 18 (1.8%) for Arsenicosis. Also, Guinea worm disease had infected 35 (3.4%) of the respondents; 78 (7.6%) reported intestinal worms, 47 (4.6%) reported schistosomiasis; while those who indicated dysentery were 70 (6.8%). Other diseases reported were malaria by 79 (7.7%) of the respondents. Pneumonia was reported by 56 (5.5%) of the respondents, 37 (3.6%) reported scabies, 25 (2.4%) reported trachoma and ulcer respectively. Others were leprosy 15 (1.5%) and anaemia 24 (2.3%). It revealed that the respondents have had health challenges resulting from the nature of their neighbourhoods, particularly the type of water consumed, poor ventilation and illumination of buildings, solid and liquid waste management issues and lack of adequate drainage facilities.

Table 3: Frequency and type of diseases reported at the hospital

Diseases	**Frequency**	**Percentage**
Fever	60	5.9
Diarrhoea	105	10.2
Typhoid	74	7.2
Cholera	49	4.8
Infectious hepatitis	29	2.8
Polio	35	3.4
Cryptosporidiosis	19	1.9
Ascariasis	34	3.3
Measles	33	3.2
Fluorosis	78	7.6
Arsenicosis	18	1.8
Guinea worm disease	35	3.4
Intestinal worms	78	7.6
Schistosomiasis	47	4.6
Trachoma	70	6.8
Malaria	79	7.7
Lymphatic filariasis	56	5.5
Scabies	37	3.6
Dysentery	25	2.4
Pneumonia	25	2.4
Tuberculosis	15	1.5
Anaemia	24	2.3
Total	**1025**	**100.0**

Source: Author's Field Survey, 2017

3.1.3 Contributions of Neighbourhood Characteristics and Sanitation facility to Ill-health

The contributions of neighbourhood characteristics and poor sanitation facilities to ill-health was analysed using multiple regression model. Table 4 presents the multiple correlation coefficient of the regression model showing $r^2 = 0.863$, an indication that the contributions of neighbourhood characteristics and sanitation facilities indicators employed in the model were positive and strong; therefore, they could be employed to predict ill-health in the sampled communities in Lagos metropolis. The result r^2 showed that about 86.0% of the diseases indicated by the respondents could be explained by indicators of neighbourhood characteristics and sanitation facilities. The *F*-ratio showed that the overall regression model was a good fit for the data. The table reveals that the independent

variables significantly predicted the dependent variable, $F_{(6, 831)} = 872.31$, $p < 0.0005$. Therefore, ill-health in Lagos metropolis was a function of neighbourhood characteristics and sanitation facilities, this was significant at 95% confidence level. However, out of the six variables employed in the model, five significantly predicted the nature of reported diseases. These were availability of drainage, adequate setback among buildings, presence of disease vectors, and availability of potable water.

Also, it could be inferred that the indices of neighbourhood characteristics in the sampled communities played significant roles in determining the occurrence of ill-health. Analysis from Table 5 showed that the non-standardized coefficient, B_1, for availability of drainage was 0.378. This means that, as the number of building without drainage facility increases, there will be increase in the incidence of breeding grounds for vectors (mosquitoes and other flies) by 0.378 (38%) times. The condition of communities for 330 (32.2%) respondents without storm water drainage could be worse, as waste water would flow unhindered on the streets and into the buildings, influencing the spread of water borne diseases. Availability of drainage, as an indicator, corroborated the significance of drainage in curbing the incidence of ill-health. This indicated that provision of more drainage would eradicate breeding sites for disease vectors by 62%.

The analysis of the adequacy of setback among buildings revealed through the non-standardized coefficient, B_1, as -0.096 implies that provision of adequate setbacks among buildings could reduce the incidence of diseases that are influenced by poor ventilation and illumination by 9%. The presence of disease vectors was also one of the indicators of neighbourhood characteristics analysed in this study. The analysis revealed that its non-standardized coefficient, B_1, was 0.197. This presupposes that every percentage increase in the presence of disease vector increase the number of times the respondents would experience ill-health by 0.197 (18%). Hence, increment in disease vectors would translate to increasing number of times that respondents would visit the hospitals owing to ill-health.

The variables used to measure sanitary condition of the neighbourhoods were availability of potable water, waste disposal methods and frequency of waste collection. Similarly, the non-standardized coefficient, $B_{1,}$ for availability of potable water was equal to -0.026. This means that, for every decrease in the water sources (to tap), there would be 0.022 (2.6%) decrease in the number of water borne diseases reported by the respondents. All other things being equal, the more the availability of potable water in all the sampled communities, the less the likelihood of been ill, this was also reported by (Kruize, 2014; Jongeneel-Grimen, 2014).

Waste disposal methods produced a non-standardized coefficient, B_1, of 1.142. This translates into the fact that any increment in the number of existing municipal solid waste disposal methods would lead to 1.142 times that the respondents would be afflicted with diseases. Therefore, the number of existing municipal solid waste disposal methods need to be reduced. The two methods approved by LAWMA were dumping in LAWMA communal waste bins, for onward collection by its officials; and collection by PSPs. The methods that need to be stopped completely to curb ill-health include dumping in canals/lagoons, dumping in communal dump-ground, buried and burnt in yards and collection by cart pushers. The non-standardized coefficient, B_1, of frequency of waste collection was 0.258. This means that every increment in the frequency of waste collection would lead to increase in the number of times the respondents would be afflicted with diseases by 0.258 (26%). This submission sounds awkward owing to the fact that those agents that dump refuse in wetlands, canals and other unauthorised places were the major collectors of municipal solid waste in the sampled neighbourhoods. This is an indication that LAWMA and PSP need to increase the number of times they collect waste weekly, in order to reduce the incidence of diseases in the Lagos metropolis.

In summary, the form of equation to predict ill-health from availability of drainage, setback among buildings, Presence of disease vectors, Availability of potable water, waste disposal methods, and frequency of waste collection is: *Ill-health = 11.013+ 0.258 (frequency of waste collection) + 0.378 (availability of drainage) – 0.026 (availability of potable water) – 0.096 (adequate setback among buildings) + 1.1422 (waste disposal methods) + 0.197 (presence of disease vectors).* In conclusion, a multiple regression was ran to predict ill-health from frequency of waste collection, availability of drainage, availability of potable water, adequate setback among buildings, waste disposal methods and presence of disease vectors. It was found that these variables significantly predicted ill-health, $F_{(6, 831)} = 872.306$, $p < .0005$, $R^2 = 0.86$. Five out of six variables added statistically significantly to the prediction, $p < .05$.

Table 4: Multiple regression results predicting ill-health[a] from indices of neighbourhood characteristics and sanitation facilities

Variables	Coefficients	Standard	t-statistics	P-

		error		**Value**
Constant	-5.253	0.960	-5.472	0.000
Availability of drainage	0.378	0.127	2.973	0.003
Adequate setback among buildings	-0.096	0.026	-3.621	0.000
Presence of disease vectors	0.197	0.010	20.080	0.000
Availability of potable water	-0.026	0.003	-7.948	0.000
Waste disposal methods	1.142	0.384	2.977	0.003
Frequency of waste collection	0.258	0.186	1.390	0.165
Diagnostics				
R^2	0.863			
Adjusted R^2	0.862			
F Statistics	872.306			

Source: Author's Analysis, 2017

3.1.4 Conclusion and recommendation

The roles of neighbourhood characteristics and sanitation facilities in the incidence of ill-health in metropolitan Lagos cannot be overlooked. This study revealed the interplay among neighbourhood characteristics, sanitation facilities and ill-health. It has demonstrated how neighbourhood characteristics and sanitation facilities influenced ill-health in Lagos metropolis. It showed that poor neighbourhood characteristics and inadequate sanitation facilities were facilitating ill-health. Therefore, priority should be given to improved living condition of the people beyond the present poverty level, so as to enhance better healthy living. To this end, intensive and effective health education of the public must be of necessity and be reinforced in other to eliminate such diseases as malaria, typhoid and other infectious diseases. There is the need for maintenance of minimum health standard, improved housing condition, adequate potable water supply, environment sanitation and food supply for the sustenance of good health condition.

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