Research Article

Evaluating the Environmental Impacts of Hawking along the Outer Northern Expressway (ONEX) in Federal Capital Territory Abuja, North Central, Nigeria

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Received: 06 April 2020; **Accepted:** 15 April 2020; **Published:** 29 May 2020

Citation: MUSA, Philemon Enemali, OGUCHE, Christopher Joseph, ONYEKWULU, Millicent Chekwube. Evaluating the Environmental Impacts of Hawking along the Outer Northern Expressway (ONEX) in Federal Capital Territory Abuja, North Central, Nigeria. Journal of Environmental Science and Public Health 4 (2020): 83-95.

Abstract

The aim of the current study is to investigate the environmental impact of hawking along the Outer Northern Expressway (ONEX), Federal Capital Territory Abuja, Nigeria. The area is located within the FCT Abuja between latitude 8° 25" and 9° 25" North of the Equator and longitude 6° 45" and 7° 45" East of the Greenwich meridian .Data were collected through the use of structured questionnaire and complemented with interview and direct observations.This study also sought information from secondary information including, relevant books, existing literature, and government records etc. data were analyzed using descriptive statistics representing tables, and pie charts. The. Results of findings revealed that 43.75 % of the respondents were male and 56.25% of the respondents were females, and within age bracket of 10 to 40 years with few falling above 40 years old. Most of the hawkers are adjudge as youth, which validates the conclusion of that

majority of the people who hawk are illiterates and without any skill. Furthermore, the result revealed that hawking leads to landscape defacement, and environmental pollution as most of the traders indiscriminately disposed of their refuse by burning and dumping in the drainage there by blocking the drainage channels causing flood during rainy season. The study revealed that hawking is part of informal economic sector and has over the years contributed to employment provision and improvement in the livelihood of many, as well as the local economy through social, political, and economic life of Nigerians. Unfortunately, the indiscriminate littering problem and non-biodegradable nature of the refuse resulting from the most items being sold after use are issues of great environmental concern. Concerted efforts are therefore needed by all relevant authorities and stakeholders to regulate and ensure proper application of technology to manage waste from sachet water trade.

Keywords: Hawking; Outer Northern Expressway; Environmental; Federal capital territory

1. Introduction

The quest for alternative means of living has significantly enticed a reasonable number of persons into the informal sector in recent decades. Though the informal economy is common to both developed and developing countries, it is predominantly prevailing in the later, [1] as evidenced by various related economic activities such as street trading. The reason for this is not farfetched as street trading or hawking plays enormous role in the supply of goods and services in many cities of the world to the end users [2]. Street trading involves continuous display of goods along roadsides which may occur within established market places or outside the intersection of major roads [3]. This activity of street vending falls among the small and micro enterprises (SMEs), and forms a major driving force for economic development in most developing countries.

Special focus on street hawking actually started with the Bellagio International Declaration of street hawkers in 1995. The declaration demanded for national policies regarding street hawkers, and follow up action by individual hawkers, hawkers associations, city governments and international organization. Regrettably, street vending is associated with a variety of challenges in terms of urban environmental deterioration or pollution. The attitude exhibited by most consumers of goods such as sachet water in terms of littering and proper disposal of used nylons is most worrisome [4]. Apart from image and scenic problems, this has equally entrenched a culture of complacency in the quest for preservation and enhancement of the quality of human environment [4]. Of course, used sachets of water and other waste resulting from street hawking completely mask the surface of the street tarmac, which testify the degradation consequences of street trading.

The rate of trading in Nigerian urban centers is alarming, as such; it is now a subject of concern to the environmentalists, physical planners, and city managers. The Federal Capital Territory (FCT), Abuja is not left out of this ugly situation. Beside encroachment on right of way by the traders which usually culminates to traffic congestion, it has caused a significant degree of aesthetic defacement of the streets. Furthermore, as the environment are being

littered with wastes, it seriously pollutes the environment and in the blockage of the water ways or drainage systems when wastes are dumped on drainages leading to flooding at times of heavy precipitation. Throughout the world, research has shown that varying factors affect the decision of a person to enter into hawking, principal among them are poverty, unemployment, low level of education, low level of entrepreneurial education, non-enforcement of city authority bye-laws, status, migration [5, 6]. Their availability along streets, pavements, markets, schools, car parks has raised significance of their contribution to the urban economy but is often overlooked by policy makers. By locating at public places without permission and contributing immensely to filth, street vending or hawking has become a source of city centers nuisance, a menace as well as an eyesore.

2. Functionalist Perspective Theory

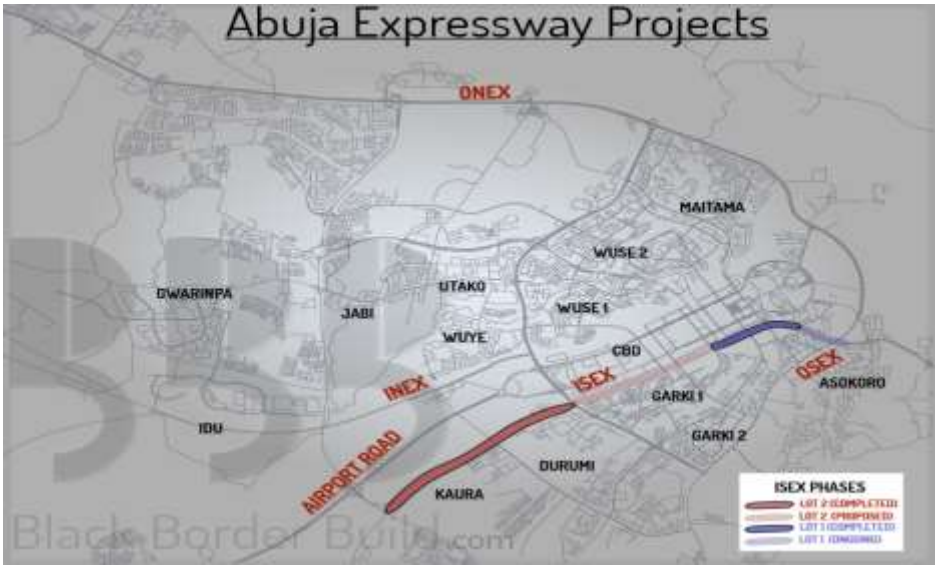
This study is built on the functionalist perspective. Functionalism is a theory of explaining social phenomena that looks at the society as a living organism [7]. This theory is also known as the equilibrium model or the consensus theory of society. It looks at society in terms of a social system made up of various social institutions or subsystems [8]. Under the functionalist theory, the society is seen as a complex whole made up of parts that are stable, separate and yet inter-dependent or interlocking and are functioning for the continuity of the whole system. Under this theory, the educational, religious, familial, legal, political and economic institutions are seen as the parts that make up the whole that is the society. All these institutions make up a social system or the social structure of the state. These social institutions are seen as persistent, stable, interdependent and well-integrated elements of the state performing their respective functions for the continuity of the state [7]. The functionalists also contend that there is a consensus of values between and among the social institutions bringing about an equilibrium state of the society. There is a cobweb of relationship between and among the various social institutions that make up the system [7]. Founders and contributors to the development of functionalism are August Comte (1759-1917), Herbert Spencer (1820-1903), Emile Durkheim (1858-1917), Talcott Parsons, Robert Merton, Ferdinand Toennies and Walter Cannon (1871-1945) among others (Ritzer, 2011). The core postulate of the functionalist perspective is that every element in a society is important in term of its contribution (functions) to survival and stability of the entire society. Any element that becomes useless or dangerous (dysfunctional) to the survival of the society or system is eliminated through natural process of interaction [7].

The functionalist theory is not only relevant but also indeed adopted for this study. Women are seen as important and critical to economic growth of the society generally and the family in particular. Street hawking as an activity is also important because it provides a means of survival to many households [9, 10]. It serves as a ‘refuge occupation’ where low entry barriers make it possible for many individuals to earn subsistent income (WIEGO, 2014). Women contribute a significant quota to building family income, through hawking, thereby enhancing familial and by extension, societal development. In the light of this perspective, hawking is functional, a compelling factor for its persistence in spite of

policies and legislations against it [11, 12]. Efforts aimed at evicting hawkers from the streets and other public spaces by city authorities have resulted in conflict leading to harassments and arrests as well as confiscation of their goods. Hawkers always adopt spatial strategies by relocating to other places where they can still ply their trade without harassment from authorities [13]. The incessant rise in the concentration of hawking activities on busy intersections, around markets and major transport routes in the developing countries is worrisome. Prior studies focus on the fact that street trading is illegal, undesirable, and deep-seated social malaise[11, 12, 14]. Yet, less attention has been given to environmental impact of street hawking. Thus, the current study intends to conduct the analysis on the effect of hawking on the environment with specific interest on Outer Northern Expressway (ONEX), Federal Capital Territory Abuja, Nigeria.

3. Study Area

The area under investigation is Outer Northern Expressway (ONEX) is located within the FCT Abuja, which is between latitude 8° 25" and 9° 25" North of the Equator and longitude 6° 45" and 7° 45" East of the Greenwich [15], in the middle belt of Nigeria (Figure 1). Abuja is bordered by four states: Kaduna in the North, Nasarawa in the East, Kogi in the South and Niger in the West. It covers a land mass of 8,000 km^2.



Sources: Google 2019.

Figure 1: Part of FCT indicating the ONEX.

The FCT falls within the Guinean forest-savanna mosaic zone of the West African sub-region. Patches of rain forest, however, occur in the Gwagwa plains, especially in the rugged terrain to the southeastern parts of the territory, where a landscape of gullies and rough terrain is found. These areas of the Federal Capital Territory (FCT) form one of the few surviving occurrences of the mature forest vegetation in Nigeria. There are two types of forests and three types of savannah. The forests are rain forest and riparian

vegetation complex. The savannah vegetation which comprise of savannah woodland, park savannah and shrub savannah [16] is represented by world areas of tropical rain green vegetation characterized by wet-dry tropical climate and adjacent belts of the semi-arid and semi desertsubtypes of the dry tropical climate.

Plate 1: A view of a section of the Outer Northern Expressway, ONEX (Maitama Avenue intersection), with the IBB International Golf course to the right and the Nigerian Army Resource centre and Aso Rock to the left.

The Park or Grassy Savannah is approximately about 4,231 square km, or 53 percent, of the total area of the FCT. Vegetation occurs annually and tree species found include: Albizia, Zygia, Butyrospernum paradoxum, Anniellia, Oliv eri and Parkia Clappertoniana. The Savannah Woodland region covers 1,026 square km, or 12.8 percent, of the territory. It occurs mostly on the Gurara, Robo and Rubochi plains, and surrounding hills. Common trees found in this region include; afzelia, africana anogeissus, leiocarpus, butyroscarpus paradoxim, daniella oliveri, khaya senegalensis, prosopis africana, uapaca togoensis, albizia, zygia, vitex doniant, bombox costatum, and ptrecarpus erinaceus. The Shrub Savannah occurs extensively in rough terrain close to hills and ridges in all parts of the territory. It covers about 1,031 square km, or 12.9 percent, of the land area. Tree species found in it include: antiaris africana, anthocleista nobils, ceiba pentandra, cola gigantean, celtis spp, Chorophora excels (iroko), khaya grandifolia (Benin Mahogany) terminalia superb (afara), triplochiton scleroxylon, and dracacna arborea.

The FCT is typified by the hot, humid, and tropical type, such that its major elements have regimes that are transitional from those of the southern and the Northern parts of the country [17]. Under Köppen climate classification, the FCT features a tropical wet and dry climate, and experiences three weather conditions annually. This includes a warm, humid rainy season and a blistering dry season. In between the two, there is a brief interlude of harmattan occasioned by the northeast trade wind, with the main feature of dust haze and dryness. The rainy season begins from April and ends in October, when daytime temperatures reach 28 °C (82.4 °F) to 30 °C (86.0 °F) and nighttime lows hover around 22 °C (71.6 °F) to

23 °C (73.4 °F). In the dry season, daytime temperatures can soar as high as 40 °C (104.0 °F) and nighttime temperatures can dip to 12 °C (53.6 °F). Even the chilliest nights can be followed by daytime temperatures well above 30 °C (86.0 °F).

At the 2006 census, the city of Abuja had a population of 778,567. United Nations figures showed that Abuja grew by 139.7% between 2000 and 2010, making it the fastest growing city in the world. As of 2015, the city is experiencing an annual growth of at least 35%, retaining its position as the fastest-growing city on the African continent and one of the fastest-growing in the world. Abuja has witnessed a huge influx of people into the city; the growth has led to the emergence of satellite towns such as Karu Urban Area, Suleja, Gwagwalada, Lugbe, Kuje and smaller settlements to which the planned city is sprawling (Wikipedia, 2015). The urban agglomeration centred upon Abuja had a population estimated at 2,440,000 in 2014. The metropolitan area of Abuja was estimated in 2016 as six million persons, the country's second most populous metro area. The city has a large and growing immigrant community consisting mainly of nationals from the ECOWAS sub-region. The city has been undergoing a rapid pace of physical development over the last fifteen years. The population of the FCT all together was given at 1,405,201 at the 2006 census.

4. Material and Method

This section deals with the processes involved in the undertaking of this study. It gives information on the methods or approach to the study and the methodology under which the research design including the tools for data analysis are discussed. It also highlights how the data collected will be analysed. Most studies conducted on hawking gathered information using focus group discussions, interviews, and questionnaires. This chapter comprises the population, sample and sampling procedure, instruments used in data collection, administration of instrument and data analysis technique. Hawking is persistently thriving in most developing countries due to various factors including poverty, unemployment, low level of education, low level of entrepreneurial education, non-enforcement of city authority bye-laws, status, migration. Consequently, by contributing immensely to filth, hawking has become a source of city centers nuisance, a menace as well as an eyesore, etc. Here, the population as well as the required sample for the study is considered. Furthermore, the methods, sources of material, as well as instruments (including questionnaires, observation and photography) used for collecting and analyzing data are presented. By and large, the current study is mainly a survey research, which entails a systematic process of collecting and analyzing data. The study employs a combination of quantitative and qualitative methods in the collection and analysis of primary data. The choice of a qualitative approach is because qualitative research gives valuable insights which might be missed by any other method. It allows the researcher to delve deeper into structural and subjective issues that surround the choices and behavior of the hawkers. However, qualitative research approach has been criticized by many for having the tendency to infuse value judgment of the researcher (Ahiadeke, 2008). It is due to this that the study combined both the qualitative and quantitative approaches. The quantitative method was used to obtain statistics on the hawkers and the business they undertake. Moreover, a descriptive survey was necessary

because it provides an accurate portrayal or account of the characteristics. The target population of this study was generally hawkers of various items. As a result of lack of a sampling frame, it was difficult to use probability sampling. Therefore, purposive sampling procedure is relevant to this research topic and convenient sampling techniques. In this sampling technique, the researcher purposely chose respondents who in his opinion were thought to be relevant to the research topic. The basic assumption behind this sampling technique is that of good judgment and appropriate strategy one can handpick the cases which was included in the sample and thus developed samples that were satisfactory in relation to ones needs. Also partly, quota sampling was also used; this sampling technique by which the researcher sets quotas of respondents to be chosen from specific population groups which were defined by the basis of choice, for example occupation, educational background.

Both qualitative and quantitative data were used in the current research. Quantitative data are anything that can be expressed as a number, or quantified such scores on achievement tests, number of hours of study, or weight of a subject. On the other hand, qualitative data cannot be expressed as a number such as data representing nominal scales such as gender, socioeconomic status or religious preference among others. Primary sources availed qualitative and quantitative information collected in raw form after direct contact with the ground. Primary data sources exploited in this study include field observation, questionnaires, and interviews. Secondary Sources are all the information that was retrieved from already existing literature or sources for the purpose of this study was treated as secondary data. Existing reports, topographical sheets, census data, abstracts, reports, archival records, journal, periodicals, Google maps and data from relevant academic sources based on the study topic were used. Method of data collection were primary and also secondary. The primary involve

4.1 Questionnaires

Data was collected through the use of structured questionnaire and complemented with interview schedule was administered. Depending on the nature of the anticipated respondents, the questionnaires developed were inclusive or conclusive. Structured questionnaires were used to collect information from key informants.

4.2 Direct observation

Observation allowed for comparison between the information obtained from the respondents and the reality on the ground. Direct observation during the study incorporated observation of ONEX and nature of hawking activities along ONEX. Secondary Data Collection Instruments also relied on information including, relevant books, existing literature, and government records etc. The data was analyzed using Concept analysis is the process of analyzing verbal or written communications in a systematic way to measure variables (Becker, 2012). After data collection, they were organized and analyzed also based on the study guidelines. Qualitative and quantitative methods were incorporated to analyze information gathered from the respondents through calculation of percentages. Analysis targeted respondents‟ expressions, perceptions, events, questionnaires, behavioral observation, photographs and records. In addition, data were analyzed using

descriptive statistics representing tables, and pie diagrams.

5. Result and Discussions

The socio-demographic attributes of the respondents presented in this section include, sex (gender), age and educational attainment. A total of 200 copies of the questionnaire were administered to the respondents, out of which 192 copies were completed and retrieved for analysis. The distribution of the respondents by gender shows that 43.75 % of the respondents were male and 56.25% of the respondents were females (Table 1). This implies that the female respondents participated actively in the study more than their male counterparts.

Gender	Frequency	Percentage (%)
Male	84	43.75
Female	108	56.25
Total	192	100.00

Source: Author's field survey (2019).

Table 1: Sex of respondents.

Age ranges	Frequency	Percentage (%)
10 – 20 years	50	26.04
21 – 30 years	82	42.71
31 – 40 years	38	19.79
41 years and above	22	11.46

Source: Author's field survey (2019).

Table 2: Age of respondents.

From the data shown in (Table 2), the distribution of respondents by age indicates that 26.04% of the respondents were from the age range of 10-20, while 42.71% were between 21 and 30 years old. Also, 19.79% were 31-40 years old, and 11.46% were 41 years old and above. This distribution implies that the respondents were drawn across different age categories. The distribution further indicates that majority of the sample were old enough to understand the topic under investigation.

It can be seen from (Table 3) that of the entire respondents, 14.06% are not educated, 11.98% attained primary education, 22.4% attained junior secondary school education, 43.75% attended senior secondary school, and 7.81% attained higher education. This distribution of the respondents shows that most of the respondents were educated and literate.

Education	Frequency	Percentage (%)
Not educated	27	14.06
Primary school	23	11.98
Junior secondary school	43	22.4
Senior secondary school	84	43.75
Higher education	15	7.81
Total	192	100

Source: Author's field survey (2019).

Table 3: Educational status of respondents.

Method	Frequency	Percentage (%)
Incineration	20	10.42
Refuse collection	23	11.98
Dumping on ground	72	37.5
Dumping in drainage	55	28.65
Others	28	14.58
Total	192	100

Source: Author's field survey (2019).

Table 4: Methods of waste disposal.

(Table 4) indicates that regarding the method of waste disposal, incineration is 10.42%, refuse collection point is 11.98%, dumping on ground is 37.5%, dumping in drainage is 28.65% and others is 14.58%.

5.1 Opinion of street hawkers on street trading activities in the study area

The essence of this study was to seek the opinion concerning waste, landscape defacement, and environmental pollution in the study area which has become major problems that characterized our street.

5.1.1 Responses of hawkers regarding waste: In an analysis of the responses of street hawkers to the question as to whether street hawking activities cause indiscriminate dumping of waste, 67% of the hawkers answered in the affirmative whilst 33% responded in the negative. Regarding those who responded in the negative especially those who trade between moving vehicles caught in traffic claimed that those who purchase their items often take them away thus they do not consume it there. Those who responded in the affirmative on the other hand, especially those who sell items like sachet water, biscuits, and fan milk products admitted that street hawking activities were contributing factors.

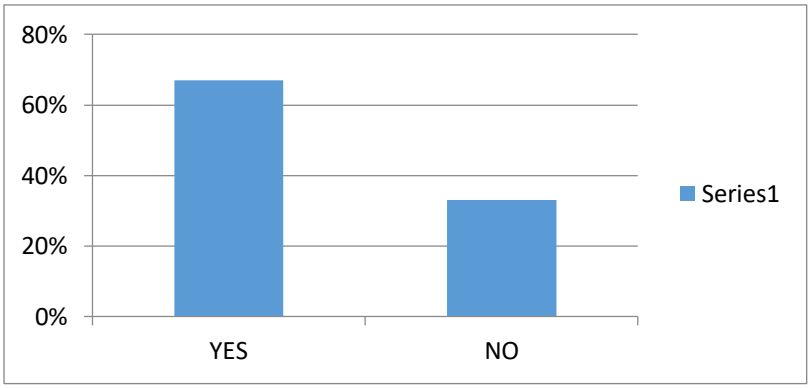


Figure 2: Opinion of hawkers on waste disposal.

5.1.2 Responses of hawkers regarding landscape defacement: In relation to the responses of hawkers with respect to whether street hawking causes landscape defacement in the study area or not, 65% responded in the affirmative whilst 35% of them answered in the negative. Those hawkers who answered in the negative claimed that their activities do not in any way landscape defacement. On the other hand, those who accepted that their activities do sometimes cause these problems, their reasons however, was the indiscriminate dumping of refuse usually causes landscape defacement.

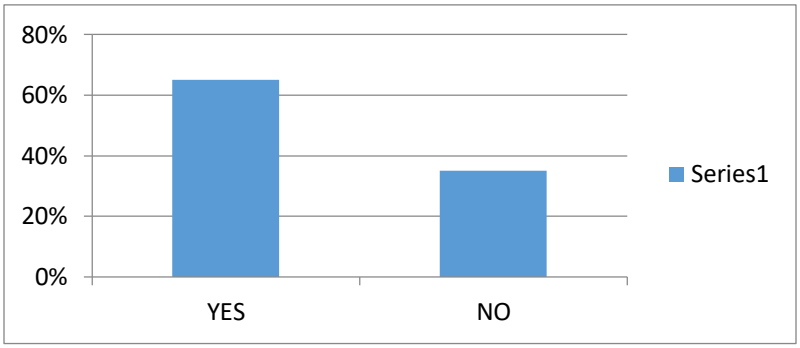


Figure 3: Opinion of hawkers on landscape defacement.

5.1.3 Responses of hawkers regarding environmental pollution: Concerning the responses of hawkers with respect to environmental pollution or not, 98% of the population affirmed that street hawking activities sometimes caused environmental contamination and 2% of them had a contrary view. Those in affirmations think that the waste product is source of environmental contamination especially, when they are left to decay.

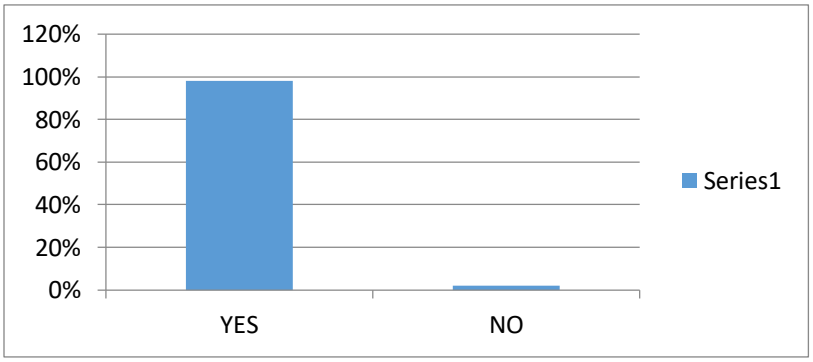


Figure 4: Opinion of hawkers on environmental pollution.

6. Discussions

The broad aim of this study was to investigate the environmental impact of hawking along ONEX, FCT Abuja. Empirical data revealed that 43.75 % of the respondents were male and 56.25% of the respondents were females, and the age bracket of the respondents are more in the age bracket ranging from 10 to 40 years with few falling above 40 years old. The data is in line with the finding by [9] that with biting economic situation in the country, men and women of all ages-young, middle aged and old partake of hawking. Also, majority (42.71%) of the respondents fall within the age of 20 to 31 years old adjudge as youth, which validates the conclusion of [10] that though people of all sexes and ages are involved in hawking, the youths are dominant. Furthermore, the preponderance of female hawkers has been similarly reported in other studies conducted in Nigeria [18, 19]. These findings are not surprising because in a typical African cultural setting, it is believed that the training of female children is not beneficial to their families. A male child usually retains the family name and possessions while the girl child is thought to be useful only to her husband. Thus, the females are less likely to attend school and are either given out in early marriage or sent to live with relatives as "house-helps" all in a bid to assist in the family finances. The present study buttresses this fact as over 50% of the hawkers were female.

Furthermore, the opinions of the respondents as revealed in 4.2 above concerning waste, landscape defacement, and environmental pollution agrees with [3] who reported environmental pollution, and aesthetically unpleasing environment due to street hawking. Of course, Bogoro [3] discovered that most of the streets traders indiscriminately disposed of their refuse by burning and dumping in the drainage there by blocking the drainage channels causing flood during rainy season and 24.75% dumped their waste right on the roadside. According to Bogoro [3] there is disorderliness in the arrangement of different methods used in displaying of items by street traders there by making the study area appear as an insightful and unpleasant urban environment thus displeasing visual effect and 28.71% of streets traders encroached into the road with up to 1-1.5m and above causing serious traffic problem.

7. Conclusion

Unfortunately, the indiscriminate littering problem and non-biodegradable nature of the refuse resulting

from the most items being sold after use are issues of great environmental concern. Indiscriminate disposal of waste affects the aesthetics and environmental condition of the area. The following recommendations are made Concerted efforts are therefore needed by all relevant authorities and stakeholders to regulate and ensure proper application of technology to manage waste from sachet water trade. Environmental education should be intensified to inculcate the right attitude and consciousness towards environmental preservation. Regulatory agencies involved in food and beverages should be empowered in their regulatory and monitoring functions to check adulteration of these products and forestall frequent cases of waterborne diseases often linked to consumption of unwholesome sachet water products. Non-governmental organization should play a vital role in area of provision of alternative job through training to hawkers on the highway in Nigeria roads. There should provision be kiosks at bus stop on the roads by appropriate authorities.

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