



WEEKLY MARKET SANITATION EXERCISE AND PERCEIVED WELL-BEING OF TRADERS IN SELECTED MARKETS IN IBADAN

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ABSTRACT

Market sanitation has been a serious problem in major cities in Nigeria. Indiscriminate dumping of refuse, littering and blocking the drainage system, insanitary defecation are common practices in major markets in Nigeria. This study investigated the role of weekly market sanitation exercise on perceived well-being of traders in Ibadan, Oyo State, Nigeria. A descriptive research survey method was adopted for the study. A total of 395 randomly selected traders and 105 purposefully selected buyers from four markets – Ogunpa, Oje, Akinyele, and Bodija, participated in the study. A single hypothesis was formulated and tested at the 0.05 significant level. A self-structured and validated questionnaire was used for data collection, and a reliability coefficient of 0.72 was obtained for the instrument using Cronbach's α coefficient. Socio-economic and demographic data were analysed with the use of frequency counts and percentages. Pearson correlation was employed for analysing relationship among the variables, while regression was used to test the hypothesis. The results showed that most marketers monthly income is relatively average, their educational status also showed that most of them have no formal education which could in the long run have an adverse effect on their level of concerned about diseases that are related to improper waste storage and disposal methods. The rate of hospital attendance has tremendously reduced compare to the period before the introduction of weekly market sanitation. The regression result $r = 0.593$ showed that improved environmental conditions have positive impacts on well-being of marketers. On the basis of the findings, it was recommended that the weekly market sanitation exercise be continued.

Keywords: *market sanitation, waste management, Well-being*

INTRODUCTION

Markets occupy an important position in the lives of people particularly the women folk. Markets usually attract large gathering of buyers, sellers and children who have accompanied their mothers and fathers. The interactions among buyers and sellers in markets provide opportunities for the spread of communicable diseases with considerable potential to reach epidemic dimensions (WHO, 2008). Activities involved in buying and selling generate large quantities of solid waste. It is quite common to observe mountains of refuse at market places. The heaps of refuse provide excellent breeding grounds for vectors of communicable diseases including rodents, insects, among others (Onyido *et al*, 2011). They may also pose fire hazards apart from being eyesores and sources of unpleasant odour. Very frequently, refuse is dumped in drainages or canals and along watercourses with impunity. All these have unpleasant environmental consequences.

In Ibadan, like other cities in Nigeria, the common feature of markets is the gross inadequacy of sanitary facilities including potable water, toilets, bathrooms, and refuse disposal bays. Open urination and defecation is widespread and the resultant contamination of the environment contributes to environmental degradation (Abejegah, 2013). Furthermore, poor supervision of markets by ill-trained, ill-equipped and corrupt officials have led to overcrowding, trading on access roads within and outside the markets – all adding to dangers that traders face. Blockade of access roads within the market and its surroundings, sometimes lead to unnecessary loss of lives and properties in event of emergency evacuation as is required during fire accidents. In most of the markets in Ibadan, there is no sufficient organised waste disposal, no drains for water, where there are drains the drains are blocked with solid waste.

The National Environmental Sanitation Policy of 2005 aptly identified Market and Abattoir Sanitation as one of the key policy issues to address the enormous problems of Environmental Sanitation in Nigeria (WHO, 2008). Examples of overwhelming sanitation problems in markets

and abattoirs include, but are not limited to, improper refuse disposal, inadequate water supply, and gross inadequacy of sanitary facilities that result in open defecation and urination, overcrowding and exposure of food and meat to flies, rodents and contaminants.

It is in the light of these that Oyo State Government observed the maiden weekly market sanitation exercise on September 08, 2011, in order to improve the environment of both traditional and modern markets; in the end, contribute to general well-being of the public. Well-being is a positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well (Diener and Seligman, 2004). It generally includes global judgments of life satisfaction and feelings ranging from depression to joy (Lyubomirsky *et al*, 2005). Therefore, well-being, in this study, is taken as satisfaction derive and feelings of safety from sanitation related infections in the market. The thrust is to promote and protect the health of all residents and non-residents of Ibadan by ensuring the highest standards of sanitation within and in the surroundings of all markets throughout the city. The purpose of this study is to ascertain the contributions of the weekly market sanitation exercise on the perceived well-being of both traders and buyers in selected markets in Ibadan.

The Concept of Environmental Sanitation

Environmental sanitation is aimed at developing and maintaining a clean, safe and pleasant physical environment in all human settlements, to promote the social, economic and physical well-being of all sections of the population (FMOE, 2005). It comprises a number of complementary activities, including the construction and maintenance of sanitary infrastructure, the provision of services, public education, community, and individual action, regulation and legislation (Canter, 1975). World Health Organization (WHO) has been at the forefront of environmental sanitation and hygiene action over the past years and developed some key materials intended for policy-makers and technical people dealing with these issues. Environmental sanitation means the activities aimed at improving or maintaining the standard of basic environmental conditions affecting the well-being of people (Business Dictionary, 2011). The principal components of environmental sanitation are collection and sanitary disposal of solid wastes, liquid wastes, excreta, industrial wastes, healthcare, and other hazardous wastes. Management of storm water drainage, cleansing of thoroughfares, markets, and other public spaces. Others are control of pests, vectors of diseases, and food hygiene. Environmental sanitation education, inspection, and enforcement of sanitary regulations, and disposal of the dead. It also, includes control of rearing and straying of animals, and monitoring the observance of environmental standards (GGMLGRD, 2001).

Those services must be provided reliably and continuously to mitigate the negative effects of social and economic activity in human settlements (Carr and Strauss, 2001). The limitation of environmental sanitation is not far from the fact that people do not realize the health benefits to the individual, the community and to society from improving sanitation. The high cost of improving sanitation is often cited as a barrier to implementing sanitation projects. However, to decrease the proportion of people lacking basic sanitation and water supply by 50% worldwide by the year 2015, it is estimated that US\$ 23 billion per year would be needed - about US\$ 7 billion a year more than is currently spent (WHO and UNICEF, 2015a).

The National Environmental Standards and Regulations Enforcement Agency Act 2007 (NESREA ACT)

After the repealing of the Federal Environmental Protection Act of 1988, the NESREA Act, 2007 became the major statutory regulation or instrument guiding environmental matters in Nigeria. It makes provision for management of waste of all descriptions and its administration and

prescribes sanction for offences or acts which run contrary to proper and adequate waste disposal procedures and practices. The Decree prohibits the Carrying, depositing and dumping of harmful waste on any land, territorial Waters, contagious zone, Exclusive Economic Zone of Nigeria or its Inland Water ways and prescribes severe penalties for any person found guilty of any Crime relating thereto. Restrictions are imposed hereunder on the release of toxic substances and requirement of stipulated monitoring of pollution to ensure permissible limits are not exceeded; unusual and accidental discharges; contingency plans; generator's liabilities; Strategies of waste reduction and safety for workers.

NESREA is mandated to enforce through compliance monitoring, the environmental regulations and standards on noise, air, lands, seas, oceans and other bodies. NESREA is thus expected to enforce the environmental standards covering water quality, air quality, noise control and atmospheric protection; this would prevent an alternation of the chemical, physical or biological quality of the environment to a definition of 'pollution' under the Act. In fulfilling this mandate, it behoves on the Agency to establish effective monitoring mechanisms. In line with this, the agency may establish monitoring stations or networks to locate sources of atmospheric pollution and determine their actual or potential danger.

The agency possesses supervisory functions over environmental projects funded by donor organizations and support agencies. It is to ensure that such projects adhere to regulations in environmental safety and protections. With the exception of the oil and gas sector, it is the body responsible for the enforcement of environmental control measures through registration, licensing and permitting systems. The use of licenses and permits is a useful tool for the prevention of environmental harm, this system enables NESREA to set and enforce limits on the concentration of particular pollutants, which are permitted to enter the environment, it regulates for instances the amount of substances released into the air and thus prevent water pollution. The use of licenses and permit means that no one may discharge polluting substances to any of the environmental media without holding a permit or license to do so. In this way, the quality of the environment is preserved and safeguarded. All industrial facilities generating waste would be required to register with the agency and to obtain permits and licenses. For example, the National Environmental Pollution Abatement in industries and Facilities Generating Wastes Regulations require industries and other facilities to possess a permit issued by the Agency for the discharge of effluent with constituents beyond permissible limits into public drains and other waters.

The mere existence of law (and a regulatory body) does not in itself create or bring about a change in behaviour. Solely statutes cannot obtain a clean and healthy Nigeria. There is the added need for information on environmental education and enlightenment of the public. This is the best form of prevention of environmental harm. There must be instilled in the minds of a sizeable number of the population an unambiguous message clearly urging the need for a healthy environment. This environmental consciousness will enable the law to function better.

Market sanitation and well-being

Sanitation refers to public health conditions related to clean drinking water and adequate treatment and disposal of human excreta and sewage (Tilley *et al*, 2014). Preventing human contact with feces is part of sanitation, as is hand washing with soap. Sanitation systems aim to protect human health by providing a clean environment that will stop the transmission of disease, especially through the fecal–oral route (Gius and Subramanian, 2015). Therefore, market sanitation is defined as the methods for the safe and sustainable management of human excreta, through the delivery of a number of sanitation services including collection, storage, treatment and disposal/reuse of faeces and urine in markets. Sanitary conditions of markets

across the country have been an issue of serious health concern to government, traders, and other connected stakeholders. Market scenery has long been associated with indiscriminate refuse disposal, open defecation, and urination, which exposed buyers and sellers to infectious diseases (Nigerian Observer, 2012). The sight of some of the markets, especially major markets in Ogun and Lagos reveal flagrant abuse of environmental laws, as put in place by various state governments (Enahoro, 1983). Wastes are disposed indiscriminately around stalls and open spaces available in the market, and where there is arrangement for gathering of refuse, it piles up for more than two weeks, with putrid odour hanging in the air. The refuse includes farm produce remnants, plastic bottles, nylons, edible goods and other wastes always litter the entire market. It is acknowledged that many of the diseases that affect Nigerians, including malaria, tuberculosis, and diarrhoea are due to unhealthy environmental conditions (Nigerian National Planning Commission, 2004).

To address the enormous problems of environmental sanitation in Nigeria, the Federal Ministry of Environment (FMOE) through the National Environmental Sanitation Policy, identified market and abattoir sanitations as areas of concern (FMOE, 2005). Adewole (2009) examined the major effects of waste management on the quality of life in two perspectives such as environmental and health effect. The major environmental effects include air pollution and waste pollution, while the health effects include flies which carry germs, mosquitoes breed in stagnant water in blocked drains, rat's spreads typhoid, salmonella, leptospirosis and other diseases. Meillassoux (1991) considered the second effects of waste management on the quality of life by saying that a city with a hazardous waste facility is now perceived and an undesirable place to live and to identify that people are leaving there is a social somatisation. Lu Aye and Widjaya (2005) compared the level of environmental impact of waste generated by traditional markets with other sources of wastes generation saying that the attributed reason is that in general the waste generated from traditional markets are more uniform, more concentrated and less hazardous than waste from other sources.

Argenti (2000) said that the management of waste from the urban food system, particularly from markets and slaughterhouses, poses one of the greatest challenges to city managers. Slaughterhouse waste is related to a host of hygiene, health and environmental problems thereby requiring safe disposal. Growing quantities of waste from processing plants, markets and slaughterhouses together with dumping of plastic packing and waste burning boosts health risks and the pollution of water, soil and air. Argenti (2000) said that the management of waste from the urban food system,

PM news (2010) expressed that for too long, markets in Lagos States, southwest Nigeria, have become eyesores. Filth and poor sanitation have become the hallmark of many markets in the Lagos metropolis. The is coupled with unbridled trading on streets, road medians and setbacks, among others. The myriad of problems associated with market development, such as environmental sanitation, physical structure, safety of live and property, security of food, transportation, conflict and crimes and health, among others readily come to the front burner. Bammeke and Sridhar (2004) talked about market sanitation and the serious problem associated in major cities in Nigeria. Their study describes the characteristics of wastes in 12 markets in Ibadan, the capital of Oyo State. The results indicate that the wastes comprise of over 68% of easily decomposable matter originating from food, leaves and paper. The wastes on an average showed 66.7% volatile substances, 2.1% total Kjeldahl nitrogen, 1.6% total phosphorus (PO₄), and 66.5% water content. The heavy metal contents were low in the single sample analyzed.

In 1990, 46% of people worldwide had no access to “improved sanitation”. By 2008 this had been reduced to 38% and is projected to fall to 33% by 2015, while the MDG target is to bring this down to 23% of the projected world population of 7.3 billion. Even if this target is met, 1.7 billion people will remain without access. The WHO/UNICEF programme projects that by 2015, 2.4 billion people will lack “improved sanitation” and 1.1 billion of those people will still defecate in the open (WHO, 2015).

Abel 2007 in his work titled “An analysis of solid waste generation in a traditional African city: the example of Ogbomosho, Nigeria.” Affirmed that comparing household waste generation across the three zones showed that as education, income and social status increase, per capita waste generation declines, especially with regard to heavier organic waste products which account for more than three-quarters of the total waste generated in the study area. This is in part influenced by the differences in employment/livelihood patterns between the zones, and the study highlights how livelihood patterns and residents’ possibilities for livestock raising influence the scale and composition of household waste. Finally, the paper highlighted the importance for waste management of considering solid waste generated by enterprises in residential areas, including those run from home.

Kanu *et al.* 2011 recommended that the careless disposal of industrial wastes without pre-treatment should be discouraged. Imposition of direct charges on industrial effluents by the regulating agency, as well as continuous monitoring and surveillance is imperative in order to ensure the protection of water resources from further degradation. Fakayode, 2005 confirmed that one of the most critical problems of developing countries is improper management of vast amount of wastes generated by various anthropogenic activities. More challenging is the unsafe disposal of these wastes into the ambient environment. Water bodies especially freshwater reservoirs are the most affected. This has often rendered these natural resources unsuitable for both primary and/or secondary usage. Sangodoyin, (1991) said that river systems are the primary means for disposal of waste, especially the effluents, from industries that are near them. These effluent from industries have a great deal of influence on the pollution of the water body, these effluents can alter the physical, chemical and biological nature of the receiving water body, and in turns influence the well-being of people.

THE STUDY AREA

Ibadan, one of the oldest cities in Africa, is the capital of Oyo State, Nigeria, and has eleven local government areas (LGAs). Population of Ibadan’s was 2.55 million according to the 2006 estimate by the National Population Commission. The population was projected to increase at 3.2 percent annually, to 2.89 million people by 2010 (Oyo State Government 2011).

The sampled markets were *Akinyele*, *Bodija*, *Oje* and *Ogunpa*. *Akinyele* market is located in *Akinyele* Local Government Area (LGA). It is about 19 kilometers north on the *Ibadan – Oyo* road, while the traders deal majorly in livestock. *Bodija* market is regional; it is located in the *Ibadan* North Local Government area of Oyo State, Nigeria. It is about one kilometer from the University of Ibadan along the road to the State Government’s Secretariat which is also about one kilometer away. It is a general-purpose market where goods of all descriptions are being exchanged on daily basis. *Ogunpa* is located in Ibadan North West LGA. It is within a central business district (CBD) of *Ibadan*. It is accessible by *Oba Adebimpe* road, Lebanon road and street, and Salvation Army-*Oke Padi* road all in *Dugbe* CBD. *Oje* market is located in the central *Ibadan*; *Ibadan* North East LGA. It has been there for over a century. It is less than a kilometer to the *Olubadan* of *Ibadan*’s palace, the paramount ruler of the city. It is in fact, the oldest market selling *Yoruba* fabrics where traders come from all over Africa to patronise every 17th day.

METHODS

A descriptive research survey method was adopted for the study. Descriptive research can be either quantitative or qualitative. It can involve collections of quantitative information that can be tabulated along a continuum in numerical form, such as scores on a test or the number of times a person chooses to use a-certain feature of a multimedia program, or it can describe categories of information such as gender or patterns of interaction when using technology in a group situation. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass and Hopkins, 1984). It often uses visual aids such as graphs and charts to aid the reader in understanding the data distribution. Because the human mind cannot extract the full import of a large mass of raw data, descriptive statistics are very important in reducing the data to manageable form. When in-depth, narrative descriptions of small numbers of cases are involved, the research uses description as a tool to organize data into patterns that emerge during analysis. Those patterns aid the mind in comprehending a qualitative study and its implications.

The city of Ibadan is made up of eleven (11) Local Government Areas. For the purpose of this study, four (4) local government areas where traditional markets are highly predominant were purposively selected. Twenty-four traditional markets were identified in the four selected LGAs (Table 1). One traditional market was randomly selected using Table of Random Numbers from each of the LGAs (Table 1). The four LGAs were *Akinyele*, *Ibadan North*, *Ibadan North East*, and *Ibadan North West*.

Table 1: Selected markets in Ibadan, sample frame and size

S/N	LGAs	Markets in the LGAs	Selected Markets	Sample Frame and size			
				Number of Unit/Market	Traders Counted	5% Sampled	3 Buyers sampled/Unit
1	Akinyele	Oja- Agbe Moniya, Ojoo, Akinyele Ijaiye, Sasa Elekuru, Onidundun, and Iware.	Akinyele	5	1, 201	60	15
2	Ibadan North	Bodija, Elewure, Sango, Apete,	Bodija	12	2,509	125	36
3	Ibadan North East	Academy, Agugu, Agodi, Orita- Aperin, Bashorun, and Ogunpa	Ogunpa	6	1,823	92	18
4	Ibadan North West	Alalubosa, Ayeye, Dugbe, Agbeni and Eleyele	Oje	11	2,367	118	33
Total			4	34	7,900	395	105

Source: Authors' construct 2019.

Data types and sources

Qualitative and quantitative data were used for this study and they were sourced from both primary and secondary sources. Secondary data were sourced through internet search, relevant books, and journals. Relevant information was also obtained from the Ministry of Environment, Oyo State Secretariat *Ibadan*. Primary data were sourced through the use of questionnaire survey and key informant interview method. The instruments that were used for the collection of the primary data were structured questionnaires and interview guide.

Prior to questionnaire administration, the researchers explained the purpose of the questionnaire administration to the identified unit head of traders in all markets. The unit head assisted to conduct head count of those traders were present. About 5 per cent of those present were systematically sampled (see table 1). Therefore, a total of three hundred and ninety-five (395) traders were sampled. Accidental sampling method was used to sample one hundred and five buyers on the basis of three (3) buyers per identified units in each market. The formulated research question seeks answer to whether there was any significant correlation in perceived well-being of traders before the introduction of weekly market sanitation and after. The socio-economic information derived from the questionnaire survey was analysed using descriptive statistical methods. The data analysed were expressed in tables and percentages. Correlation was used to test the research question.

FINDINGS AND DISCUSSIONS

Socio-economic and environmental traits of sampled markets

The socio-economic and environmental characteristics of selected markets are presented in this section from where inferences are made for the general well-being of traders. Majority of the respondents are female as indicated by 63.8%, while 36.2% of the respondents are male. The monthly income of the respondents is expressed as follows: those respondents that earn between 30,000 – 39,000 naira was 37.0%, 20,000-29,000 naira was 27.0%, less than 20,000 naira 19.0%, 50,000-59,000 naira was 6.6%, 60,000 naira and above is 5.4%, while those who earned 40,000-49,000 naira was 5.0%.

About 87.6% of the respondents have been participating in the weekly market sanitation; while the remaining 12.4% indicated that their sales boys and girls have been participating in the exercise on behalf of them. With regards to condition of drainage, out of the 500 respondents, 95.9% indicated the drainage around their stalls were used to be filled with refuse of all descriptions before the introduction of weekly market sanitation, while the remaining 4.1% of the respondents said that the drainage around their stalls was never blocked by refuse.

The respondents, mainly traders, revealed that the introduction of the weekly market sanitation has no significant impact on the availability of water needed for personal hygiene. According to the respondents, the sources of water remained borehole as indicated by 69.6%, 5.2% said they sourced water from pipe, 20.1% said wells is the source of their water, while 5.2% said they source water outside the market areas. The research work reveals that water supply to the markets remained irregular, in that, 77.8% of the respondent said the water supply to the markets was irregular while 22.2% said the water was regular.

The improved environmental condition of available public toilets in the sampled markets was also attributed to the weekly market sanitation exercise. Although the traditional pit latrine was common in the sampled markets, their cleanliness, have improved tremendously due to the weekly market sanitation exercise as shown by 70.6% of the respondents, while the remaining 11.3% said that they don't use the toilets at the markets, therefore, have no basis for assessing the cleanliness before and after the introduction of the weekly market sanitation. The types and

number of available toilets remained unchanged; at *Akinyele* market, there were two toilets, one was pit latrine and the other pour flush toilet. Those of *Bodija* market were eight; four pits latrines, two ventilated improved pit latrines and two pour flush toilets. At *Ogunpa* market, there were two pit latrines, eight ventilated improved pit latrines, and six pour flush toilets. *Oje* market boasted of six pit latrines, four ventilated improved pit latrines and two pour flush toilets.

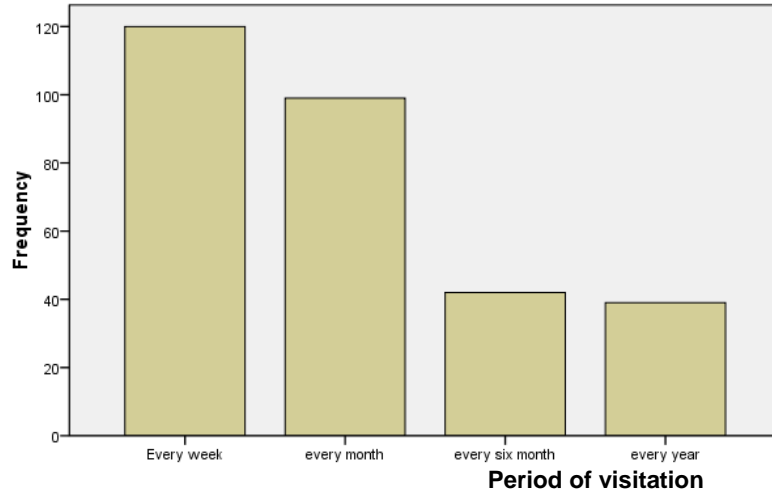
The respondents asserted that the introduction of the weekly market sanitation exercise has also improved the environmental conditions of their roads, as littering as reduced appreciably. It was only at *Akinyele* that majority of the roads within the market remained unpaved as indicated by 100% respondents. 97.6% of respondents at *Bodija* market asserted that the roads within the market were paved and motorable. At *Oje* market, 100% of the respondents agreed that the access roads were paved; while at *Ogunpa* market, 97.8% said the road accessibility is equally paved only about 2.2% said it was unpaved.

In spite of the introduced weekly market sanitation, the availability of health facilities remained the same. There was no exclusive health facility for both traders and buyers at *Akinyele* market. The traders patronise community dispensary provided by the local government and private hospitals located outside the market, ditto for traders at *Ogunpa* and *Oje*. Respondents at *Bodija* market revealed that there was one hospital cum maternity home provided for the market as indicated by 86.4% of the respondents.

In all the sampled markets, 45.8% of the respondents deal in perishable goods, 25.4% non-perishable goods, 7.8% metal goods, 3.2% wood goods, 2.4% textile goods, 2.8% plastic goods, 10.0% polythene goods, and 2.6% paper goods; which is an indication that majority of the waste stream is putrescible. In all the sampled markets except *Bodija* where waste recycling is taking place, solid waste management practices remained as hitherto; but claimed that there is improvement in the rate of removal, as bins are been removed on weekly basis during the market sanitation hours. At *Akinyele* market, 46.6% said they dump waste into waste bins within the market; about 39.8% said they patronize itinerant waste collectors, while 13.6% burn waste. Also the study reveals that the mode of waste disposal at *Bodija* market is the same as that of *Akinyele* market, because itinerant waste collectors collect waste and finally dispose off in bins as 51.6% of the respondents indicated, 37.4% shown that they throw waste on adjoining vacant land, however, 11.0% disposed waste by burning.

The frequency of visitation to hospitals for complaints about health issues before the introduction of weekly market sanitation and after was also captured. Figure 1 depicts that the rate at which traders' visits hospital before the introduction of weekly market sanitation. It shows that the frequency of visitation is high on weekly basis for series of water related diseases and the common one that has high frequencies is typhoid fever.

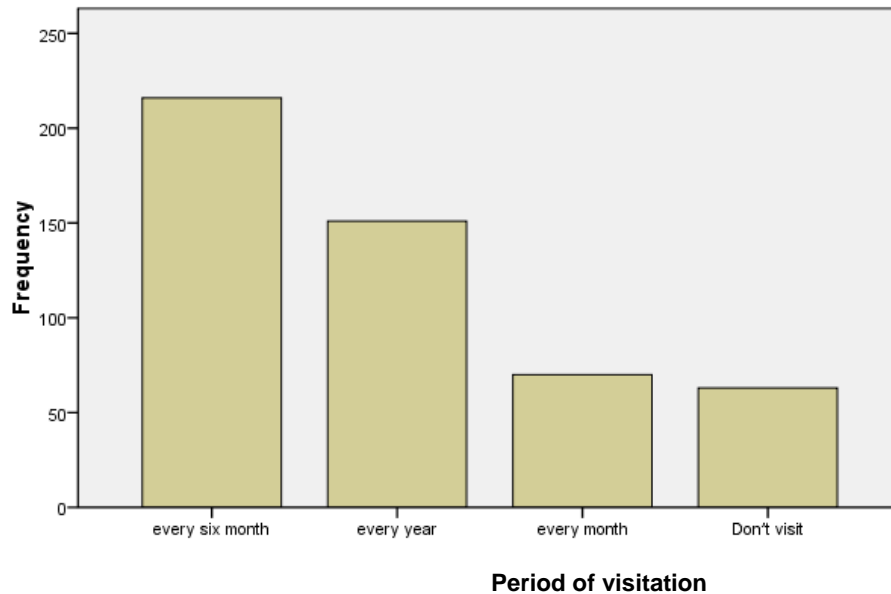
Figure 1: Frequency of visitation to hospitals before the introduction of weekly market sanitation



Source: Authors' analysis, 2019

Figure 2 displays the rate of visitation of traders to hospitals after the introduction of weekly market sanitation. It shows that the frequency of visitation to hospitals by traders has now reduced drastically to one time in a year. This also made the traders to perceived improvement in their well-being.

Figure 2: Frequency of visitation to hospitals after the introduction of weekly market sanitation



Source: Authors' analysis, 2019

Traders' well-being and market sanitation

The hypothesis that states that there is no significant correlation between traders' well-being and weekly market sanitation is analysed and presented in Table 2, thus: the result implies that the correlation is significant at 0.01 level of significant with $R^2 = 0.593$ ($p < .001$) meaning that the weekly market sanitation has improved traders' well-being.

Table 2. Correlations

		Traders' Well-being	Weekly market sanitation
Traders' Well-being	Pearson Correlation	1	.593**
	Sig. (2-tailed)		.000
	N	500	500
Weekly market sanitation	Pearson Correlation	.593**	1
	Sig. (2-tailed)	.000	
	N	500	500

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

It was discovered that traders' well-being, weekly market sanitation and environmental conditions of the markets were significantly related (Table 3). Once all the three explanatory variables significantly related with one another, the newly introduced weekly market sanitation exercise is worthwhile.

Table 3 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	23.160	1.787		12.958	.000
	Traders' Well-being	.761	.112	.330	6.770	.000
	Weekly market sanitation	.285	.146	.102	1.949	.052
	Environmental Condition	.334	.091	.179	3.672	.000

a. Dependent Variable: Marketer's Perception

The adequacy of the model is checked with R² calculated as 0.268 that gives about 27% adequacy (Table 4). Although the 0.27% is below average, the traders, however, still perceived that their well-being has improved. This is evident in the improved cleanliness of the available toilets in the markets, weekly removal of refuse of all descriptions in the public drainage, and reduction in the frequency of visitation to hospitals.

Table 4. Model Summary

	Std. Error of the Estimate
Adjusted R Square	9.02357
.268	

a. Predictors: (Constant Traders' Well-being, Weekly market sanitation, Environmental Condition)

CONCLUSION

Market is a significant institution that facilitates the socio-economic development of any given settlement. It involves many varieties of systems, institutions, procedures, social institutions and infrastructures whereby parties engage in exchange of goods and services. The anthropogenic interactions occurring in market places on daily basis is also associated with movement of vectors and transmission of diseases of all descriptions. Hence, the need to ensure that the environment of market is sanitary enough to eradicate transmission of vectors and contraction of diseases. The introduction of weekly market sanitation in Ibadan city is to rid markets of avenue of transmitting diseases among traders and buyers. Although the exercise is barely a year old, the outputs are already manifesting in the improvement that have been achieved on the general well-being of both traders and buyers. Therefore, the exercise should be intensified to facilitate consolidation of the perceived gains.

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