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AN APPRAISAL OF WASTE MANAGEMENT IN LAGOS METROPOLIS: A Case Study of Lagos State Waste Management Authority (LAWMA)

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Abstract

Waste accumulation occurs when waste isn't readily disposed and this leads to filth, diseased conditions and poor aesthetic appeal. In Lagos, the Lagos State Waste Management Authority (LAWMA) is the body responsible for collection of waste in Lagos State by keeping plastic refuse bin at designated locations in the metropolis. This work aims to appraise the activities of LAWMA in Lagos Metropolis. This was achieved by randomly administering questionnaire to residents of Alimosho, Eti-Osa and Kosofe Local Government Areas in the Lagos Metropolis. The data collected was analyzed using inferential statistics. Of the 300 questionnaires distributed, 275 (91.67%) were retrieved from respondents and was used in the analysis. Findings showed that 100% of the respondents are aware of LAWMA activities in Lagos State and they noted that waste are evacuated on the average of once in a week by the use of LAWMA truck. Majority of the respondents, 180 (60%), believe this has only being partially effective in waste management as waste pile up for too long before evacuation takes place leading to dirty environment, disease outbreaks and the immense environmental pollution. According to respondents in the study area, a major draw back in service delivery by LAWMA is the breakdown of waste evacuation trucks; others include non-payment of collection fees by the populace, limited number of equipment, man power, inadequate maintenance capacity as well as lack of cooperation from residence in ensuring proper waste management. It is therefore recommended that government should ensure the regular maintenance of the trucks used by LAWMA as well as public education, orientation and awareness programs on proper waste handling through the mass media while LAWMA should increase the frequency of waste collection in the state so as to ensure sustainable environment.

Keywords: Lagos, LAWMA, Pollution, Waste management, Sustainable Cities.

Introduction

Nigeria, like most other developing nations, is experiencing a rapid increase in population with the attendant environmental change which create more centers of daily activities and the intensity of these centers are of increasing environmental liabilities. As a result of rapid urbanization combined with industrialization in most of these cities, there are greater concentrations of waste than these cities system can absorb (Berry, 1974, Langeweg, 2000). According to Audu, (2007), waste is simply left-over, or already used items waiting for reuse or disposal. In Nigeria, open dumping of solid wastes into wetlands, watercourses, drains and burrow pit is a prevalent form of disposal.

This practice has sometimes resulted in the littering of the surroundings, creates eyesore and odor nuisance (Ihuoma, 2012). Lagos, the second fastest growing city in Africa and seventh in the world, generates more than 9,000-10,000 tons of urban waste every day making municipal waste management a big challenge (Vanguard, 2010; Bakare, 2016). To this end, the Lagos Waste Management Authority (LAWMA) - the Lagos state environmental agency saddled with the responsibility of waste management in the Lagos environ, has provided homes with refuse bins for refuse collection, and these are evacuated periodically using hydraulic rear-load refuse packer compactor trucks (LAWMA, 2011).

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Eze, (2008) in a report on environment sanitation trend analysis in the African region, classified solid waste management as one of the three major factors affecting health. In spite of the presence of public sanitation agency like the Lagos State Waste Management Authority (LAWMA), the environmental condition in cities is far from sanitary. It is difficult to get people to clean their environments when the heaps of rubbish collected the previous month are yet to be evacuated. There is indiscriminate and improper disposal of solid wastes on the streets, markets, sewage, flood drainage, streams and undeveloped plots of land rendering some major streets impassable for weeks. This study therefore aims at appraising waste management in Lagos to ascertain the level of equipment available to Lagos State Waste Management Authority (LAWMA) for waste management, how effective their policies are and identify the challenges faced by LAWMA in managing wastes in Lagos state.

Materials and Methods

The research design used in this study is a random survey of three local governments in Lagos state i.e. Alimosho, Kosofe and Eti-osa local government areas using both primary and secondary data. The primary data includes questionnaires (structured and unstructured), personal interview (residents and

business owners) and observations. Secondary sources of data include Newspaper, Textbooks, Journal, and Magazines etc. A total of 300 questionnaires were distributed to the residents and business firm owners of the selected areas to collect all relevant information. The data collected was analyzed and presented in tables and bar charts.

Results and Discussions

The total number of questionnaire distributed is 300 however only 275 (91.67%) respondents filled and returned the questionnaires. Of these, 90 (32.73%) reside in Alimosho, 95 (34.55%) reside in Kosofe while, 90 (32.73%) reside in Eti-Osa LGA. Most of the respondents are university graduates, single, between the ages of 25 and 54 and males (Table 1). All the respondents indicated that they are aware of the activities of LAWMA while a total of 50.18% agree that LAWMA frequently evacuate their waste once in a week by the use of LAWMA truck (89.82%). (Fig 1) Despite this, only a fraction (24.73%) of the respondents agreed that the waste disposal management system used by LAWMA is effective (Fig 2). About 42.18% believes that dirty environment, disease outbreaks and the immense environmental pollution can all be traced to the resulting waste found within the environment. The major problem faced by LAWMA as opined by respondents in the study area is the breakdown of waste evacuation trucks (Table 2).

Table 1: Demography of respondents in the study area

Questionnaire Parameters		No of Response	Percentage (%)
Age	15-24	71	25.82
	25-34	124	45.09
	35-44	60	21.82
	45-54	8	2.91
	55years and above	12	4.36
Sex of Respondents	Male	157	57.09
	Female	118	42.91
Marital Status	Single	187	68.00
	Married	79	28.72
	Divorced	2	0.73
	Widow	5	1.82
	Widower	2	0.73
Educational qualification	WAEC	50	18.18
	OND	35	12.73
	NCE	9	3.27
	HND	53	19.27
	BSc and above	128	46.55

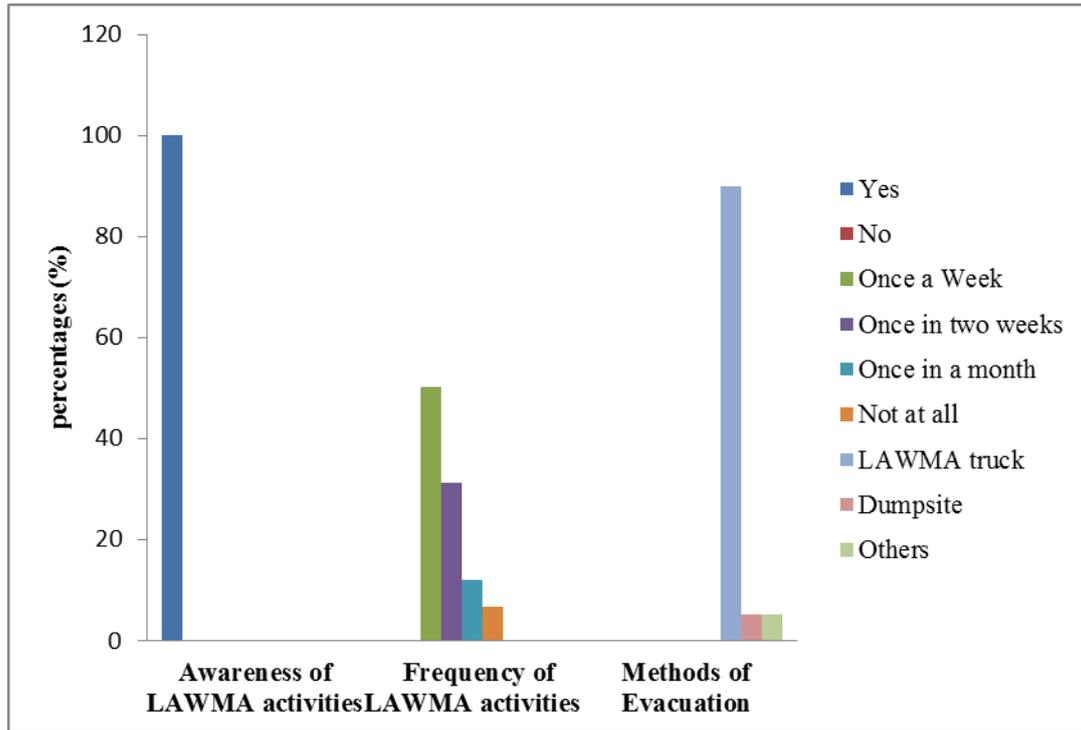


Figure 1: Assessment of LAWMA Activities in Lagos Metropolis

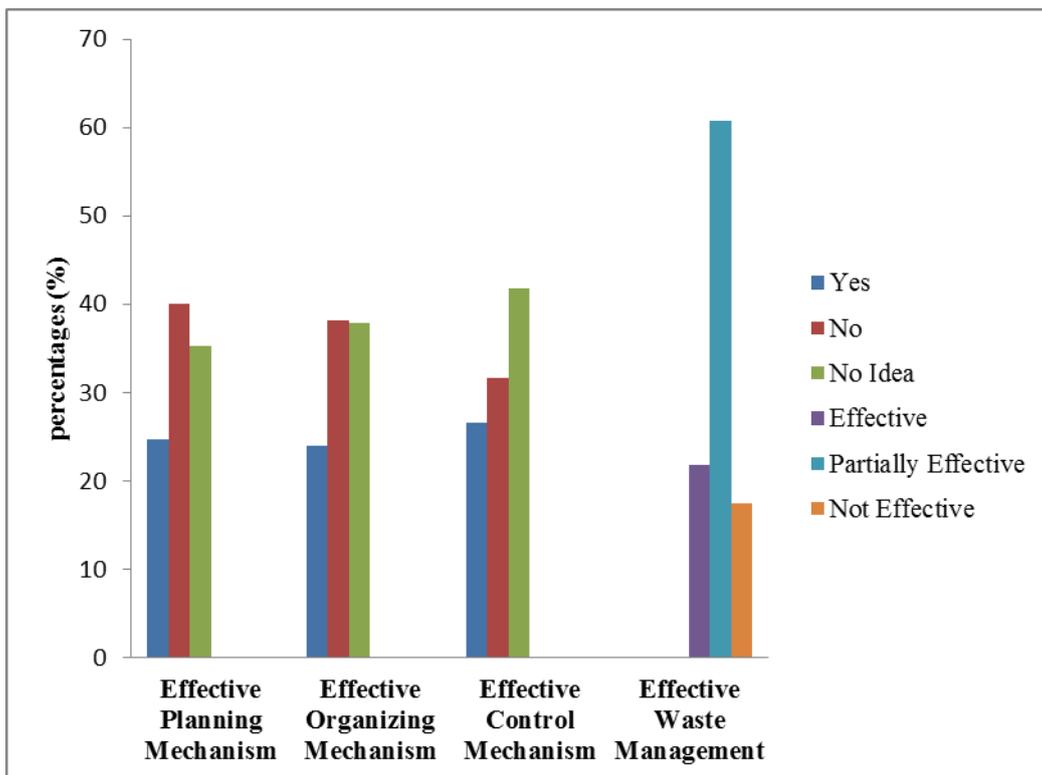


Figure 2: Assessment of the effectiveness of Waste Disposal Management by LAWMA

Table 2: Analysis of problems associated with LAWMA activities in Lagos State by Respondents in the Study Area

Questionnaire Parameters		No of Response	Percentage (%)
Does LAWMA have problems in waste management	Yes	202	73.45
	No	73	26.55
Problems facing LAWMA	Breakdown of waste evacuation trucks	154	56.00
	Collection of fees by LAWMA	48	17.45
	Others	73	15.64
Do LAWMA has enough machinery to carry out this exercise	Yes	68	24.73
	No	159	57.82
	No idea	48	17.45
Source of revenue by LAWMA	Great extent	41	14.91
	Fairly great extent	91	33.09
	Very low extent	143	52.00
Access to fund for Machinery procurement	Great extent	35	12.73
	Fairly great extent	102	37.09
	Very low extent	138	50.18
Adequacy of LAWMA maintenance capacity	Great extent	30	10.91
	Fairly great extent	96	34.91
	Very low extent	149	54.18
Adequacy of LAWMA manpower requirement	Great extent	43	15.64
	Fairly great extent	123	44.73
	Very low extent	109	39.64
Public participation in waste management	Yes	123	44.73
	No	112	40.73
	No idea	40	14.55

In spite of the fact that environmental sanitation is done on a regular basis in the Lagos, Metropolis, the amount of dirt on the street is still huge. According to Momodu *et al.* (2011), the volume of solid waste generated per se does not account for the rate of pollution within a society when the waste is evacuated and disposed of satisfactorily and as fast as possible. Waste accumulation results when waste aren't readily disposed of thereby causing filth, diseased conditions and poor aesthetic appeal.

In this study, the respondents stated that the frequency of waste disposal by LAWMA is once a week and sometimes the waste management officials might not come in on time leading to accumulation of waste in the environment. A similar situation was reported by Momodu *et al.* (2011), who argued that when evacuation and disposal perpetually lag behind the rate of generation, then solid waste becomes an environmental nuisance.

Although, LAWMA in a bid to improve its efficiency has involved private and corporate bodies

through a Private Sector Partnership (PSP) program that had been given the license to handle and dispose of waste. However, one fundamental issues observed in this study is the delayed collection of household solid waste which consequently leads to overflow of waste bin and littering the surroundings and this corroborates the report of Bakare, (2016). Respondents in the study area also opined that lack of reliable transport infrastructure is a challenge in service delivery by LAWMA and this supports the report of Bakare, (2016). Again, it was also recorded that the penalty for defaulter who refuses to pay their monthly collection fees to LAWMA is not enforced and this brings about constraint in funding for the organization and consequently affects their service delivery.

Furthermore, our observations are consistent with Agunwamba, (1998) who stated that government policies on the environment are piece meal where they exist and are poorly implemented and also that public enlightenment programs lacked the needed coverage, intensity, and continuity to correct their

attitude towards the environment. He also noted that poor funding, inadequate facilities and human resources, inappropriate technology, and an inequitable taxation system are the limiting factors to the activities of the state environmental agencies as we have highlighted in this research.

Conclusion

The level of waste management in Lagos metropolis, though has improved over the past few years, is still considered low and this impacts negatively on the aesthetics of the environment and health of the populace. Solid waste disposal in Lagos State by LAWMA has been credible yet more work still needs to be done to ensure safety and health for all the residence of Lagos and even Nigeria as a whole. It is therefore recommended that government should ensure the regular maintenance of trucks used by LAWMA as well as public education, orientation and awareness programs on waste handling through the mass media while LAWMA should increase the frequency of waste collection in the state so as to ensure sustainable environment.

Conflict of interest

Authors declare no conflict of interest.

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