

Perception and Operational Habit of the Waste Managers of Domestic Waste Disposal in Ijebu Ode, Southwest Nigeria

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Abstract: The study sought to identify the perception of the waste management workers on domestic waste disposal in Ijebu-ode zone. Interview and personal observations were used to collect the data. Factors impeding the effective and efficient domestic waste management were identified. The different operational habits of the waste managers were observed, 16.2% engaged in drinking and smoking while at work, 15.4 and 14.6% chew gums/ kolanut and take snuff respectively while 11.5% whistle, sings and received visitors while at work. Headache was the most common health hazard experienced accounting for 18%, 17.6% body pains, 11.5% redness of the eye, 11.1% sneezing and 8.2% for excessive sweating. Among the workers sampled, 22.7% put on Hand gloves, 20.8% wear nose guard, 19.3% wear overall clothing as a preventive measure. Enlightenment campaign on the dangers of unhealthy living and proper operational habits by waste managers is recommended.

Key words: Waste manager • Operational habit • Precautionary measures • Health hazards

INTRODUCTION

Waste is more easily recognised than defined. Something can become waste when it is no longer useful to the owner or it is used and fails to fulfil its purpose [1]. Solid Waste according to Miller [2] is any useless, unwanted, or discarded material that is not liquid or gas. This includes the domestic wastes. A great mixture of substances including fine dust, cinder, metal, glass, paper and cardboard, textiles, putrescible vegetable materials and plastic characterise solid waste [3].

Just like other major towns and cities of Nigeria, Ijebu-Ode is engulfed in filth in both conspicuous and inconspicuous places, because it has serious problems with its waste management from generation, through storage, treatment, to disposal.

In order to provide solution to these problems, it therefore becomes imperative for this study to examine the perception of the waste manager and proffer solution on how these domestic wastes can be managed in Ijebu-ode zone. This research is therefore intended to provide insight to citizens, government officials and non

governmental organizations who might want to help resolve the domestic waste management crisis in Ijebu-ode

Ijebu Ode is a city located in south-Western Nigeria, with an estimated population of 222, 653 Wikipedia [4], it is the second largest city in Ogun state after Abeokuta. The city is located 110km by road north-east of Lagos, it is within 100km of the Atlantic ocean in the eastern part of Ogun state and possesses a warm tropical climate and lies within the longitude 3° 56'E and latitude 6° 49'N.

In the time past, the domestic waste in Ijebu-ode area are only been managed by individuals, many people drop their waste in the drainages while some discarded theirs into moving water body and other in un-authorized places. Sanitation was generally poor; there were visible scenes of heaps of rubbish on or along the streets and other open place which were referred to as dumping site. The drainage systems even though were not well constructed, they were filled up with dirty and rubbish. These for so many times have led to flooding and as well caused a lot of damages to the economy of the region (personal observation).

Recently, (between 2006 till date), there have been a lots of revolutionary changes about waste management in Ijebu-ode. This is as a result of the efforts contributed by the **PESCASEN** (a company affiliated to the Ogun state environmental protection Agency (OGEPA) with their dumping site located at kilometre 34 Shagamu-Benin express way Ijebu-ode, many mantles of rubbish, had been dismantled and transfer to this dumpsite. The company as well is involved in sweeping and packing the refuse on or along the roads and also collect waste from door to door.

Problem Statement: Despite the present concern of individual and the government about waste management in Nigeria, Ijebu-ode one of the cities in Ogun state, is still faced with serious domestic waste management problem. From observation many waste generated from cooking and human activities were found disposed in un-authorized places like gutters and on the streets and even when it is been packed and taken to the dumping site by the waste managers, it is not properly managed. They were left in pile for weeks and later set on fire which in turns generates toxic gases that could be dangerous to the inhabitants of the locality and to the environment itself.

Objectives:

- To asses domestic waste management by waste managers in handing waste in the study area.
- To asses the health hazard encountered by the waste managers during involvement in the work.
- To asses the precautionary and prophylactic measures available for the waste managers dealing with domestic waste.
- To make recommendations for improving domestic wastemanagement in the study area.

Despite the importance of adequate solid waste management to the urban environment, the performance of many city authorities in this respect leaves much to be desired. According to Malombe [5], irregular services rendered to the producers of refuse by the municipal council compel them to find ways of disposing of refuse. He observed that the main methods adopted by the producers are burning compositing, or indiscriminate dumping. It is estimated that about 83% of the population dump their refuse in either authorised or unauthorised site in the neighbourhood and due to weak capacity to handle waste; unsanitary conditions are created [6].

Sule [7] opined that the main cause of the problem of Nigeria cities is poor environmental condition which can be ascribed to improper management of solid wastes and the lack of seriousness in the enforcement of solid waste disposal code.

Adelaide [8] observed that disposal sites in Accra are situated quite a distance away from inhabitants or sellers. This one cannot dispute the fact that long distance disposal sites discourage inhabitants and sellers from making use of them. They therefore result to littering their surroundings.

Arowolo [9], reported that toxic waste now arrive daily in Nigeria from Europe and united states in form of obsolete computers, old television set, second hand cell phone and other discarded electronics. He said in an attempt to bridge the digital divide, Nigeria is fast becoming a vast digital junkyard. They are dumped in sprawling landfills across the country.

The old and useless computers and TV sets contain hazardous substances such as mercury and heavy metals like nickel, cadmium, chromium and cobalt among others. The flame retardant chemicals used for casing contain lead. And when the dump site contain these dangerous metals are set ablaze, the poisonous flame are inhaled by the rich and the poor [9].

MATERIALS AND METHODS

A survey research design was adopted for this research in order to investigate the perception of the waste managers on domestic waste disposal in Ijebu-Ode zone.

Research Instrument: The primary states were collected using structured questionnaires. The questionnaire contained closed and open-ended questions and they were self-administered. 50 were administered on the waste managers themselves while at work.

The data gathering from various sources were processed and analysed. Simple descriptive statically and analytical tools such as frequencies count and percentages were employed in the analysis of the data.

RESULTS

Socio-Economic Characteristics of the Waste Managers: 50 people were interviewed among the waste managers and the details of their personal data were show in Table 1. 44 and 20% were between the age of 26-35 and 36-45years, respectively, about 18% were between the age

Table 1: Socio-Economic Characteristic Of The Waste Managers

S/N	Variables	Frequency n=50	Simple%
1.	AGE (Years)	-	-
	15-25	9	18%
	26-35	22	44%
	36-45	10	20%
	46-55	7	14%
	56-above	2	4%
	Total	50	100%
2.	Marital Status	-	-
	Single	5	10%
	Married	44	88%
	Divorced / separated	0	0%
	Widowed	1	2%
	Total	50	100%
3.	Religion		
	Christianity	28	50%
	Islamic	18	30%
	Traditional	4	8%
	Total	50	100%
4.	Level of Education		
	No formal education	4	8%
	Primary education	28	56%
	Secondary education	13	26%
	Tertiary education	5	10%
	Total	50	100%
5.	Occupation		
	Student	3	6%
	Trader	0	0%
	Public servant	47	94%
	Business executives	0	0%

Table 2: Operational Habit Of The Waste Managers

S/N	Variables	Relative		
		Frequency	SIMPLE%	VALID%
1..	Smoking	21	42%	16.2%
2.	Snuffing	19	38%	14.6%
3.	Talking	10	20%	7.7%
4.	Chewing gums / Kola nut	20	40%	15.4%
5.	Drinking	21	42%	16.2%
6.	Eating	0	0%	0%
7.	Whistling	15	30%	11.5%
8.	Singing	12	24%	9.2%
9.	Receiving Visitors	12	12%	9.2%
	Total	130		100%

of 15-25years, 14% 46-55years and 4% 56years and above. They were both male and female with about 88% of them married, 10% single and 2% widowed. 56% were Christian 36% Muslim and 8% traditionalist. An average number of them 56% have primary education w 26% secondary education, 10% tertiary education and 8% with no formal education.

Operational Habit of the Waste Managers: Table 2 shows the operational habits of waste managers. It was observed that 16.2% of the workers engaged in both drinking and smoking while at work, 15.4% and 14.6% chew guns/kolanut and take snuff respectively. Other operational habits include 11.5% whistling, singing and receiving visitors at 9.2% and 7.7% talking.

Health Hazard Encountered By Waste Managers: Table 3 shows the list of health hazard encountered by the waste managers and the frequency of occurrence. Headache was the most common hazard experienced at a valid percentage of 18% and body pain at 17.6%. other hazard encountered were redness of the eye and sneezing at 11.5 and 11.1%, respectively, excessive sweating at 8.2%, blurred vision at 7.4%, body itching at 6.1%, coughing at 5.7%, foot rot at 3.7%, running stomach and Breathing difficulty at 3.3% each, rashes on the skin at 2.5%, muscle twitches at 0.8% while stomach cramps and cholera at 0.4 each.

Preventive Measure Available To Waste Managers: Table 4 shows the precautionary measures available to waste managers. Hand gloves were worn at a frequency of 47 (22.7%), Nose guard at frequency of 43 (20. 8%), overall clothing at frequency of 40 (19.3%). Other precautionary measures taken were sunshade 15.4%, Jungle boots 15% and Handkerchief 6.8%, while none of them used respirator.

Table 3: Health Hazard Encountered By Waste Managers While At Work

S/n	Variables	Relative		
		Frequency	Simple%	Valid%
1	Pneumonia	0	0%	0%
2	Asthma	0	0%	0%
3	Breathing difficulty	8	16%	3.3%
4	Coughing	14	28%	5.7%
5	Sneezing	27	54%	11.1%
6	Vomiting	0	0%	0%
7	Running stomach	8	16%	3.3%
8	Diarrhea	0	0%	0%
9	Stomach cramps	1	2%	0.4%
10	Cholera	1	2%	0.4%
11	Body Pain	43	86%	17.6%
12	Muscle twitches	2	4%	0.8%
13	Body itching	15	30%	6.1%
14	Headache	44	88%	18.0%
15	Rashes on the skin	6	12%	2.5%
16	Excessive sweating	20	40%	8.2%
17	Blurred vision	18	36%	7.4%
18	Redness of the eye	28	56%	11.5%
19	Convulsion	0	0%	0%
20	Foot rot	9	18%	3.7%
	Total	244		100%

Table 4: Preventive Measures Available To Waste Managers

S/n	Variable	Relative Frequency	Simple%	Valid%
1	Handkerchief	14	28%	6.8%
2	Respirator	0	0%	0%
3	Nose guard	43	86%	20.8%
4	Sunshade	32	64%	15.4%
5	Overall clothing	40	80%	19.3%
6	Jungle boots	31	62%	15%
7	Hand gloves	47	94%	22.7%
Total		207		100%

Table 5: Prophylactic Measures Available To Waste Managers

S/n	Variables	Frequency	Valid Percentage
1	Regular Medical Check up	-	-
	Once a week	0	0%
	Once a month	0	0%
	Once in a quarter	0	0%
	Not at all	50	100%
Total		50	100%
2	Distribution of Drugs	-	-
	Every day	0	0
	Once a week	0	0
	Once a month	50	100%
	Once a quarter	0	0
	Not at all	0	0
Total		50	100%

Table 6: Referral Available By The Company To The Waste Managers

S/n	Variable	Frequency	Valid%
1	Company clinic	0	0
2	General hospital	0	0
3	Health centre	50	100
4	None available	0	0
		50	100%

Prophylactic Measure Available To Wastmanagers:

Table 5 shows the prophylactic measure available to waste managers 100% of the waste managers declared that there are nothing like regular medical check up but drugs such as pain relief were given to them once in a month.

RESULTS AND DISCUSSION

From the investigation carried out, it was discovered that majority of those involved in waste disposing in the studied area were between the age of 26-45years old, mainly females with few males and were almost all married.

They were predominantly Christians and Muslim, most with primary and secondary education and few with tertiary education.

Although many residents gave their waste to the waste managers, other re used several unlawful methods to get rid of the waste like dumping into gutter, burning, dumping on undeveloped land, while few others buried theirs. These according to Bennet *et al.* [6] might be due to inadequacy of services provided by the waste managers.

The operational habits of the waste managers observed did not follow proper safety guideline as it was observed that about 16.2% of them engaged in smoking and drinking and 15.4% of them chew gums and kolanut, 14.6% of them snuffing 11.5% of them whistling, 9.2% of them singing and receiving visitors, while 7.7% of them talking while packing and disposing wastes.

This dangerous and unsafe action could lead to inhalation of the toxic gases of the wastes. This action also that nose guards and mouth guard though available, were not worn during the exercise which ought not to be. Due to all those poor operational habits of the waste managers and the high level of their exposure to various environment factors such as sunlight, rainfall and dust, some severely suffered/ suffering from various health hazard.

The health hazard suffered by waste manager ranges from headache (18.0%), body pain, sneezing, redness of the eye, excessive sweating, blurred vision, body itching, coughing, foot rot, breathing difficulty, running stomach, rashes on the skin, muscle twitches, stomach cramps and cholera which is the least of the hazard with valid percentage of 0.4%.

The precautionary measures taken by the waste managers was observed to be inadequate as only 22.7% of the respondents used hand gloves, 20.8% used nose guard 19.3% used overall clothing 15.4% used sunshade, 15% use jungle boots, 6.8% used handkerchief while non of them used respirator which supposed to be the number one precautionary measures for the waste managers. The prophylactic measures given to the waste manger was also not sufficient as it was observed that only pain relief were given to them once in a month which can not help them in solving any of the problems.

Human being are known to work better under certain favourable conditions or incentives, but the waste workers of Ijebu -ode in a private conversation with the researchers disclosed that there are no motivation available for the waste managers as the company always delay their salaries to almost half of the following month before payment. They also confirm that there are no reliable prophylactic measure available for the workers and even the only referral available is just a mere health

centre which in most time do not have enough equipment and facilities to take care of them when they were down. Correction should be made by the company to encourage the workers in contributing their best while at work. Wastes were not sorted into recyclable, biodegradable and non - biodegradable, all were packed together and burnt after disposal at dump site which in turns generate toxic gases that were dangerous to human health [9].

More so, there were different operational habits inculcated by the waste managers such as smoking, drinking, chewing gums and kola nut while at work. The precautionary measures are not standard enough as well as the prophylactic measures.

Recommendations: People should be educated to sort waste into biodegradable, recyclable, inert, composite and hazardous or toxic at source and dispose it as per the direction of the waste management authority, effectively participate in the activities of both the local, state and federal government to keep their environment clean.

Attention should be given to integrate the roles of the waste management authorities, rag pickers and the emerging actors in the field of waste disposal by the government through encouraging / motivating Non-Governmental Organizations (NGOs), Stakeholders, United Nation and other donor countries to donate money and equipment so as to acquire effective and efficient personnel and equipments.

As it has been practiced in developed countries, waste materials that are organic in nature such as plant material, food scraps and paper products, should be recycled using biological composting and digestion processes to decompose the organic matters. The resulting organic material can then be recycled as fertilizer for agricultural purposes. In addition, waste gas from the process (such as methane) can be captured and used for generating electricity thereby reducing the problem of electricity in the country.

The waste managers after collecting the waste from the people or bins should stop disposing or burning the waste in open environments, instead they should inculcate some other methods such as incinerator and land filling, since there are lots of dugged pits around as a result of constructions works everywhere. Hazardous chemicals should be detoxified for landfill so that they do not contaminate ground water.

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