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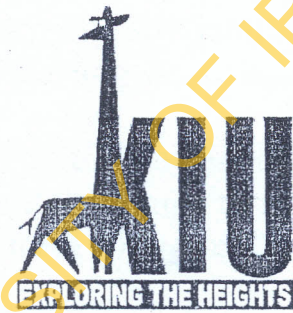
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ISSN 1821-8202

VOLUME 6, APRIL, 2012

KIU JOURNAL OF EDUCATION

ISSN 1821-8202 VOLUME 6, APRIL 2012



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INHABITANTS' PERCEPTION OF FACTORS FOR IMPROVEMENT AND SUSTAINABILITY OF ENVIRONMENTAL SANITATION IN IBADAN CITY

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Abstract

The study is a survey which investigated the perception of inhabitants of Ibadan metropolis on the factors that can enhance improvement and sustainability of environmental sanitation in Ibadan metropolis. The study sample consisted of 933 inhabitants from 5 LGAs selected through multi-stage sampling procedure. Twenty-five households were selected from the last and smallest sampling unit (the ward) in each LGA. The Inhabitants Improvement and Sustainability Perception Questionnaire was used to collect data which were analysed using descriptive statistics. The demographic profile of the inhabitants measured in terms of relevant indicators like education, occupation, income, type of houses and population density of the location they lived, indicated a mix of those in the high, middle, and low socio-economic status. Inhabitants perceived the listed factors as important to improvement and sustainability of environmental sanitation in the city: provision of waste cabins in strategic locations in the city, curriculum review to include environmental health education, environmental laws enforcement, regular meetings on environmental issues and campaigns among others. The state government and the state environmental agencies in charge should pay particular attention to the identified enhancing factors in order to achieve an appreciable impact at sustainability.

Introduction

Waste generation is a human problem in most developing countries of the world. In Nigeria and many other African urban centres, waste management constitutes a major problem. Refuse dumped along roads and in water-ways constitute not only health problem but also causes environmental and social menace. Onibokun, Adedipe and

Sridhar (2000) reported that waste management is an endemic problem that has characterized the African cities in crises. These scholars are of the view that the problem of waste management is mainly due to the rapid rate of urbanization and lack of adherence to sound physical planning and development practices. Adekola (2004) observed that it is difficult to institute a sustainable waste management policy that is effectively responsive to the ubiquitous problem of environmental health, socio-culturally induced waste disposal habit and pervasively nagging problem of poverty. Onibokun *et al* (2000:59) further observed that "... the mechanisms and instruments for collection, disposal, processing, treatment, recycling and utilisation have defied solution at the statutory level." Other writers like Oluwande (1974) commenting on the economic implication of waste management observed that the collection and transportation of solid wastes to dumpsite takes as much as 75% of the total expenses on waste disposal in Nigeria. This estimation would probably increase considering the prevailing low value of the Naira in present day Nigeria.

Waste disposal would seem to be a great problem for governments to manage not only in Africa but all over the world, and not only an African problem. According to Adekola (2004:1), who described it as an endemic problem in all the major cities of the world, contended that in spite of the level of technological development of the developed countries of the world, their height of sophistication and high level of environmental knowledge, are not spared of the problems of waste management especially in their major cities.

The European Union in a European directive 75/442/ EC (nd) defined waste as "an object the holder discards, intends to discard or is required to discard. Under the waste framework directive, this is an amendment of the early directive which stated that once a substance or object has become waste, it will remain waste until it has been fully recovered and no longer poses a potential threat to the environment or to human health. The United Kingdom Environment Protection Act (1990) stated that waste includes any substance which constitutes a scrap material, an effluent or other unwanted surplus arising from the application of any process or any substance or article which requires to be disposed of which has been broken, worn-out, contaminated or otherwise spoiled, this is supplemented with anything which is

discarded otherwise dealt with as if it were waste shall be presumed to be waste unless the contrary is proved. The UK Waste Management licensing regulation in 1994 amended the above Environmental Protection Act of 1990 and defined waste as any substance or object which the producer or the person in possession of it discards or intends or is required to discard but with exception of anything excluded from the scope of the waste directive. These various definitions of wastes are all encompassing and do not only refer to solid waste.

Waste is inevitable anywhere human activities take place. It is generated in different forms - solid, gaseous and liquid. Waste collections under each of the forms of waste are of varied origin and they possess different characteristics. However, Solid wastes are generated from domestic activities, industrial, clinical waste and commercial refuse. Contreau (1982) cited in Onibokun *et al.*-(2000), categorised solid waste into household wastes, commercial refuse, institutional refuse, street sweeping, construction debris. Tejuosho (2004) expanding the constituents of waste, reported that solid waste are from domestic and industrial in origin which include municipal wastes (residential, institutional, commercial and municipal waste); agricultural wastes; mining and mineral wastes; and industrial waste. In another instance, Forum International (1984) cited in Adekola (2004) sees solid waste as the more familiar type of refuse which include food wastes, old newspaper, packaging materials, yard wastes and other items that are discarded by the typical family such as bulky appliances, old furniture, dead trees, junked automobiles, street sweeping, construction rubbles and demolition debris. Based on the above views of solid waste, it could be said that any solid material that is considered a nuisance and have been discarded can be referred to as solid waste.

In time past, most of the domestic materials used by man were degradable materials for instance leaves for wrapping food, wood for furniture. Tejuosho (2004) reported that major sources of solid wastes in Oyo State are domestic and industrial in origin. Industrial contribution to solid waste in Oyo State is much more pronounced within Ibadan where over 70% of about 161 industrial establishments present in the State are located. In recent times, most of the degradable materials have been substituted for non-degradable materials such as polythene for wrapping and packaging; and wood is now replaced with plastic materials for

packaging products. This has increased the volume of waste generated in Ibadan and other cities.

In order to achieve positive and lasting efforts at a clean and healthy environment, the target population needs to be involved and carried along especially in the planning, implementation and monitoring of the environment for the smooth running and achievement of the effectiveness and efficiency of any initiative. These researchers strongly believe that the active participation of the inhabitants is essential for a people oriented programme targeted at the sustenance and continuity of proper waste disposal and environmental health in Ibadan metropolis. Participation is essential and central to the success and sustenance of any project especially projects that are geared toward the development and improvement of a community. Participation entails involving the people especially the beneficiaries of the programme in order that the project enjoy continuity and the desired impact, otherwise, any other plan set in motion, could thwart all efforts and resources put into it. Adekola (2004) observed that participation cannot be divorced from any development programme be it economic, environmental, social or physical development programmes or projects. The views of Adekola (2004), Nwocha (1999) and Lammers (2000) are that participation whether direct or indirect is a fundamental principle.

Tejuosho (2004) views community participation as the process by which individuals and families assume responsibility for their own health and for those of the community and develop the capacity to contribute to their own development and that of the community. Akin-Aina and Salau (1992) also observed that no conservation area can be effectively protected without the support of the communities in the area, they proposed management plan that involve the local inhabitants in the protection and management process, and intensification of economic activities in the project area.

Due to the problem that waste management poses, it becomes necessary that institutions in all tiers of government from federal to state and local government be established who will oversee to the proper management. Even private agencies and non-governmental organisations are not to be left out. In affirmation of this view point Nnaji (2002:79) had rightly declared that "the responsibility of maintaining a good environmental health has to be

a joint operation of the government, her agencies, corporations, private and groups. At the federal government level in Nigeria, the Federal Ministry of Environment and Housing, and Federal Environmental Protection Agency (FEPA) are in charge of environmental issues. FEPA plays a regulatory role at the federal level and oversee environment issues in the country. The role of FEPA in relation to solid waste management and the laws it has enacted are well documented in Onibokun *et al* (2000). These are, however highlighted here:

- (i) Study the most reliable systems that are appropriate for local, domestic and industrial wastes,
- (ii) Specification of waste disposal and treatment that will take into consideration the geological and environmental setting and encourage recycling,
- (iii) Specification of waste disposal sites that guarantee the safety of surface and underground water systems.
- (iv) Setting up and enforcement of standards for adequate sanitary facilities for the disposal of human and other solid wastes in dwellings, housing estates and public facilities in both urban and rural areas.
- (v) Establishment of monitoring programs including periodic surveillance of approved waste disposal sites and their surroundings and waste-water systems,
- (vi) Establishment of monitoring stations for the control of the disposal of leachate from dumpsites into surface and ground water systems.

To enable smooth implementation of the above stated goals. FEPA enacted environmental management laws as follows:

- (i) The National Effluent Limitation Regulation Decree to install anti-pollution equipment and for primary treatment of effluents and chemical discharges.
- (ii) The hazardous wastes criminal provision decree 42 of 1988.
- (iii) The pollution abatement in industries and facilities Generating Waste Regulation of 1991 and
- (iv) The management of solid waste hazardous Wastes Regulation of 1991 (Onibokun *et al*, 2000).

A critical examination of the enacted environmental laws indicate that most of the laws are focused on industrial generated wastes whereas, studies have shown that household/domestic generated wastes form the bulk of solid wastes generated in urban cities like Ibadan. One other issue evident, is that most of these laws are only on paper, they are not enforced. Osuafor (2002) confirmed this when she submitted that it was time to strictly adhere and enforce all environmental laws and policies. Also, no aspect of the FEPA stated rules specifically dwelt on the enlightenment of the public and this is essential. Tejuosho (2004) affirms that increasing the level of public environmental awareness and the continuous introduction of stringent environmental protection regulation in the developed countries for example, had discouraged indiscriminate disposal of hazardous wastes. Though the emphasis here is on hazardous wastes, some degree of enforcement in relation to solid waste disposal is necessary because some hazardous wastes are in form of solid waste.

In Oyo State and in Ibadan in particular, the Ministry of Environment is the ministry that oversees environmental issues in the State. The State Environmental Protection Agency (SEPA) in conjunction with other concerned bodies like Ibadan Solid Waste Management Authority, the Sustainable Ibadan Project (SIP), the five local governments in Ibadan metropolis, and some private bodies are involved in the management of solid waste. These bodies are saddled with the responsibility of collection, transportation and disposal of solid waste generated within the city, maintenance of dumpsites, educating the masses and enforcement of solid waste edicts and bye-laws. The mandate of Sustainable Ibadan Project (SIP) is on health education; mobilization for community participation in the management of solid waste, planning alternative strategies for tackling the menace of solid waste in Ibadan land and conducting research to involve the people of Ibadan in planning and managing of the city, so as to strengthen the capacity of the institutions responsible for environmental planning and management. Considering the scope of operation of the above waste management institutions, they have the backing of the authority and adequate human and material resources to execute effective and efficient activities in the State. However, the effects are not been felt and enjoyed by all and sundry in the state even when, Okwilagwe and Adigun (2011) found that education is a potent factor for

attitudinal change of the people. Rather heaps of refuse is what is left for the sight to behold all over the city.

To inculcate the sense of hygiene in the people of Nigeria and ensure good and clean environment fit for habitation, the federal government established a law that enforced the observation of environmental sanitation which comes up every last Saturday of the month throughout the country. To ensure compliance, movement of people and vehicles are restricted during the period of the programme and any violator is usually arrested and sanctioned according to the law establishing it. To complement the federal government initiative, some states Oyo and Lagos State for instance, commenced the state version of the programme. It would seem that at the moment, the State version in most states is not being observed except in Lagos State. In spite of the effort made to effectively manage the problem of waste disposal, the problem still persists.

Statement of the Problem

The disposal of solid waste in Ibadan has posed a great challenge to constituted authority to manage and all strategies and efforts made to sustain a clean and health environment has proved futile. This study was designed to investigate the perception of Ibadan metropolis inhabitants on the factors that can enhance sustainable environmental sanitation in the city.

Research Questions

The study sought answers to the following research questions:

- (1) What is the demographic (characteristics) profile of the inhabitants of Ibadan metropolis?
- (2) What do the inhabitants perceive as enabling factors of improvement and sustainable environmental sanitation in the city?

Methodology

Description of the Study Area

Ibadan is the capital of Oyo State, one of the states within the South-West geo-political zone of Nigeria. Ibadanland has eleven (11) local government areas; Ido, Lagelu, Akinyele, Oluyole, Ona-Ara, Egbeda, Ibadan North, Ibadan North-East, Ibadan North West, Ibadan South-

East and Ibadan South West. The last five local government areas Ibadan North, Ibadan North-East, Ibadan North-West, Ibadan South-East and Ibadan South-West which make up Ibadan metropolis, came into existence on August 27, 1991 under the military regime of Ex-president General Ibrahim Babangida when the old Ibadan municipal government was split into five. These five Local Governments Areas cover the study area of this work. The remaining six local governments are the peripheral LGAs of Ibadan metropolis. Within the Ibadan metropolis, people of varied religions, ethnic and cultural background inhabit the place. For instance the Yorubas who are the natives are predominant. Others are: the Ibos, the Hausass, Edo, other ethnic groups and also people of foreign nationals- Ghanaians, Togolese, Senegalese, and Guineans. Some of the religious affiliations of the people are Christianity, Islam and traditional religion.

Ibadan is an ancient city. It was the capital of the old Western Region of Nigeria. The city of Ibadan covers a total land area of 160.45km² and the population is estimated to be over 2,550,593 (Sridhar, 2009:154). It is the most populous city in the whole of black Africa. The premier university in Nigeria, University of Ibadan and the first television station in Africa are sited in the city. Provision of social amenities like electricity, road network, pipe borne water are evident in the city. The people, also make use of water from sunk bore-holes, dug wells and flowing streams to meet their daily water needs where the pipe-borne water is not readily available. There are 2,236 primary, 967 secondary schools, and various institutions of higher learning and research institutes in the city.

Ibadan city is well known for its excellent medical facilities primary and secondary medical facilities and particularly, the tertiary teaching hospital - The University College Hospital (Sridhar, 2009:154). There are big markets in the city and the markets are structured in such a way that the products one needs determine the markets to go. For instance, Bodija market is well known for food stuff, Agbeni market for provisions, Gbagi markets for textile etc. Dry season in Ibadan starts from November to April while the rainy season extends from May to October. Ibadan has a lot of traditional locations and these areas are of high density and a few low density areas. The inhabitants of the traditional locations are predominantly the natives. People of varied socio-economic and educational status

live within the metropolis.

Research Type

The survey research type was employed in the study since the interest was to investigate the perception of Ibadan inhabitants on factors for sustainability of environmental sanitation in the study area, and the researchers had no direct control over the occurrence of the variables. This type of research allowed for empirical collection of information about the research problem and also enhanced the systematic description of the habitants' perception on enhancing factors for waste disposal management and sustainability of environmental health in the area, based on the data collected.

Population, Sampling Procedure and Sample

The target population for this study consisted of the inhabitants of the five local government areas of Ibadan metropolis. The multi-stage sampling technique was employed to obtain a representative sample of the population from five LGAs. This enabled the spread of sample selected to cover high density and low density areas, and the wards. There were four stages of sampling. Twenty-five household were finally randomly selected in each of the selected ward to give a total of one thousand households that participated in the study. However, 933 respondents whose data were complete were used for analysis. The characteristics of the final sample used in the study were similar to that of the population.

Instrumentation

Household Solid Waste Disposal Sustainability Perception Scale (HSWDSPS) was developed and administered on inhabitants of high and low density areas of Ibadan metropolis. The instrument consisted of items on perception of how improved environmental sanitation can be sustained. The questionnaire was divided into two parts. The first part contained personal information about the respondents in terms of their age, occupation, actual location of employment, population density, local government area, type of building and the use of the in house/space. The second part consists of sixteen (16) items that sought information on factors of sustenance of improved environmental sanitation practices in the city.

To make the instrument fit for use, it was given to experts in

evaluation who scrutinized its content. Their comments, observations and suggestions were used to improve the instrument by eliminating, substituting and restructuring items where necessary. To determine the reliability of the instrument, it was administered on respondents in selected areas that were outside the study area but having similar characteristics with the population in the study area. The item - total correlation analysis of HSWDSPS using Cronbach Alpha reliability formula was 0.79.

Data Analysis

The data collected were analysed using descriptive statistics, such as frequency counts, percentages and means to determine the perception of Ibadan metropolis inhabitants on factors that can sustain environmental sanitation.

Results and Discussion

The results of the factors that can sustain imported environmental sanitation in Ibadan metropolis are presented in Table 1. The other result is presented in Tables 2.

Table 1: Descriptive Statistics of Respondents Demographic Data

Variable	Frequency	Percentage	Cumulative Percentage
Age			
15 yrs and below	277	29.7	29.7
16-35	419	44.9	74.6
36-50	178	19.1	93.7
51 and above	59	6.3	100.0
Total	933	100.0	
Sex/Gender			
Male	373	40.0	40.0
Female	560	60.0	100.0
Total	933	100.0	
Marital Status			
Married	281	30.1	30.1
Widow/Divorce	54	5.8	35.9
Single	598	64.1	100.0

Total	933	100.0	
Educational Qualification			
Primary six and below	162	17.4	17.4
Secondary School	446	47.8	65.2
Certificate	184	19.7	84.9
OND/NCE	141	15.1	100.0
School Certificate	933	100.0	
HND/other higher degrees			
Total			
Occupation			
Student	554	59.4	59.4
Self-employed	118	12.6	72.2
Civil Servant	154	16.5	88.5
Trader	107	11.5	100.0
Total	933	100.0	
Actual Location of Employment			
Market	165	17.7	17.7
School	656	70.3	88.0
Ministry	112	12.0	100.0
Total	933	100.0	
Neighbourhood (Location)			
High Density	693	74.3	74.3
Low Density	240	25.7	100.0
Total	933	100.0	
LGA			
Ibadan North	255	27.3	27.3
Ibadan North East	202	21.7	49.0
Ibadan North West	174	18.6	67.6
Ibadan West	156	16.7	84.4
	146	15.6	100.0

Ibadan West Ibadan East Total	South South	933	100.0	
Income per month	per			
₦10,000 below	and	282	30.2	30.2
₦11,000 -		227	24.3	54.6
₦30,000 -		100	10.7	65.3
₦31,000 -		120	12.9	78.1
₦60,000 -		103	11.0	89.2
₦61,000 -		101	10.8	100.0
₦90,000 -		933	100.0	
₦91,000 -				
₦120,000 and above				
Total				
Type of Building	of			
Duplex		116	12.4	12.44
Flats		350	37.5	49.9
Bungalow		143	15.3	65.3
Face to Face		214	22.9	88.2
Storey Building		110	11.8	100.0
Total		933	100.0	
House/Space Use				
Residential		634	68.0	68.0
Business/Official		182	19.8	87.8
Market		117	12.2	100.0
Total		933	100.0	

Table 1 shows that 74.6 percent of the respondents are under 35yrs and of age; 64.1% are single (not married) and 60% are females. Seventy-four percent of the respondents live in high density

neighbourhood while 70.3% have their actual location of employment or training in schools. Sixty-eight percent of the respondents use their houses for residential purposes, 65.2% of them earned sixty thousand Naira and below per month. Table 1 also shows that 59.4% respondents are students, 47% are school certificate holders while 37.5% live in flats and 27.3% are from Ibadan North Local Government Area, 21.7% from Ibadan North East, 18.6% are from Ibadan North West, 16.7% from Ibadan South-west while 15.6% are from Ibadan South East Local Government Area. The minimum qualification of most of the respondents is School Certificate (48%) whereas (35%) are either fairly or very well educated that is, have NCE or university degrees.

Table 2: Summary of Descriptive Statistics of Perceived Factors for Improved and Sustainable Environmental Sanitation in Ibadan Metropolis

Item No	Statement	Response		
		Yes (%age)	No (%age)	No Response (%age)
1	Community dwellers should compulsorily hold regular meetings on environmental issues in the community.	861 (92.1%)	68 (7.3%)	4 (0.4%)
2	Environmental laws should be enforced.	869 (93.1%)	63 (6.8%)	1 (0.1%)
3	Regular campaigns, meetings and discussion on refuse disposal enlightenment should be held with community dwellers.	856 (91.7%)	70 (7.5%)	7 (0.8%)
4	Provision of waste cabins in accessible points in every community is a necessity.	882 (94.5%)	50 (5.4%)	1 (0.1%)

5	Availability of toilet facility in every house and public places should be enforced.	866 (92.8%)	66 (7.1%)	1 (0.1%)
6	Environmental health education should form part of school curriculum at all levels in the state.	885 (94.9%)	45 (4.8%)	3 (0.3%)
7	The use of materials that cannot decay should be encouraged in the package of household food.	48 (5.1%)	395 (42.3%)	5 (0.5%)
8	The arrangement of buildings within Ibadan should allow for effective refuse disposal in trucks and vans.	533 (57.1%)	395 (42.3%)	2 (0.2%)
9	Building structures within Ibadan should allow for effective refuse disposal by trucks and vans.	822 (88.1%)	108 (11.6%)	2 (0.2%)
10	Employment and training of environmental health officers, refuse collectors and labourers is important.	810 (86.82%)	121 (12.97%)	2 (0.21%)
11	Need for regular collection and disposal of refuse	679 (72.78%)	253 (27.12%)	1 (0.11%)
12	Monitoring of people in the way they dispose refuse especially in public places is important.	679 (72.78%)	253 (27.12%)	1 (0.11%)

13	Converting waste to wealth initiative should be introduced in Ibadan.	510 (54.66%)	418 (44.80%)	5 (0.54%)
14	Need for provision of adequate funds to waste management agencies for efficient services is essential.	772 (82.74%)	161 (17.26%)	0 (0%)
15	Need for the Introduction of shift duties for sanitary inspectors for effective services is ideal.	465 (49.84%)	464 (49.73%)	4 (0.43%)
16	People's participation in refuse management is paramount for a healthy environment.	350 (37.51%)	581 (62.27)	2 (0.21%)

Table 2 shows that more than ninety-four percent of the sampled respondents respectively are of the opinion that environmental health education should form part of school curriculum at all levels (item 6) and that provision of waste cabins in accessible points in every community is a necessity (item 4). Over ninety percent of the respondents respectively agreed that environmental laws should be enforced (item 2); community dwellers should hold regular meetings on environmental issues in the community (item 1); availability of toilet facility in every house and public places should be enforced (item 5) and that regular campaigns, meetings discussion on refuse disposal enlightenment should be held with community dwellers (item 3). Above eighty percent of respondents agreed that building structures within Ibadan should allow for effective refuse disposal by trucks and vans (item 9) and more than fifty-seven percent agreed that arrangement of buildings within Ibadan should allow for effective refuse disposal by trucks and vans (item 8) while just about five percent of the respondents agreed that the use of materials that cannot decay should be encouraged in the packaging of household food (item 7).

Table 2 shows that ninety-five percent of the sampled

respondents are of the opinion that environmental health education should form part of school curriculum at all levels (item 6) and that provision of waste cabins in accessible points in every community is of necessity (item 4). Ninety-two to ninety-three percent of the respondents respectively agreed that environmental laws should be enforced (item 2); community dwellers should hold regular meetings on environmental issues in the community (item 1); availability of toilet facility in every house and public places should be enforced (item 5) and that regular campaigns, meetings discussion on refuse disposal enlightenment should be held with community dwellers (item 3). Eighty-eight percent of respondents agreed that building structures within Ibadan should allow for effective refuse disposal by trucks and vans (item 9) and fifty-seven percent agreed that arrangement of buildings within Ibadan should allow for effective refuse disposal by trucks and vans (item 8) while just above five percent of the respondents agreed that the use of non-degradable materials should be encouraged in the packaging of household food (item 7).

Table 2 further shows that eight hundred and ten (86.8%) suggested that there is need for the employment and training of environmental health officers, refuse collectors and labourers as a way of improving environmental sanitation in the metropolis (item, 10), while six hundred and seventy-nine (72.8%) respectively supported the regular collection and disposal of refuse (item,11); and monitoring of people in the way they dispose refuse, (item, 12). Five hundred and ten (54.7%) supported waste to wealth activities (item, 13) while seven hundred and seventy-two (82.7%) supported provision of funds (item 14); introduction of shift duties for sanitary inspectors; four hundred and sixty-five (49.8%) (item 15) and people's participation in refuse management was suggested by three hundred and fifty (37.5%) as the way that can improve environmental sanitation (item, 16).

Discussion

The study findings have indicated that a modest proportion (50-60%) of the inhabitants of Ibadan who participated in the study, can be classified as belonging to the middle socio-economic status (working class) by the nature of their qualification, occupation and the kind of houses they live and income earned. Only a small proportion (less than 20%) belong to the low socio-economic class,

while the remaining proportion (20-30%) can be classified as belonging to the high socio-economic class. Those who belong to the high socio-economic class live in duplexes, bungalows and earn over N120,000 per month, and probably have good education and work as self-employed or as civil servants in various ministries in the State. Those of low socio-economic status are mainly students and market traders some of whom live in high density areas and are of low educational qualification.

The study findings further indicated that enlightenment programmes that are designed to involve community dwellers' participation are paramount. Findings also showed that introduction of environmental health education at all levels of education would most likely enhance attitude of inhabitants towards a more sustainable and improved environmental sanitation in the city. This is borne out of the fact that 94.5% of the respondents expressed the views that environmental health education should be enshrined in the educational curriculum at all levels, to serve as a means by which the objectives and goals of attaining sustainable healthy environment can be achieved, spread and its sustenance ensured. This finding is supported by Okechukwu (2002), Osuafor (2002), Okwilagwe and Adigun (2011). Okechukwu (2002) for instance, had recommended that environmental education must be an integral part of the nation's educational system aimed at building up the environmental ethics which will be concerned with contributing to both public well-being and insuring the survival of our planet and the people therein. Okwilagwe and Adigun (2011) found that educated inhabitants of Ibadan city have better attitudes at environmental sanitation.

Findings are also in support of the views of the United Nations Environmental Programme (UNEP) (2005) in Adio-Moses (2007) that the key to changing solid waste management (SWM) practices at the consumer level is to provide health education to the public and also to make a distinction between public awareness and public education. It further reiterated that an informed and educated public can do much to improve the effectiveness of solid waste management in their communities. UNEP (2005) views and the findings of Okwilagwe and Adigun (2011) are a further confirmation of the importance of education in behaviour change.

The study findings have indicated that there is the need for provision of solid waste management facilities. Ninety-five

percent of the respondents perceived that provision of facilities for waste disposal will enhance Ibadan metropolis inhabitants' positive attitude towards solid waste disposal. The Federal Ministry of Environment (2004) cited in Adio-Moses (2007) tends to confirm this in its assertion that the problem of waste management is expounded by the gross inadequacy of sanitary facilities including refuse disposal cabins in the markets, poor supervision of markets by ill-trained, ill-equipped and corrupt sanitary officials.

Conclusion and Recommendations

The state of the environment has a deciding positive or negative effect on the activities of human beings, living and non-living things and to a great extent determines their well-being. The need to ensure a clean and healthy sustainable environment makes it a necessity for urgent attention to be given to proper waste disposal and management in the city of Ibadan. This study has revealed that the factors the inhabitants of Ibadan metropolis perceived could improve and sustain the environment in the city, are people oriented and they border on proper education, monitoring of the populace, provision of adequate facilities, enforcement of environmental laws, awareness creation and regular community meetings.

Based on these findings, the following recommendations are made:

- i. the government should provide adequate waste cabins and other facilities in accessible points in every community and market places;
- ii. government through policy enactment, should include environmental education into the school curriculum at all levels of our educational system; and
- iii. environmental laws, rules and regulations as laid down should be enforced by authorized agencies.
- iv. there should be enlightenment programmes where community dwellers' participation interaction and involvement on waste management is promoted;
- v. Provision of funds to the relevant agencies to embark on proper solid waste management projects;

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