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UPSHOT OF TRASH DUMPING ON VIGOR IN PORT HARCOURT METROPOLIS

BY

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ABSTRACT

The study investigated the upshot of waste Dumping practices in Port Harcourt metropolis of Rivers State. A total of 133 questionnaires were distributed and 133 were returned. The results showed that there were: no guidelines as regards waste dumping and dumpsites, inadequacy in funding, laxity in the practice of waste management as well as lack of organized waste management systems etc. Government should provide adequate funds for waste management personnel for the purchase of more evacuating vehicles and waste Dumping containers. There is need for environmental and public health education on the danger of indiscriminate waste Dumping in the study area. There is need to strengthen the work force, by recruiting more personnel in the Waste Management Authority. Government should provide adequate funds for waste management personnel for the purchase of more evacuating vehicles and waste Dumping containers. There is need for environmental and public health education on the danger of indiscriminate waste Dumping.

Keywords: Waste Dumping Practices; Waste Management; Environmental Health; Public Health Education; Environmental Pollution; Dumpsite Management; Port Harcourt Metropolis.

INTRODUCTION

The importance of living in a clean environment cannot be over-emphasized. Once an environment is free of indecent waste, its impact is usually seen in all aspects of life of individuals having contact with that environment. Solid waste products are properly managed in order to prevent the occurrence of attendant problems associated with poor waste management including water contamination, air contamination, increased prevalence of vector-borne diseases, infection spread etc. Proper waste management methods have been shown to contribute to the decrease in the quality of health of a population as a result of environmental health nuisances that have risen due to poor waste management methods (Oyebode, 2013; Igbinomwanhia et al., 2014; Awajiogak, 2013). These waste products broadly called Municipal Solid Waste (MSW), includes effluents arising from agricultural, industrial, construction, mining and exploration or commercial activities which could be gaseous, solid, semi-solid or liquid in nature; garbage disposed at trash dumps, abandoned non-functional cars equipment's and all other materials which are regarded as no longer useful. These waste products are however at certain times are not properly disposed or managed which in turn leads to the occurrence of environmental of environmental and public health challenges (Onwughara et al., 2010; Schübeler et al., 1996; Karija et al., 2013). Municipal solid waste management however remains a major environmental health challenge in Nigeria which has been attributed to indiscriminate roadside trash Dumping, open dumping of waste products, a massive unplanned urbanization trend and growth of the population, absence of actionable guidelines as regards trash dumping and trash dumpsites, inadequacy in funding, laxity in the practice of waste management as well as absence of organized waste management systems etc (Igbinomwanhia et al., 2014; Abah and Ohimain, 2010; Agwu, 2012). An assessment of the urban waste problem in Nigeria has revealed that Nigerian cities were among the dirtiest cities in the world and that over 80% of Nigerians use waste Dumping methods that are not in line with World Health Organization standards (Federal Ministry of Environment, 2002). It is noteworthy to state that the

government of Nigeria on its own part has played significant roles in ensuring that this menace is curbed through the enactment of regulations and legislations that ensure the practice of adequate waste management. This is however not enough on its own as the populace must also be educated on how best they can adhere to these laws as non-adherence not just only leads to facing penalties from environmental health agencies but can also lead to deterioration in health as well as deaths. This is an issue that must be addressed round the clock despite the many challenges being faced by the relevant waste management authorities.

Statement of Problem

Improper waste management has led to the spread of various diseases and several environmental hazards. Thus, generation of toxic substance into the atmosphere and pollutants into aquatic environment is becoming an issue of concern. Following these challenges, it has become an issue on where to dispose waste safely to prevent disease spread. Consequently, these wastes have become a big threat to man's survival thereby associated with disease emergence.

Significance of the Study

The study will be beneficial to the timing population of Rivers State, more specifically, the ever-increasing domestic waste that has negatively, affected the aesthetic feature of the State. Thus, inhabitance of the State would be well informed of the upshotof this indiscriminately disposed waste on her health and also look forward to prevent the impact.

REVIEW OF RELAED LITERATURE

Waste is more easily recognized than defined. Something can become waste when it is no longer useful to the owner or it is used and fails to fulfill its purpose (Gaurlay, 2012). Solid waste according to Milter (2008) is any useless unwanted or discarded materials that are not liquid or gas. It is a great mixture of substances including fine dust, metal, glass, paper and cardboards, textiles, vegetable materials and plastic characterize solid waste (Simmens, 2001). Wastes as opined by Oluwade (2009) are trash (empty containers, papers rubbish e.t.c) sewage (faeces, water urine) and industrial waste (chemical nuclear) that result from the manufacturing of certain substances, materials and equipment. The interaction organisms and their environment leads to the generation of waste. Waste is non-beneficial materials discarded; therefore all these have to be properly disposed. trash are waste materials that have been thrown away. The statutory definition of trash is not based on the physical form of materials, that is, whether or not it is solid, as opposed to liquid or gas but on the fact that the material is a waste.

The United State Environmental Protection Agency (2011) defines solid trash as any garbage, trash, sludge from a waste water treatment plant, water supply treatment plant or air deed material, including solid, liquid, semi-solid or contaminated gaseous material and agricultural operation and from community activities. Human has always produced waste that included not only the discarded bones of animals slaughtered for food. trash according to Clesceri (2008) can be divided into two main groups these are: that which is mainly dry and can be put directly in the dustbins and that which is liquid and may be drained away through pipes. The dry household trash can be disposed using galvanized iron or plastic bins having a well – fitted lids and two handles for easy transportation. The bins are placed away from the kitchen or the back door. The only waste that should be put in this bin are dusts, waste papers, leaves, nylon or cellophane wrappers tins and bottles. The other type of wastes includes faeces, urine and water wastes from our kitchen and bathroom. United Nations Environmental Programme (2010), states that human beings are faced with the problem of the Dumping of waste. In villages people have a lot of land at their Dumping. Organic matters can be thrown away and they are allowed to decompose on this land. However, in cities and towns, people run the risk of being infected with diseases due to limited land to spare for trash. The Consequences of indiscriminate waste Dumping in man are numerous. The flora or fauna on the environment in form of health problems from convulsion, dermatitis, irritation of nose, throat, anemia, skin burns, chest pains, blood disorders, stomach aches, vomiting, diarrhea, lungs cancer to death. Other health Consequences includes flies which carry germs on their bodies and legs and also excrete them, mosquitoes breed in stagnant water, blocked

drains in favourable location (Freeze and Cherry, 2006). Some residents burn their trash, while others indiscriminately burry it. Indiscriminate Dumping, burning and burying of trash pose major environmental and health threats through soil and water which put the entire eco-system of an area in danger. The contamination of waste cause severe problems for human and animals alike. The major environmental Consequences include air pollution which includes odour, smoke, noise, dust and so on. The rapid growth of cities in the developing world in recent decades has resulted in increased consumption of resources to meet the growing demands of urban population and industry. This situation leads to generation of large amount of waste. Seventy to eighty percent of trash in African cities are disposed of by dumping in open spaces, water bodies and surface drains as a result of inadequate infrastructure and ignorance of inhabitants (United Nations Environmental Programme, 2010). Indiscriminate Dumping of waste is detrimental to health because it creates unsanitary environment that have adverse impacts for urban residents where sanitary facilities are scarce and the household trash are not disposed properly, compound the health hazards. (Oluwade, 2009). Nigerian cities have been described as some of the dirtiest, most unsanitary and the least aesthetically pleasing in the world (Gomez and Nakat 2007). It has been suggested that the quantity of wastes generated in the state is proportional to population size. As population increases so also waste generated also increases. When materials are stored in a place or container before it is being transported for the point of storage, the point of Dumping, this can then be dumped on land at a tip either in engineered and hygienic way or indiscriminately disposed. A healthy man is a wealthy man; if a nation is healthy the nation will be wealthy. A healthy man brings about a wealthy man which brings the expression "health is wealth." The dangers of indiscriminate waste Dumping are all around the nooks and crannies of the country and the Consequences constitute nothing but negative Consequences to the inhabitants.

Conceptual Reviews; Wastes and solid wastes

The concept of waste is one that has attracted so much concern from various researchers. This is because many items can be regarded as waste yet what is waste to one individual may not be waste to another. Wastes may be useful materials but are in places where they are not needed. A discarded empty beer bottle or empty bottled water container may be useful to a 'zobo' seller. Though these empty containers are discarded because their owners found them useless, they can become a resource to another person. In the light of this, waste has been conceptualized by different authors. Adewumi (2001) defined waste as a resource in the wrong place. In a different perspective, Tchobanoglous and Kreith (2002) opined that wastes are discarded tangible products of human activities that are regarded as unwanted and useless. Similarly, Abiodun (2003) refers to waste as lack of use or value or useless remains. According to him, it is a by-product of human activities. Oyeniyi (2011) defined waste as any material which has been used and is no longer wanted because the valuable or useful part of it has been taken out. This means that wastes are such items which people are required to discard because their owners no longer see any value in them but can serve another person a useful purpose. Merriam Webster dictionary (2013) defined waste as trash from places of human or animal habitation. In the same light, The World Book Dictionary (2013) defined waste as useless or worthless material; stuff to be thrown away. Unfortunately, these definitions of wastes, except that of Adewumi, reflect a widespread attitude that does not recognize waste as a resource. But then, Zero Waste America (2013) saw waste in the light of Adewumi (2001), as a resource that is not safely recycled back into the environment or the marketplace. This definition takes into account the value of wastes as a resource, as well as the threat its unsafe recycling can present to the environment and public health. From the foregoing review, it can be said that waste is a useless material that can become a resource if treated well. For this study, wastes are materials that their owners no longer see any value in but can become a resource to another person when safely recycled. Various items can be considered as waste. Ezigbo (2012) stated that waste can be any garbage, sludge, and gaseous and other discharged materials resulting from various community activities. He further stated that waste consists therefore of discarded materials resulting from domestic and

community activities, and from industrial, commercial, and agricultural operation e.g., household rubbish, sewage sludge, wastes from manufacturing activities, packaging items, discarded cars, old televisions, garden waste, and old paint containers. Rathi, (2007) opined that waste is an unavoidable by-product of human activities. It then follows that waste can be generated anywhere, thus, all our daily activities can give rise to a large variety of different wastes arising from different sources. These may include wastes coming from households, commercial activities (e.g., shops, restaurants, and hospitals), industry (e.g, pharmaceutical companies, clothes manufacturers etc.), agriculture (e.g., slurry), construction and demolition projects, mining and quarrying activities and from the generation of energy. Wastes can exist in liquid, solid and gaseous forms which simply denote the state of matters that make up the waste.

Theoretical Framework

The Theory of Planned Behavior (TPB) state that an individual's behavioral Beliefs, normative beliefs and control beliefs respectively determine attitude towards a given behavior, subjective norm, and perceived behavioral control, which collectively influence the behavioral intention and actual behavior of the individual when participatory decision in an action are voluntary and under an individual's control. The research assumes that the background (sex, age and social class) of Obio/Akpor residents influences their attitude, subjective norm and perceived behavioral control thus determining the behavioral intention/actual behavior i.e. trash Dumping and trash management (Ajzen, 1991).

In the past sanitation was taken to be influenced by miasma theory which stated that occurrence of diseases was caused by inhaling bad air. Up to the mid of 19th century cholera, a water borne disease, which claimed many lives in Europe was believed to spread through polluted air (Pathak1995) Wall, Genthe et al., 2012). It was latter on that researchers of their time, to mention just few of them such as Louis Pasteur (1822 –1895) a French chemist and microbiologist, who discovered the principles of vaccination, microbial fermentation and pasteurization and Joseph Lister (1827–1912) British surgeon who discovered antiseptic surgery; came with the theory that germs transmit diseases (Smith 1920; Pathak1995; Wall, Genthe et al., 2012). In 1854,

John Snow a medicine doctor proclaimed that cholera was a water-borne disease. He made the claim after his study carried at unplanned part of London urban area. He found out that water from a borehole in the area had infected by germs which caused spread of cholera disease. However, people did not believe the result, so they took it for granted and with great doubt (Wall et al., 2012). Sanitation theory therefore emphasizes the importance of cleanliness and absence of germs and provision of facilities to achieve such absence (Wasike, 2010). According to Wall et al. (2012), sanitation theory states that microorganisms are responsible for infectious diseases

By a model of sanitation it means anything that a planner or any other actor can use to make prediction of how the sanitation situation will respond to its use. There are several models in planning which act as tools in solving peoples' day to day sanitation problem (Patton et al., 2012). Advancement in supply of affordable technologies that facilitate access to improved sanitation and hygiene Procedures are taken as feasible answers for eliminating cases of occurrences of controllable diseases and death. There are efforts made that came out with some theoretical models, explanatory frameworks and decision making models that attempt to influence behaviour change interventions associated with sanitation (Dreibelbis et al. 2013). Most of sanitation model aims to provide a conceptual and practical tool for scaling up our Awareness and skills in evaluating different factors that influence sanitation and hygiene Procedures in different context. Important aspect for consideration being the issue of sustainability of the model. There are quite a number of models:

The Integrated Behavioral Model for Water, Sanitation and Hygiene (IBM-WASH) focuses on ability to promote and sustain behaviour change at the individual, household, community, and structural/institution levels. The model relies into the contextual, psychosocial, and technology dimensions of WASH Procedures.

The contextual dimension gives the characteristic of the setting, personal, or environment that are in most cases outside the range of influence of

program activities but they can affect acceptance of certain products and/or behaviours. Examples are capacity to get sanitation products, access to enabling resources (like water for hand washing), socioeconomic, demographic and household characteristics and the physical environment. The context in which behaviour occurs is dynamic and changes throughout the day –children go to school, adults go to work, household members go to the market. The final level of the Contextual Dimension explicitly addresses these by identifying other opportunities or the lack of other opportunities to repeat and continue practicing an improved behavior. Understanding hand washing behaviors among school children at home must be understood within the context of hand washing water, soap, and facilities available at schools. The IBM-WASH framework provides a simple, adaptable tool for understanding WASH behaviours and habit formation that is informed by existing theoretical insights at multiple levels and dimensions (Dreibelbis et al., 2013)

The psychosocial dimension in this model consists of issues that can influence direct acceptance of introduced sanitation actions. These are taken as behavioral determinants. Example is disgust which has been used as one of psychosocial determinant in WASH to foster hand washing with soap and to stop open defecation. In Community Led Total Sanitation (CLTS), elicitation of disgust at the community level is a key step immobilizing support for sanitation improvements. Social norms and/or social desirability, and aspirations are also widely awakened to influence WASH Procedures as well as play a central role in Diffusion of Innovation Theory. Awareness and perceived threat of illness –particularly diarrhoeal/cholera disease –are often key components of behaviour change promotion strategies.(Dreibelbis et al. 2013).

In this context issue of consideration is how the introduced technology can have influence on behavioural outcomes. Technology includes its placement because sometimes location of the technology that was expected to facilitate good behaviour toward sanitation Procedures may inhibit instead of facilitating good sanitation Procedure. Having soap or water at a convenient location for hand washing was associated with improved hand washing Procedures following faecal contact in rural Bangladesh (Dreibelbis et al. 2013)

Rational decision-making model is known in organizational behavior, is used for making logically sound decisions. It is a multi-step model that logically starts from studying the existing situation to identifying the problem through to determining the solution. This is one of the models that can be used in determining sanitation problems in particular localities and trying to find out the desired solutions for such problems, given the circumstances of the community in question. Rational decision –making model.19.2.2.3 Consumer Led Aspirational Sanitation Services (CLASS) model. This model takes people's aspirations as the major focus and proposes that these aspirations become the starting point rather than the conventional pit latrine alternatives designed by experts being the starting point for sanitation services development. The model awareness many challenges associated with it. People's aspirations could be very diverse and hence, the difficulty in putting them together for a comprehensive sanitation development plan, on the one hand, and also sometimes the contrasting views between the expertise thinking and the local people's thinking in regard to sanitation planning processes of the models that can be used in determining sanitation problems in particular localities and trying to find out the desired solutions for such problems, given the circumstances of the community in question. Rational decision –making model.19.2.2.3 Consumer Led Aspirational Sanitation Services (CLASS) model. This model takes people's aspirations as the major focus and proposes that these aspirations become the starting point rather than the conventional pit latrine alternatives designed by experts being the starting point for sanitation services development. The model awareness many challenges associated with it. People's aspirations could be very diverse and hence, the difficulty in putting them together for a comprehensive sanitation development plan, on the one hand, and also sometimes the contrasting views between the expertise thinking and the local people's thinking in regard to sanitation planning processes. of

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WASH Map model uses social media and tools for to gather data on water and sanitation. Important data on sanitation coverage and occurrences of open defecation are collected and mapped. The collected information can then be used to instigate communities and /or decision makers to engage in action, taking community led total sanitation approaches as an inspiration. This is a model that can easily be used in urban areas, but very difficult to operationalized in rural areas.

Progress Linked Finance (PLF) model is designed to provide incentives and to give support to water, sanitation and hygiene (WASH) service providers to meet the needs of low-income consumers in a financially sustainable manner. In this model, multilateral financing institutions make commitment to provide concessional finance in a stated time set during agreement with urban WASH service providers. The urban WASH service provider would receive the agreed finance support after being able to demonstrate commercially viable service delivery to poor communities, and has built its capacity to a level of readiness for scale-up of services to low income consumers (WSUP, 2014).

The PLF model proposes, among other models, the use of "The Integrated Behavioural Model for Water, Sanitation, and Hygiene (IBM-WASH)", which is built in a form of a matrix, which has three dimensions (the contextual dimension, psychosocial dimension, and the technological dimension) which appears in the column. As the three dimensions work together they reflect the notion of shared determinism in "Social Cognitive Theory", which defines reciprocated interfaces amid the individual, the behaviour, and the environment in which the behaviour is Procedured (Dreibelbis et al. 2013).

According to an empirical study by Otu and Ibrahim (2014), poor solid waste management practices in Nigeria have led to the proliferation of infectious and communicable diseases. The study revealed that a high percentage of trash disposed in Nigeria is domestic waste, which harbors several pathogens. Additionally, the study found that the improper Dumping of medical waste was a significant contributor to the spread of infectious diseases in health facilities. Respiratory Problems trash Dumping can also contribute to respiratory problems. The burning of waste, which is common in Nigeria, can emit toxic gases and particulate matter that can be harmful to human health. These emissions can cause respiratory issues such as bronchitis, asthma, and other respiratory illnesses. Furthermore, the buildup of organic matter in waste sites can lead to the proliferation of mold, which is another respiratory hazard (Ogbonna & Onyebuchi, 2016).

These are materials of statistical investigation which were collected by the research for a particular purpose. They can be obtained through a survey, observation questionnaire or as experiment, the research

her has adopted the questionnaire method for this study.

Secondary Source:

These are data from textbook Journal handset etc. they arise as byproducts of the same other purposes. Example administration, various other unpublished works and write ups were also used.

Population of the Study

Population of a study is a group of persons or aggregate items, things the researcher is interested in getting information from the study of the upshotof trash Dumping on Vigorin Nigeria. A total of 200 staff of Rivers state waste management agency (RSWMA) was selected randomly by the researcher as the population of the study.

3.3Sample and Sampling Procedure

Sample is the set people or items which constitute part of a given population sampling. Due to large size of the target population, the researcher used the Taro Yamani formula as the procedure of arriving at the sample size.

n= N
1+N(e)2
n= 200
1+200(0.05)2
= 200
1+200(0.0025)
= 200 200
1+0.5 = 1.5 = 133

Instrument for Data Collection

The major research instrument used is the questionnaires. This was appropriately moderated. The students were administered with the questionnaires to complete, with or without disclosing their identities. The questionnaire was designed to obtain sufficient and relevant information from the respondents. The primary data contained information extracted from the questionnaires in which the respondents were required to give specific answer to a question by ticking in front of an appropriate answer and administered the same on staff of the organizations: The questionnaires contained about 16 structured questions which were divided into sections A and B.

Validation of the Research Instrument

The questionnaire used as the research instrument was subjected to face its validation. This research instrument (questionnaire) adopted was adequately checked and validated by the supervisor his contributions and corrections were included into the final draft of the research instrument used.

Method of Data Analysis

The data collected was not an end in itself but it served as a means to an end. The end being the use of the required data to understand the various situations it is with a view to making valuable recommendations and contributions. To this end, the data collected has to be analysis for any meaningful interpretation to come out with some results. It is for this reason that the following methods were adopted in the research project for the analysis of the data collected. For a comprehensive analysis of data collected, emphases were laid on the use of absolute numbers frequencies of responses and percentages. Answers to the research questions were provided through the comparison of the percentage of the staff response to each statement in the questionnaire related to any specified question being considered.

Frequency in this study refers to the arrangement of responses in order of magnitude or occurrence while percentage refers to the arrangements of the responses in order of their proportion.

The simple percentage method is believed to be straight forward easy to interpret and understand method. The researcher therefore chooses the simple percentage as the method to use. The formula for percentage is shown as.

% = f/N x 100/1

where f = frequency of respondent's response

N = Total Number of responses of the sample

100 = Consistency in the percentage of respondents for each item contained in questions.

RESULTS

Table 1: Gender distribution of the respondents

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	77	57.9	57.9	57.9
	Female	56	42.1	42.1	100.0
	Total	133	100.0	100.0	

From the above table it shows that 57.9% of the respondents were male while 42.1% of the respondents were female.

Question 2

Table 2 The positions held by respondents

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Environmentalist	37	27.8	27.8	27.8
	Waste collectors	50	37.6	37.6	65.4
	Drivers	23	17.3	17.3	82.7
	managers	23	17.3	17.3	100.0
	Total	133	100.0	100.0	

The above tables shown that 37 respondents which represent27.8% of the respondents are waste environmentalist, 50 respondents which represents 37.6 % are waste collectors, 23 respondents which represents 17.3% of the respondents are news drivers, while 23 respondents which represents 17.3% of the respondents are managers.

Table 3 Are there implications of an improper waste Dumping system?

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	89	66.9	66.9	66.9
	No	30	22.6	22.6	89.5
	Undecided	14	10.5	10.5	100.0
	Total	133	100.0	100.0	

From the table above, the researcher asked the respondents are their implications of an improper waste Dumping system, it can be observed that 89 respondents which represents 66.9% said yes that improper trashd Dumping has a negative implication on the health of the populace, 30 respondents which represents 22.6% said No, that improper trashd Dumping has no implication on the health of the populace, while 14 respondents which represents 10.5% of the respondents were undecided.

The researcher therefore concludes that improper trashd Dumping has a negative implication on the health of the populace.

Table 2: The present state of trashd Dumping in Rivers State appropriate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	83	62.4	62.4	62.4
	Yes	32	24.1	24.1	86.5
	Undecided	18	13.5	13.5	100.0
	Total	133	100.0	100.0	

From the table above, the researcher asked the respondents is the present state of trashd Dumping in Rivers State appropriate, it can be observed that 83 respondents which represents 62.4% of the respondents said No, 32 respondents which represents 24.1% of the respondents said Yes, while 18 respondents which represents 13.5% were undecided.

The researcher therefore concludes that trashd Dumping in Rivers State is inappropriate.

Table 5: Modern technologies involved in waste management and their long-term benefits compared to their cost

	Response	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agreed	69	51.9	51.9	51.9
	Strongly Agreed	21	15.8	15.8	67.7
	Disagreed	32	24.1	24.1	91.7
	Strongly Disagreed	11	8.3	8.3	100.0
	Total	133	100.0	100.0	

From the table above, the researcher asked the respondents are the modern technologies involved in waste management and their long-term benefits compared to their cost, it can be observed that 69 respondents which represents 51.9% agrees that it benefit supersede the cost, 21 respondents which represents 15.8% are strongly agreed to this fact, 32 respondents which represents 24.1% disagreed, while 11 respondents which represents 8.3% strongly disagreed.

The researcher therefore concludes that the benefit of modern waste management machine supersedes the cost

Table 6: Effective method that can be used to managed waste in Rivers State?

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agreed	65	48.9	48.9	48.9
	Strongly agreed	23	17.3	17.3	66.2
	Disagreed	31	23.3	23.3	89.5
	Strongly Disagreed	14	10.5	10.5	100.0
	Total	133	100.0	100.0	

In the table above, the researcher asked the respondent Are there more effective method that can be used to managed waste in Rivers State, 65 respondents which represents 48.9% Agreed that there are more upshotmethod of trashd management, 23 respondents which represents 17.3% strongly Agreed, 31 respondents which represents 23.3% Disagreed while 14 respondents which represents 10.5% strongly disagreed.

The researcher therefore concludes that there are more upshotway of trashd management.

Summary

In trash Dumping management there is no 'away'. When 'throwing away' waste, system complexities and the integrated nature of materials and pollution are quickly apparent. For example, waste incineration is expensive and poses challenges of air pollution and ash Dumping. Incineration requires waste placed outside for collection to be containerized to stay dry, and much of the waste stream is not combustible. Landfills require land availability, and siting is often opposed by potential neighboring residents. Solving one problem often introduces a new one, and if not well executed, the new problem is often of greater cost and complexity.

Conclusion

Waste management plays an integral role in human activity. The overall view of solid waste management is to collect, treat and dispose solid waste by urban dwellers in an environmentally and socially satisfactory manner. Until recently, Nigerians have not been particularly concerned about proper waste management, open dumping and open burning in unapproved locations has been the norms. The constraints to upshotsolid waste management are not limited to lack of policy or laws, but poor infrastructure, education, social awareness of problems and solutions, and lack of institution promoting sustainable environmental actions.

Recommendation

Haven successfully completed the study the following recommendations were made: Strategic environmental planning of waste Dumping and management practices in the study area. There is need to ensure strict adherence to guidance and cost analysis of solid waste options in the area. Community participation in collection, selection of sites and design of facilities is inherently essential for sustainability. There is need to strengthen the work force, by recruiting more personnel in the Waste Management Authority. Government should provide adequate funds for waste management personnel for the purchase of more evacuating vehicles and waste Dumping containers. There is need for environmental and public health education on the danger of indiscriminate waste Dumping in the study area.

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