

WASTE DISPOSAL PRACTICES AMONG EKOSODIN RESIDENTS

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**DEPARTRMENT OF HEALTH SAFETY AND ENVIRONMENTAL
EDUCATION**

FACULTY OF EDUCATION

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BENIN CITY

MAY, 2024

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**RESEARCH PROJECT PRESENTED TO THE DEPARTMENT OF
HEALTH SAFETY AND ENVIRONMENTAL EDUCATION, UNIVERSITY
OF BENIN, BENIN CITY, IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF B.Sc (Ed) DEGREE IN
ENVIRONMENTAL EDUCATION**

MAY 2024

APPROVAL

I hereby certify that this work was carried out by **Williams Ekoja IDUH** in partial fulfilment of the requirements for the award of B.sc (Ed) degree in Environmental Education in the Department of Health safety and environmental education. Faculty of Education, University of Benin, Benin City.

.....

Dr. Norris Erhabor
(Project Supervisor)

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Date

CERTIFICATION

We, the undersigned certify and approve that this research work was carried out by **Williams Ekoja IDUH** with matriculation number **EDU1603363** in the Department of Health safety and environmental education, Faculty of Education, University of Benin, Benin City.

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DEDICATION

I want to dedicate this project to God almighty who has never left me destitute of His mercies all through my journey in the university of Benin.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to God almighty for keeping me alive today and also to everyone who helped in completing this project

I would like to Extend my gratitude To my project Supervisor Dr Norris Erhabr who is always ready to listen, who didn't give up on me when I almost quit, who is always there to give a helping hand, one of the few persons who made my stay in uniben amazing. Am glad our paths crossed thank you sir for everything and may God continue to bless you

To Mrs ju Don my school Mother the first I always run to when I get frustrated her constant advise and encouragement kept me going, the one person that made me to stop being scared of the worst. May God continue to bless you ma

I also want to say thank you the entire staff of H.S.E(Health safety and Environmental Education) Teaching and None teaching staff included], for their continuous guidance, encouragement, and expertise. I am grateful for the knowledge and skills.

Am grateful To my Ever loving parents Thank you for all the constant prayers, words of encouragements, unwavering support and belief in my abilities.

Financial assistance, The troubles of travelling to and fro. Even when I thought all hope was lost they still come through for May God keep you and bless

To Dr Atimati and his wife, my first encounter In uniben who were always ready to listen, help in whatever way they can, Money, advice, any form of assistance

To Mr Christopher Odeh(Bros Chris) for his ever loving nature, who will always find it hard to say no to any form of requests, he was always there to run to

To my friend joy Diri and Anthony Atimati the two musketeers. Although the road was tough we were able to Overcome. This two made my first years in uniben amazing all the memories am glad to have met the both of you thank you and God bless

To Micah and lucky my Roommates who became more than friends. The two backbone who didn't shift nor break. Thank you for handling all my troubles

This wouldn't be complete without mentioning Ocita and Josh ,Danjigi the great and Josh king thank you for all the memories for all the troubles I caused may the good God bless you all

I would also like to acknowledge the assistance provided by the school administration and staff. Their cooperation and provision of resources have greatly contributed to the successful execution of this project

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ABSTRACT

This research investigated Waste Disposal Practice among Ekosodin residents. The purpose of this study was to determine the waste disposal practice of Ekosodin residents, to determine the age influence of waste disposal practice of Ekosodin residents and to determine the sex influence of waste disposal practice of Ekosodin residents. To determine the educational level influence of waste disposal practice of Ekosodin residents. A descriptive survey research design was adopted for the study. The population comprised of 143 residents who live in Newton street at Ekosodin. The sampling techniques used for the study was total of (100) students enumeration sampling Technique. A questionnaire was designed and titled Waste Disposal Practice among Ekosodin residents. A total of 100 copies of questionnaire were administered and 100 copies were duly completed, returned and found useable for this study. The instrument was subjected to face validation by the supervisor. Analyses and discussions of data collected for this study were descriptively done using mean and standard deviation. The findings of the study shows that the Ekosodin residents hardly practice waste disposal, the residents attitude and knowledge towards waste disposal are low. Majority of them still dump waste on the drainage, rivers and don't dispose toxic substance to the right place. Most of them keep their waste in a bag and only few follow management method of waste disposal. Recommendations were made which state that Hence, waste Management should create more awareness of the importance of proper waste disposal through campaign in Ekosodin it should be Compulsory and effective without further delay. Ekosodin community should involve and create dialogue around the proper waste disposal practice. It is also found necessary to change the mindset of the people. Everyone should be open to discussion about the side effects of not disposing waste rightly and help the younger people to understand how to dispose their waste and the importance of proper waste Management is. So, for that more education on waste disposal practice has to be taught to everyone. It is also important to form a policy on waste disposal practice in Ekosodin residents, Passage of this act would help increase awareness of the potential risks of engaging in the wrong way of waste disposal. All youth would be better equipped to make informed decisions about waste disposal practice in Ekosodin.

CHAPTER ONE

INTRODUCTION

Background of the Study

Waste is an inevitable by-product of human activities. It takes the form of solid, liquid and gas. Waste, over the past years, has been defined and considered as matter that has no monetary or economic value and discarded or thrown away if it fails to meet its primary function Aniekan, and Ikechukwu, (2016). Recent advances in technology and a better understanding of materials have been applied in the reduce, reuse, and recycling process that adds both monetary and economic value to waste matter while simultaneously mitigating the adverse effects of unchecked waste in the environment Igbinomwanhia, (2012). Ikpe, Owunna, and Agho, (2019).

Nigeria, an African country, over the past two decades, has seen a rise in economic and social activities as a result of the continuously increasing population; this has led to the increase in the quantity of waste generated.

According to Ikpe, Imonitie, and Ndon, (2019). The solid waste generation is one of the most significant environmental challenges bedeviling Nigerian cities in recent times. The amount and type of waste generated are directly proportional to the location and season Nwaokobia, Ogboru, and Okolie, (2013). Nigeria generates all types of waste and a large portion of the waste generated is indiscriminately disposed in the environment, even by waste collectors. Nigeria's poor waste management system has seen it exposes her citizens to public health risks and environmental dilapidation. The health risk posed by the indiscriminate waste disposal is seen by the "black death" epidemic of the 14th century that killed nearly half the population of

Europe. Its cause was from the unhygienic environment which aided the spread of the bacteria called “*Yersinia pestis*” by infected rodents and flea that find refuge in such environments Gani, and Okolie, (2013). The implication of improper waste management can result in adverse risk conditions such as ground water contamination, air pollution, increase in insect vectors and diseases transmitted by them, poor environmental aesthetics, attraction of vermin and pests, breeding grounds for disease spreading vectors such as “*mastomys natalensis*” (responsible for Lassa fever), emission of Green House Gases (GHGs) such as methane (CH₄) and carbon dioxide (CO₂) Ikpe, Egunilo, and Okovido, (2018). For example, decomposition of organic waste matter in open dumpsite releases poisonous gases such as hydrogen sulphide, ammonia, and offensive odour into the atmosphere; toxic leachate is also formed from the decomposition of open dumpsite waste (organic and inorganic) that mixes with water, polluting groundwater and surface water Ikpe, Ndon, and Adoh, (2019). The exposure of humans to waters contaminated by open waste dumping can lead to diseases like diarrhoea, cholera, skin diseases, malaria, tuberculosis, and cancer from the pathogens in the contaminant Onwuera, Ogugua, and Otitoju, (2016), Samuel, Davou, Juliet and Ruth (2006). Previous epidemiological studies have found that two main health outcomes -cancer and congenital malformations– are associated with waste exposure to dumpsites Mavropoulos, and Newman, (2015). Often man is responsible for the environmental risk-factors in the environment through indiscriminate disposal of waste. In Nigeria, the environmental risk-factor is high as is manifested in the form of piles of indiscriminately disposed waste at uncovered and illegal dumpsites which may contain toxic, infectious and radioactive waste Essienubong, Okechukwu, Ejuvwedia, Essienubong, Okechukwu, and Ejuvwedia, (2018). In Nigeria, open dumpsites are usually sited

for convenience, such as the presence of a pre-existing hole (created from sand mining activities) and are located residential housing and public markets and therefore poses significant threats to human health and the environment Aderemi, and Falafel, (2012). Living with solid waste littered around appears to be an acceptable way of life among the people in the metropolis in recent years as research studies found out that the perception of Nigerians towards sanitation and environmental hygiene contributed to waste management problem Igbinomwanhia, (2012), Banjo, Adebambo, and Dairo, (2009). Waste management is commonly seen and practiced as “pick up the waste and go dump it somewhere convenient for you”. Unchecked and unmanaged waste that is indiscriminately disposed in the environment finds its way in affecting the surrounding air, surface and ground waters, soil properties, aquatic culture and housing conditions, leading to unsafe, and unsuitable habitat for human life. The earth is primarily a life support system. It consists essentially of biochemical processes that imbue it with the capacity to sustain life. As an ecosystem, the earth however, has a threshold Abdullahi, Ugbede, (2013). Waste generated must be managed to ensure the environmental conditions suitable for human life. Unchecked and unmanaged waste poses great threats to environment, health and economy. Aside the public health risk posed by the indiscriminate dumping of solid waste, also there is the economic risk of lost employment opportunities: Optimized labour and equipment to enhance productivity, improved standard of living, threats to structural integrity as a result of drainage blockage causing flooding from rain water and also loss of arable land for agricultural productivity. The recent view of waste as a resource implies monetary and economic value that can be added to waste matter when it is processed. Waste could be an unofficial measure of prosperity; it can also be a major problem on man especially where it is

not well managed. With the continuous increase in the population of people, Nigeria is likely one of the most populous country on earth with a population of over 190 million people. This invariably implies that Nigeria is one of the largest producer of methane (CH₄) from the decomposition of organic wastes at open dumpsites. Food waste (garbage) by characterization is generated from commercial solid waste in Benin Metropolis Igbinomwanhia, (2012). Organic matter decomposes producing methane (CH₄) gas as one of the gaseous products as well as biofertilizer. Methane is a greenhouse gas that is 25 times more potent than Carbon Dioxide (CO₂) in causing global warming over time horizon of 100 years Mohan, Jagadeesa, (2013). According to Ngumahet, Ngumah, Ogbulie, Oriji, and Amadi, (2013). Nigeria has the potential of yielding about 25.53 billion cubic meter of biogas (about 169, 541.66 MWh) and 88.19 million tons of biofertilizer per annum. Both have a combined estimated value of about \$ 29.29 billion. This potential biogas yield will be able to completely replace the use of kerosene and coal for domestic cooking, and reduce the consumption of wood fuel by 66%. An effective organic waste program in Nigeria will also remarkably reduce the environmental and public health concerns, deforestation, and Greenhouse Gas (GHG) emissions. Methane finds application domestically for cooking of food and heating of homes. Industrially, methane (CH₄) is a common fabric, plastic, anti-freeze and fertilizer agent; the combustion help businesses dry, dehumidify, melt and sanitize products. Methane (CH₄) gas is a natural resource with tremendous economic benefits when is harnessed from the decomposition of organic matter. Organic fertilizer is also obtained from the decomposition of organic waste and impacts positively on economic growth by reducing the cost of purchasing fertilizer by farmers for better crop yield, thereby increasing agricultural produce as well as ensuring food security.

Several environmental problems arising from man's activity have to be solved in a cost-effective and an environmentally friendly approach. Onwurah, Ogugua, and Otitoju, (2016). Apart from the various diseases and toxic conditions inhere in and derivable from wastes products, the presence of waste degenerates the aesthetic value of the environment Abdullahi, Ugbede, (2013). Although waste can be recycled or processed into viable products for economic use, it also has a negative effect and implication which is assessed in this paper using Benin City Metropolis as a case study.

Statement of the Problem

Waste disposal practice has become an area of major concern in Ekosodin residents today. It appears to be losing battle against the harmful consequences of unguided waste and the attainment of a clean healthy environment for all indigenes of the place. It's common sight in Ekosodin today to see heaps and accumulation of festering waste dump in parts of the place. All sides of the residential apartments, the drains, the roads, corners of major and minor streets, undeveloped plots of land have all become waste dumps for many house hold. As one writer puts it, waste increase in a geometrical progression while collection and disposal increase at an arithmetical progression. Akinwale (2015). The problem associated with waste disposal practice in most Ekosodin area doesn't completely appear to be a problem of absence of legislation frameworks for waste management owing to the fact that at federal state, and local government levels. There exist some form of sanitation legislation or the other, but some other factors have come to play with the crises experienced in the management of waste in Nigeria, urban center from the background of this Study absence of an effective monitoring and control

mechanism can bring about in discriminatory refuse generation and disposal. This is true because no force coordinating all the part to guarantee order and conformity. Modern technology used in implementing effecient waste management method may be existing in paper and not in practice terms. On the other hand, the people's negative attitude regarding waste disposal could pose a very big challenge in waste disposal practice among Ekosodin residents. In this Study, our attention would be focused on ascertaining whether the aforementioned problem associated with Ekosodin residents or waste management are responsible for the challenges of waste disposal practice among Ekosodin residents and proffer suggestions that may assist in addressing the issue that seemed to be aborting most efforts of international organization, the state government, waste management authority and professional alike.

Research Questions

To guide this study, the following research questions were raised:

1. What are the waste disposal practice of ekosodin resident?
2. Does age influence the waste disposal practice of ekosodin resident?
3. Does sex influence the waste disposal practice of ekosodin resident?
4. Does educational level influence the waste disposal practice of ekosodin resident?

Purpose of the Study

The main purpose of the study is to Determine waste disposal practice among Ekosodin residents. The Study seeks the following.

1. To determine the waste disposal practice of Ekosodin residents.
2. To determine the age influence of waste disposal practice of Ekosodin residents.
3. To determine the sex influence of waste disposal practice of Ekosodin residents.
4. To determine the educational level influence of waste disposal practice of Ekosodin residents.

Significant of the Study

It is hoped that this study will provide adequate information apart from the various diseases and toxic conditions inherent in and derivable from the indiscriminate disposal and dumping of waste which has become a common practice in Ekosodin residents. The findings of this study will contribute its quota in the quest to make Ekosodin a clean environment to live comfortably in. If the recommendations and suggestions of this study will be sincerely and adherently to, it will reduce, to the barest minimum, the adverse effects of such diseases like malaria, diarrhea, cough, catarrh, cold, and fever. This will in turn cut down on the high rate of infant mortality and pregnancy woman mortality. Also the money being spent by individuals, families on treating patients of waste-induced disease will be channeled to some other need of their worthy to maintain. The fact that when waste disposal, the heavy traffic congestion caused by spill over of refuse dumps along the major road in Ekosodin will cease to be an issue. Academically, findings of this study serve as a platform for others' research work and added to the knowledge of scholars when will in turn impact the students and future, and also to the people as well, the findings and recommendations of this study will assist in transforming their negative perceived attitude towards waste disposal, waste management authority and its agent.

Scope of the Study

This research is going to be specifically fixed on waste disposal practice among Ekosodin residents. It explores data sources. The primary documents will be generated through questionnaires and that will be focused on Ekosodin residents.

CHAPTER TWO

Review of Related Literature

This chapter presents literature review of various authors and schools related to the subject matter. It is organized under the following sub-headings:

- Concept of Waste Management
- Types of Waste
- Knowledge of Waste Management
- Attitude Towards Waste Management Practice
- Waste Management Practice
- Summary of Literature Reviewed

Concept of Waste Management According to NEMA (2013) many of low income residential estates are badly littered with garbage. Numerous researchers discovered that the collection of waste in Nigeria households doesn't exceed 25 %, as majorly concentrate in higher income earning areas where private management undertake these activities (NEMA, 2013). Strangely, a huge proportion city population resides in poor or low housing facilities as they cannot afford good housing estates. In the poor populations areas waste littering is attributed to informality, poor roads making it inaccessible, insecurity or high crime rates masking management of wastes to

boost sanitation equally difficult (JICA, 1998). About 30% of all the waste collected is taken to this particular site. Industries undertake their own disposal of mixed waste and for land filling (AfDB, 2012). The characteristic poor management of this activity has caused the site to be filled up while there is scarcity of waste transfer facilities in the custody of the City Council of Nairobi (UNEP and NEMA, 2015). Barely 40% of Nigeria generated waste is collected by City Council. The private sector's limited capability only allows them to collect 20% of the remaining waste (60%), leaving the remaining 40% uncollected.

The uncollected waste is subjected to other disposal means including burning, throwing in pits and in other unauthorized places, collected by NGO's, self-help groups in the community and other volunteers (Ikiara, 2016).

One of the major metropole in Africa faces huge solid waste management (SWM) challenges linked with improper waste disposal such as the clogging of sewers and drainage, the diseases born out of contaminated water, e.g. typhoid, cholera and diarrhoea, the increase of upper respiratory maladies emanating from garbage burning (Fullo and Odhiambo, 2019). In order to minimize their cost, privately owned firms in waste collection sector resorted to dumping in illegal places and disregarded installation of effective monitoring systems, besides having no law reinforcement con

trolling waste disposal at the site (NEMA, 2013). Studies have shown that the soil, water and air around Dandora, the only dumping site in Nigeria, is highly polluted resulting into serious health and security problems to the local residents. According to UNEP (2012) there is a dire need of creating environmental education and awareness, practices, and knowledge in high schools with aim of enhancing environmental monitoring and management in the country for both present and future periods. This will go a long way in enhancing education on environment in an attempt to reorienting education so as to restore environmental competence owing to its basic aim of attaining personal and social competence (Shobeiri, 2017). This will augur well by establishing the difference between knowledge/ awareness and practices in managing the environment on one hand, and students' attitude and level of education on the other hand.

According to Crompton and Kasser (2019), environmental education encourages the development articulation of literacy in the citizens whose own environmental concerns are shared regarding their own benefit and the good of those to come in the future generations. There is a striking connection between the learners' level of education and the environment management, of which its establishment will resolve the complicated problems of the environment by integrating Environmental Education at all levels. Ultimately this education will impose a positive change in behavior

or and attitude which is required for effective participation in managing the environment. However, it will call for considerable efforts on the part of both the government and school management in their bid to arrange for students, teachers and administrators workshops and seminars that will facilitate efficient sensitization on the problems associated with environment alongside their consequences (Li, 2016)

Types of Waste Municipal solid waste (MSW) sources as contended by UNEP (2012) encompasses are business activities, institutions, households, and organizations, with the major elements of MSW comprising of plastics, wood, rags, metal, food among other wastes. Building demolitions and construction wreckages contribute hazardous wastes like batteries bulbs among others in the debris are a health hazard to human and environmental health (UNEP, 2012). As indicated by UNEP (2012) industrial waste incorporated in this study, bundling materials, waste from food manufacturing and processing, oils, solvents, resins, paints and sludge's, glass, pottery, stones, metals, plastics, rubber, cowhide, wood, fabric, straw, abrasives, and so forth. Similarly, the municipal waste, the absence of a consistently updated and methodical database on industrial waste guarantees that the correct rates of age are to a great extent obscure. Farming waste and buildups have likewise been acquired through growing rural creation bringing about expanded amounts of l

ivestock waste, agrarian harvest deposits and agro-industrial results (Zagozewski, et al., 2011).

A study conducted by Alam and Ahmade (2013) on the impact and influence of waste on environmental and human health highlighted the sources of types, amount, disposal methods, and adverse effects of poor waste management on health. The liquid, excreta from community and households forms the dangerous health threats from wastes that contribute to causes and spread of infectious infections in the society as the findings illustrates. According to a study by Li, (2016) industrial wastes include the wastes generated during the production process like traffic, resource development. The study dealt with the various economic industries and their associated wastes like mining, power, chemical, oil, light, and metallurgical industries and the coefficient of waste generation. Alam and Ahmade (2013), researched on the implications of waste on human and environmental health, identified components of waste, types and quantity, disposal methodology of wastes, and the improper waste management effect on health. The results indicated infections and the risks that come with the wastes in the society and on human as well as environmental health.

Knowledge of Waste ManagementBased on the study targeting students of a selected hostel in Rajasthan University by Arora and Agarwal (2011) on the variables co

comprising of waste management knowledge, attitude and practices. The leading objective in the study was to establish the university student attitude towards waste management, and sample of three students used and the questionnaire, self-administered as collection method, and t test to analyze the data findings. The findings indicated low, less favorable, and moderate in knowledge, attitude, and practice respectively; correlation of knowledge and attitude was absent, practice and knowledge indicated a substantial correlation. While conducting the research to establish the knowledge and practices on biomedical waste in a population sample of health workers in health care institutions, Kumar et al. (2013) employed a cross section study. A limited percentage of health care workers, 35.4% had biomedical waste management training and skills, as 31% of them were not vaccinated against hepatitis B diseases. A study on impact of community health awareness and intervention on knowledge, attitude, and behaviors by Karout & Altuwaijri (2012) on waste product management and disposal. The study adopted a questionnaire as a data collection instrument to gather data. The findings indicated vast knowledge on diseases and health risk associated with waste accumulation for the group that attended the training and education programs, positive attitude on managing wastes, and improved waste handling practices which include recycling household wastes. The observati

on showed an increase in community participation in cleaning and other environmental protection activities

Attitude towards Waste Management PracticesEneji, (2016) conducted a study on waste disposal and waste management. The study hypotheses tested at 0.05 level of significance. The implication of the results is that the residents of Calabar South have very negative attitude towards waste management and disposal, while the second hypothesis tested also showed a significant influence of indiscriminate disposal of waste and the health status of the residents of Calabar South Local Government Area. The study concluded that because of the negative attitude the residents of Calabar South have towards the management and disposal of their waste, it has some significant influence on their health status. Barloa (2016) did a study to establish the effect of attitudes, practices, and knowledge on waste management on 2528 Polytechnic university student. The findings indicate that 73.4% of the students indicated knowledge to be satisfactory, 71.4% attitude on strategic waste management issues; while around 43.1% depicted satisfactory levels in practice. The relationship depicted a significant interaction between knowledge and attitude and an $r^2 = 0.11$; $p < 0.005$ ratings of student prediction. The student rating KAP indicated the link with social status and a significant association with students from families that are medium-

sized with parents earning moderate income. Waste disposal perception and attitude study was conducted by Fearon, and Adraki (2014) in the Tamale Metropolis, Ghana. From the study findings, there was a strong and significant influence and impact on waste disposal by attitude on households as well as payment for waste collection intentions.

Waste Management Practices Adogu, (2015) conducted a study in Owerri municipal Imo state residents in Nigeria and found 90% of the respondents on the questionnaire were aware of the waste management with 97.55% showing a positive attitude toward managing wastes and protection of the environmental health. Further, the results showed a 97.1 % of the household wastes comprising of food residues as well as 95.4% being vegetable wastes. Open dumping 66.3% of the sampled population, and burning 62.4% of the population practiced it forms the two poor waste management approaches illustrated

in the study. Wheel barrow transportation stood out as the most famous means of waste transportation to the dumping site. The respondent's education and gender significant impact on attitude, practice, and knowledge, attitude and practice of waste management ($p < 0.05$). A review of waste management practices by Giusti (2009) investigated the impact on human health in municipal waste, and effect of bio a

erosol exposure from sewage plant treatment. Results found that municipal waste had adverse impact outcome on health for the population neighboring dumping sites and nuclear installation. In addition Adeyemi and Adeyamo (2006) also found that the main waste disposal practices in wastes have a significant influence on environmental hygiene and human health. Increase in population in urban centers such as Nairobi has resulted in increased waste management challenges. Lack of funds in the department of urban sanitation and regulations related to sanitation in the city attributes to the increased challenges above. According to Troschinetz and Mihalicic, (2009), over 100 million individuals lack access to better sanitation in East Africa. Dandora in Eastlands, a former marram.

Summary of Literature Reviewed

As a Researcher, this research work was proposed to investigate waste disposal practices among Ekosodin Residents. Analysis of the concept of waste management, types of Waste, knowledge of Waste Management Practice, attitude towards waste management practice and waste management practice which this study did is very important due to its impact on the Ekosodin Residents. This research work would play an essential role in the standard of waste management practices and the attitude towards waste management practice and the result from this research work will also provide a

wareness of what role they must play in order to maintain good health life and attitude towards waste management practice.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter describes the procedure employed in carrying out the research. It was done under the following sub-headings:

- Design Design
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

This study adopted a descriptive survey research design. Descriptive survey design is the process of collecting data or obtaining information about people's attitude and opinion in order to make judgment about conditions that exist (Salami & Aluta, 2015).

Population of the Study

The population of the Study Comprise of 143 residents who lives in Newton street at Ekosdin

Sample and Sampling Technique

The researcher used sample random sampling techniques to select those that participated in the study. A sample size of four (4) houses in Newton street at Ekosdin in the study areas was selected for the study and twenty five (25) respondents will be randomly shown from each house, with the total number of 100 residents.

Research Instrument

The instrument used for data collection is a structured questionnaire. This was divided into two sections. Sections A address the demographic Information of the respondents. Section B was made up of twenty structured questions based on the research question earlier stated to elicit information from the respondents. The questionnaire consist of 2 potent YES and NO

Validity of the Instrument

The items of the instrument were validated by two (2) lecturers; my supervisor, and one other lecturer in the faculty of Education, University of Benin, Benin City, Edo State. Corrections made were effected.

Reliability of the Instrument

The test re-

test method of reliability was adopted for this study. The instrument was administere

d twice and re-

administered after two weeks to the same respondents. The Pearson Product Momen

t Correlation Co-

efficient was to compute the scores. The reliability of the questionnaire was establish

ed at 0.81

Method of Data Collection

Data was collected by the use of the instrument, 100 pieces were administered. The r

esearcher administered the questionnaires to the respondents and collect them.

Method of Data Analysis

The completed questionnaire was collected and analyzed sequentially according to t

he research questions. Frequency count and simple percentage was used to analyze th

e YES and NO responses. The decision of the YES and NO responses was such that a

ny score greater than or equal to 50% was taken as agreed and any score below 50% a

s disagree.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter present the analysis of data collected, interpretation and discussion of results, according to the research Questions. The research question were answered using frequency and percentages and the findings were discussed.

Analysis of Research Questions

A total of one hundred (100) questionnaire were administered to the respondents of which was properly filled and returned.

Analysis of the Respondents' Bio-data

Gender Distribution of the Respondents

Table 4.1: Gender Distribution of the Respondents

| Gender | Frequency | Percentage% |
|---------------|------------------|--------------------|
| Male | 37 | 37% |
| Female | 63 | 63% |
| Total | 100 | 100.0 |

Table 4.1 shows that there are more female respondents (63%) than their male (37%) counterparts. This implies that female students participated more in this study than their male counterpart.

Age of the Respondents

Table 4.2: Distribution of the Respondents by Age

| Age | Frequency | Percentage% |
|---------------------------|------------------|--------------------|
| 20 years and below | 27 | 27% |
| 21 - 25 years | 42 | 42% |
| 26 - 30 years | 18 | 18% |
| 31 years and above | 13 | 13% |
| Total | 100 | 100 |

Table 4.2 shows the age distribution of the respondents. The table reveals that 27% of the respondents are within the age bracket of 20 years and below, 42% are within 21 - 25 years, 18% are within the age bracket of 26 - 30 years, 13% are within the range of 31 and above. This implies that majority of the respondents are within the age range of 21 - 25 years.

Marital status of the Respondents

Table 4.3: Distribution of the Respondents by Marital status

| Marital status | Frequency | Percentage% |
|-----------------------|------------------|--------------------|
| Single | 78 | 78% |
| Married | 22% | 22% |
| Divorce | 0 | 0% |
| Sapareted | 0 | 0% |
| Total | 156 | 100 |

Table 4.3 shows the age distribution of the respondents. The table reveals that 78% of the respondents are single while 22% of the respondent are married and there was no response for divorce and sapareted. This implies that majority of the respondents are single.

Education Level of the Respondents

Table 4.4: Distribution of the Respondents by Education Level

| Education Level | Frequency | Percentage% |
|---------------------------|------------------|--------------------|
| SSCE | 32 | 32% |
| NCE/OND/HND | 21 | 21% |
| Tertiary Education | 47 | 47% |

| | | |
|--------------|------------|------------|
| Total | 100 | 100 |
|--------------|------------|------------|

Table 4.4 shows the Education Level of the respondents. The table reveals that 32% of the respondents have SSCE, 21% of the respondents have NCE/OND/HND while 47% of the respondents attended tertiary Education.

This implies that majority of the respondents are attend tertiary Education.

Religion of the Respondents

Table 4.5: Distribution of the Respondents by Religion

| Religion | Frequency | Percentage% |
|------------------|------------------|--------------------|
| Christian | 78 | 78% |
| Muslim | 22% | 22% |
| Others | 0 | 0% |
| Total | 100 | 100 |

Table 4.5: shows the age distribution of the respondents. The table reveals that 78% of the respondents are christains while 22% of the respondent are muslim. This implies that majority of the respondents are christains.

Research Questions 1: what are the waste disposal practice among Ekosodin residents (n=100)

Table 4.6: Mean response on waste disposal practice among Ekosodin residents

| S/n | Items | Yes | No | Total |
|-----|--|-----|-----|-------|
| 1 | I bury my waste | 32% | 68% | 100% |
| 2 | I sometimes burn my waste | 87% | 13% | 100% |
| 3 | I sometimes drop my waste inside erosion | 92% | 8% | 100% |
| 4 | I keep my waste in a bag | 73% | 27% | 100% |
| 5 | I sometimes dispose my waste according to the methods prescribed by Government | 38% | 62% | 100% |
| 6 | I sometimes dispose my waste in a Bush | 64% | 36% | 100% |
| 7 | I dispose my waste in drainages | 55% | 45% | 100% |
| 8 | I sometimes dispose my waste on the road | 78% | 22% | 100% |
| 9 | I'm aware of the different method of waste disposal | 33% | 67% | 100% |
| 10 | I don't keep waste management rules | 53% | 57% | 100% |
| 11 | Proper waste disposal can help prevent cholera | 88% | 12% | 100% |
| 12 | I openly dump waste on Land | 71% | 29% | 100% |
| 13 | Proper waste disposal improves a clean and healthy | 98% | 2% | 100% |

| | | | | |
|----|---|-----|-----|------|
| | environment | | | |
| 14 | I dispose toxic waste properly | 76% | 24% | 100% |
| 15 | I give my waste to waste management every month | 67% | 33% | 100% |
| 16 | I sometimes pay waste management to dispose my waste | 79% | 21% | 100% |
| 17 | I have never burn my waste | 13% | 87% | 100% |
| 18 | I don't like pay to waste management board of Service | 23% | 77% | 100% |
| 19 | I have never kept my waste in a bag | 72% | 28% | 100% |
| 20 | I dump my waste at night in the next community. | 3% | 97% | 100% |

Source: Fieldwork 2023

From table 1, it's showed that majority of the respondents (68%) hardly bury their waste although (32%) of the respondents agree they bury their waste, while majority of the respondents (87%) agree they sometimes burn their waste and (13%) respondents hardly burn their waste.

Hence, From the results ekosdin Residents sometimes drop their waste in erosion (92%), so the rest respondents hardly drop waste in erosion (8%)

Majority of Ekosdin Residents keep their waste in a bag (73%), while respondents representing 27% don't keep their waste in a bag, although, (62%) respondents says they don't dispose waste according to government method, while (38%) follow government method.

From the results of Ekosdin residents sometimes dispose waste in the bush (64%), while respondents (36%) do not dispose waste in the bush, majority of Ekosdin residents dispose waste in drainages (55%), while respondents (45%) hardly dispose waste in drainage, Respondents response (78%) dispose waste on the road, although (22%) hardly dispose waste on the road. Majority of Ekosdin residents are not aware of the different method of waste disposal (67%), only (33%) respondents say they're aware of the different method of waste disposal, also some of Ekosdin residents says (57%) they do not keep waste management rules, although (53%) respondents say they keep the waste management rules, Respondents (88%) agree proper waste disposal can help prevent cholera only (12%) respondents disagree proper waste disposal will not prevent cholera, (71%) of ekosodin respondents openly dump waste on Land, while (29%) of ekosodin residents says they don't openly dump waste on Land, majority of ekosodin residents (98%) agree proper waste disposal improves a clean and healthy environment, while (2%) disagree, majority of ekosodin respondents (76%) says they dispose toxic waste properly, while (24%) hardly dispose toxic waste properly,

a quiet number of ekosodin residents response (67%) says they give their waste to waste management every month, while some of ekosodin residents (33%) says they don't give their waste to waste management every month, although (79%) response say they sometimes pay waste management to dispose my waste, while (21%) of ekosodin residents says they don't pay waste management to dispose their waste, (87%) disagree they have never burn their waste, while (13%) agree they have burn their waste, also (74%) disagree that they pay to waste management board of Service, while (26%) agree they don't like pay to waste management board of Service, (72%) agree they have never kept their waste in a bag, while (38%) disagree they have kept my waste in a bag.

Lastly, the results from dumping waste at night in the next community, (97%) of ekosodin residents says they don't dump waste at night in the next community, while only (3%) dump waste in the next community.

Discussion of Findings

This section discusses the findings of the study. The findings are discussed drawing inferences from author's views in the literature review and relating them to the researcher's point of view based on the result of the study.

Research question one revealed what are the waste disposal practice among Ekosodin residents. The findings indicated that waste disposal practices among

Ekosodin residents is determinant. This was supported by majority of the respondents who agreed that control of waste disposal practice in ekosodin was not done on a regular basis, keeping of waste in the bag or waste bin in Ekosodin was to ensure to help in waste management practice, waste collection method. Storage of waste was effectively carried out by a few people in ekosodin. The waste disposal practices at ekosodin, Nigeria was found out that the main waste disposal practice at Ekosodin is dumping. The researcher found other practices around waste disposal included burning of waste; burying of waste, waste collection and storage practices.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of the Study

The study explore waste disposal practice among Ekosodin residents. The objectives of the study was to determine waste disposal practice among Ekosodin residents. A total of 100 copies of the questionnaires were distributed to the respondents and 100 were retrieved and found usable, resulting to 100% response rate. The summary of the research findings are as follows:

Ekosodin residents hardly practice waste disposal, the residents attitude and knowledge towards waste disposal are low. Majority of them still dump waste on the drainage, rivers and don't disposal toxic substance to the right place. Most of them keep their waste in a bag and only few follow management method of waste disposal.

Conclusion

Based on the findings of the study, it has been confirmed that the proper waste disposal practice has the ability to influence the attitude and awareness of ekosodin residents. From the study, it can be deduced that proper waste disposal practice among Ekosodin residents will not only influence their attitude towards waste disposal but also create a proper hygiene to the environment at large. However, several recommendations for the study have been presented. This

necessitates careful consideration of the tactics to be used on how to ekosodin residents can practice and cultivate the right way to dispose waste.

Recommendations

In the light of the findings of this study, the following recommendations are made:

- Hence, waste Management should create more awareness of the importance of proper waste disposal through campaign in ekosodin it should be Compulsory and effective without further delay.
- Ekosodin community should involve and create dialogue around the proper waste disposal practice. It is also found necessary to change the mindset of the people. Everyone should be open to discussion about the side effects of not disposing waste rightly and help the younger people to understand how to dispose their waste and the importanec of proper waste Management is. So, for that more education on waste disposal practice has to be taught to everyone. It is also important to form a policy on waste disposal practice in ekosodin residents.
- Passage of this act would help increase awareness of the potential risks of engaging in the wrong way of waste disposal. All youth would be better equipped to make informed decisions about waste disposal practice in ekosodin.

REFERENCE

- Abang, O. N. (2016). Theories of Career Choice and Motivation. Calabar: Eti- Nwa
- AssPacyna JM, Pacyna EG (2001) An assessment of global and regional emissions of trace metals to the atmosphere from anthropogenic sources worldwide. *Environ Rev* 9: 269-298.
- Adeyemi, I. & Adeyamo, O. (2006). Waste management practices at the Bodija abattoir, Nigeria', *International Journal of Environmental Studies*, 64:1, 71 –82
- Adogu, P., Uwakwe, K., Egenti, K., Okwuoha, A. & Nkwocha, I. (2015). Assessment of Waste Management Practices among Residents of Owerri Municipal Imo State Nigeria. *Journal of Environmental Protection*, 6, 446-456
- Afullo, A. & Odhiambo. F, (2009). The Primary Solid Waste Storage Gaps Experienced By Nairobi Households. *Ethiopian Journal of Environmental Studies and Management* Vol.2 No.3. Pp 34-43
- Akil, A. & Ho, C. (2014). Towards sustainable solid waste management: Investigating household participation in solid waste management. *The International Symposium of the Digital Earth (ISDE8)* IOP Publishing IOP Conf. Series: Earth and Environmental Science.
- Alam, P. & Ahmade, K. (2013). Impact of Solid Waste on Health and the Environment, Special Issue of *International Journal of Sustainable Development and Green Economics (IJSDBG)*, ISSN No.: 2315-4721, V-2, I-1, 2
- Al-Khatib, I. A., Kontogianni, S., Abu Nabaa, H., Alshami, N., and Al-Sari, M. I. (2015).
- Arora, L & Agarwal, s. (2011). Knowledge, Attitude and Practices regarding Waste

Public perception of hazardousness caused by current trends of municipal solid waste management. *Waste Management*, 36323-330.

Management in Selected Hostel Students of University of Rajasthan, Jaipur,

International Journal of Chemical, Environmental and Pharmaceutical Research

Vol. 2, No.1, 40-43

Azjen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour.*

Bartlett, C. (2005). *Stormwater knowledge, attitude and behaviours: a 2005 survey of*

North Carolina residents. Sacramento, California, Stormwater Unit, Division of

Environmental Analysis, (http://www.ncstormwater.org/pdfs/stormwater_survey

Cooper, D.R & Schindler, P.S (2003). *Business Research Methods*, 9th, edition. McGraw-

Hill Publishing, Co. Ltd. New Delhi-India.

Cooper, D.R. & Schindler, P.S. (2006). *Business Research Methods*, 11th, edition.

McGraw-Hill Publishing, Co. Ltd. New Delhi-India

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods*

approach (2nd Ed.). Thousand Oaks, CA: Sage.

Cronbach, R.A. (1951). *Mortgage Default among Rural, Low- Income Borrowers.* *Journal*

of Housing Research, 6 (2), 349-369.

Dawda, B., Mohd A. A. S., Latifah A. M., and Azizi B. M., (2012). *Assessment of*

Municipal Solid Waste Composition in Malaysia: Management, Practice, and

Challenges. *Pol. J. Environ. Stud.* Vol. 21, No. 3, 539-547

Dierkx, RJ (2001). *Cool Schools for Hot Suburbs: Models for Affordable and*

Environmentally Responsive Schools in Nairobi, Kenya (2002). PhD thesis,

Eindhoven University of Technology, NL

- Eneji, O., Ogar, E., Ngoka, V.N. & Abang, M. (2016). Attitude towards Waste Management and Disposal Methods and the Health Status of Cross River State, Nigeria, SCIREA Journal of Agriculture, Volume 1, Issue 2.
- Fearon, J. & Adraki, P. (2014). Perceptions and Attitudes to Waste Disposal: An Assessment of Waste Disposal Behaviors in the Tamale Metropolis, Journal of Environment and Earth Science Vol.4, No.1
- Giusti, L. (2009). Review of waste management practices and their impact on human health, Waste Management 29 2227–2239
- Hilburn, A. M. (2015). Participatory risk mapping of garbage-related issues in a rural Mexican municipality. Geographical Review, 105(1), 41-60.
- IRIN (2004) Office for Coordination of Humanitarian Affairs (OCHA), Integrated Regional Information Network (2016). Information Network <http://www.irinnews.org> (education, Kenya)
- JICA. (1998). The study on solid waste management in Nairobi City in the Republic of Kenya: final report. Japan International Cooperation Agency (JICA); in collaboration with CTI Engineering & Environmental Technology Consultants
- Kanwal, Z., Khalid, M., Afzal, M., and Muzaffar, A., (2012). Impact assessment of community participation in solid waste management projects in selected Areas of Faisalabad City. Journal of urban planning and development. 319-327
- Kothari, C. (2004). Research Methodology: Methods & Techniques, 2nd edition. New age International Publishers, New Delhi, India
- Ministry of Finance (MF) (2009). Position Paper on the Solid Waste Management Sector in India. Department of Economic affairs, Ministry of Finance, Government of India
- Muigai, S.E., Opata, G.P., & Mwasi, B.N. (2015). An analysis of the household solid waste generation patterns and prevailing management practices in Eldoret town, Kenya. International Journal of Agricultural Policy and Research, 2 (2), 076-089.

Narayana, T. (2009). Municipal solid waste management in India: From waste disposal to recovery of resources? *Waste Management*, 29(3), 1163-1166.

NCC, (2010). *Solid Waste Management in Nairobi: A Situation Analysis Technical Document accompanying the Integrated Solid Waste Management Plan.*

Olson, E.C., Bowman, M., & Roth, R. (1984). Interpretation and non-formal environmental education in natural resources management. *Journal of Environmental Education*, 15, 6-10.

Oyake-Ombis. L., (2016). *Innovations on plastic waste management in Kenya and role of universities*, Prentice-Hall, Upper Saddle River, New Jersey.

Saat. S. A., (2013). *Solid waste management in malaysia and ecological modernization theory perspective*. *Journal of Sustainability Science and Management*. Vol.8. Issue 2, Pp. 268-275

Sekaran, U. & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach*. 5th Edition. Aggarwal printing press, Delhi, ISBN: 978-81-265-3131-8

Shobeiri, S.M., Omidvar, B., and Prahallada, N.N. (2007) *A Comparative Study of Environmental Awareness among Secondary School Students in Iran and India*. *Int. J. Environ. Res.*, 1(1), pp. 28-34.

Tartiu, V. (2011) *Evaluation of attitudes and knowledge regarding municipal waste among students, Case study: Bucharest Academy of Economic studies*. *J. Economica. Seria Management*, 14(1), pp. 263-276.

Troschinetz, A. M., and Mihelcic, J. R. (2009). Sustainable recycling of municipal solid waste in developing countries. *Waste Management*, 29(2), 915-923

UNEP, (2012). *21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues*. United Nations Environment Programme (UNEP),

Nairobi, Kenya.

UNEP. (2007). Environmental pollution and impact on people health: Implications of the

Dandora municipal dump site in Nairobi, Kenya.

Vinod, A., and Venugopal, K. (2010) Environmental Studies.1st ed. Calicut University

Central Co-operative Stores, LTD No. 4347

Vivek et al (2013); Journal of Environment (2013), Vol. 02, Issue 06, pp. 147-150Zagozewski, R.,

Judd - Henry, I., Nilson, S., and Bharadw- aj, L. (2011) Perspectives of

past and present waste dispos- al practices: A community based participatory

research project in three Saskatchewan first nations communities. J.

Environmental Health Insights, 5, pp.22

UNIVERSITY OF BENIN

FACULTY OF EDUCATION

DEPARTMENT OF HEALTH AND SAFETY ENVIRONMENT

RESEARCH QUESTIONNAIRE

Dear Sir/Madam,

I am conducting a study titled **waste disposal Practices among Ekosodin residents**. It is one of the requirements for the award of a Bachelor Degree in health education. I would appreciate your participation in completing this questionnaire because your opinion would be valuable to the study.

Please, be assured that there is no right or wrong answers and information provided in this questionnaire is purely for academic purpose and therefore would be treated with utmost **Confidentiality**.

Thank You.

Yours faithfully,

Williams Ekoja IDUH

Researcher

Please, read each question and tick or fill the statement that clearly reflects your view:

Section A: Demographic Profile

1. Gender : Male [] Female []
2. Age group :20 years and below [] 21-25 years [] 26-30 years [] 31years and above []
3. Marital status Single: [] Married [] divorced [] separated []
4. Educational Level: []SSCE []NCE/OND/HND[] Tertiary Education []
5. Religion: christian[] Islam [] others []

Section B: waste disposal Practices among Ekosodin residents.

Please tick marks the most appropriate response as per the scale below.

| S/N | ITEMS | YES | NO |
|----------|--|-----|----|
| | What are the waste disposal Practices of ekosodin resident? | | |
| 1 | I bury my waste. | | |
| 2 | I sometimes burn my waste. | | |
| 3 | I sometimes drop my waste inside erosion. | | |
| 4 | I keep my waste in a bag | | |

| | | | |
|-----------|---|--|--|
| 5 | I sometimes dispose my waste according to the method prescribed by Government | | |
| 6 | I sometimes dispose my waste in a Bush | | |
| 7 | I dispose my waste in drainages | | |
| 8 | I sometimes dispose my waste on the road | | |
| 9 | I'm aware of the different methods of waste disposal | | |
| 10 | I don't keep waste management rules | | |
| 11 | Proper waste disposal can help prevent cholera | | |
| 12 | I openly dump waste on Land | | |
| 13 | Proper waste disposal improves a clean and healthy environment | | |
| 14 | I dispose toxic waste properly | | |

| | | | |
|-----------|---|--|--|
| 15 | I give my waste to waste management every month | | |
| 16 | I sometimes pay waste management to dispose my waste | | |
| 17 | I have never burn my waste | | |
| 18 | I don't like pay to waste management board of Service | | |
| 19 | I have never kept my waste in a bag | | |
| 20 | I dump my waste at night in the next community. | | |

