

**ATTITUDE OF UNDERGRADUATE STUDENTS TOWARDS
ENVIRONMENTAL SANITATION AND WASTE DISPOSAL IN
UNIVERSITY OF BENIN**

BY

Ebele Mercy CHIEDOZIE

EDU1603351

**FACULTY OF EDUCATION
UNIVERSITY OF BENIN,
BENIN CITY**

JULY, 2021

**ATTITUDE OF UNDERGRADUATE STUDENTS TOWARDS
ENVIRONMENTAL SANITATION AND WASTE DISPOSAL IN
UNIVERSITY OF BENIN**

BY

Ebele Mercy CHIEDOZIE

EDU1603351

**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION,
UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILMENT
FOR THE AWARD OF BACHELOR IN SCIENCE (ED) DEGREE IN
ENVIRONMENTAL EDUCATION**

JUNE,2021

CERTIFICATION

We the undersigned certify that the research work was carried out by CHIEDOZIE EBELE MERCY EDU1603351 in the Department of Health, Safety and Environmental Education, Faculty of Education, University of Benin. It is adequate in scope and quality for the partial fulfillment of the requirements for the award of B.Sc (Ed) degree in Environmental Education

.....

.....

Dr. T.A. Akingbade

Dr. S.O.Olikiabio

**(Project Supervisor)
Coordinator)**

(Project

Date.....

Date.....

.....

Prof. E.O.S Iyamu

Dean, Faculty of Education

Date.....

DEDICATION

This project is dedicated to Almighty God for His love, grace, mercy, guidance, provision and protection throughout my academic pursuit.

ACKNOWLEDGEMENTS

Her sincere appreciation goes to the Almighty God who in his infinite mercy spared her life and grant her the opportunity to get to this stage of her life.

Special thanks to her project supervisor Dr. Akingbade .T. A for her immense efforts and motherly corrections towards the completion of this project work and also to her Head of Department Dr. E.O Igudia and other lecturers in the department.

The researcher sincere appreciation goes to her parent Mrs. Isioma Amuamuzia for her prayer, advice, care, and financial support and bringing her to this world. And to her siblings Promise Chiedozie, Favour Chiedozie, Lizzy Ibolo, Kester G fella and Marzi Amuamuzia for their moral support. She will never wish for a better family. She loves you all so much.

Her sincere appreciation goes to her friends Maureen Ugbaja, Valeria Aigbekaen, Oluchi Eriega, Akugbe Unity for their moral support.

TABLE OF CONTENTS

	PAGE
TITLE	
i	
DELIMITATION	
iii	
ACKNOWLEDGEMENTS	
iv	
ABSTRACT	
v	
CHAPTER ONE: INTRODUCTION	
Background to the Study	
1	
Statement of Problem	
5 Research Questions	
7	
Purpose of the Study	
8	
Significance of the Study	
9	
Scope and Delimitation of the Study	
9	
Definition of Terms	

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Concept of Environment

14

Factors Affecting Environmental Sanitation

16

Attitude of students towards Environmental Sanitation

18

Problems of Solid Waste Management

22

How to Solve the Problem of Environmental Sanitation

24

CHAPTER THREE: METHODOLOGY

Research Design

27

Population of the Study

28

Sample and Sampling Technique

28

Research Instrument

28

Validity of the Instrument
29

Reliability of the Instrument
29

Method of data Collection
29

Method of Data Analysis
30

CHAPTER FOUR: PRESENTATION RESULTS AND DISCUSSION OF FINDINGS

Presentation of Result
31

Discussion of Findings
39

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary
43

Conclusion
45

Recommendations
57

REFERENCES
49

APPENDIX
52

ABSTRACT

The aim of this study was to examine the attitude of undergraduate students in hall of residence in university of Benin towards environmental sanitation and waste disposal, four research questions were raised to guide the study. What are the attitudes of students living in hall of residences in university of Benin toward environmental sanitation? What is the current environmental sanitation situation in the hall of residences in University of Benin? What factors account for the environmental sanitation in the hall of residences in university of Benin? What are the current practices of students towards a better way to dispose waste and environmental sanitation?

The descriptive survey research design was used for this study. The population of the study consist of students in the Faculty of Education in University of Benin. A sample of 200 students were randomly selected from the population. Questionnaire was the instrument used to elicit information from the respondents. The data collated were analyzed using the simple percentage, mean and standard deviation.

The findings from the study it was seen that the students feel unconcerned toward environmental sanitation in their surroundings. It was also seen that students have a negative attitude toward health important of maintaining good environment. It was seen that polluted air from refuse dumping site brings out odour cause respiratory disease among students. The recommendation includes Environment health offices should train and operate on the opinion that active participation of cleaning the environment is necessary because people are more inclined to use and support of sanitation improvement if properly guided. There should be legislation for proper sanitation on a regular basis to make every day count as it will enhance the health status of the environment.

CHAPTER ONE

INTRODUCTION

Background of the Study

Environmental sanitation is a set of actions or a fundamental process of collecting and safely disposing all kinds of waste within the environment with the intention of protecting and promoting the individual health and quality of life of communities (Christy, 2012). Environmental sanitation generally includes the provision of facilities and services for the safe disposal of waste, the maintenance of hygienic conditions and the prevention of diseases Olojoba (2019).

So, it is a key public health intervention that is essential for social and economic development especially in developing countries. This leads to the improvement of health, well-being and economic productivity and benefits the individual, household and community through the provision and practice of adequate sanitation, good hygiene and the use of safe water (World Health Organization, 2015).

Over population particularly in the school environment have contributed in various ways, to a general deterioration of the environment students have been made aware of the harmful effects of the waste substances they generated and the attendant consequences of the waste action on the environment, World Health Organization, 2017). According to Rene (2018) some of the non-infectious diseases that have been endemic in many societies have resulted from various human activities within the environment. (Babalola,2006) the declining environmental sanitation in school community and appealed to all students is to be involved in maintaining good sanitation. Despite various programs by different tiers of government to address the issue of environmental sanitation many Nigerians students still have negative attitude towards environmental sanitation (Milas, 2010).

(Ukpong,2000) emphasized the importance of education in achieving the goals in environmental sanitation, information, education and motivation had indicated that those strategies will provide knowledge and will change the students' attitude towards environmental sanitation. Environmental condition in many areas threatens to reverse the gain made in public health

over the last several decades. Every human should have a healthy and productive life in harmony with nature. In a tragically degraded environment, human health is threatened most cities of the world are faced with problem of growth and environmental pollution. There is no doubt that the issue to environmental sanitation is nationwide however, the degree of attitude of the students vary. The characteristics of environmental sanitation is problems which exist by such factors as uncontrolled reuse disposals. Lack of good water supplies, well-constructed streets and pollution.

We can improve our health to live happier, longer, and more productive and more satisfying lives if we pay attention to what we do to the environment. Man's activities on a daily basis are all centered on his environment. This is because the environment is known to be providing four major functions like extraction of resources for the production of Man's activities physically, economically or socially have in a long way affected the environment he finds himself. In years past, people have been able to practice sanitation by sweeping, cleaning, burning their waste and this can lead to depletion of the ozone layer. (Nosike & Opara ,2003) opined that in order to attain a healthy living, particular in the school environment students

has to pay attention to environmental sanitation and make place for healthy waste disposal, if the environment a students live is not taken care of properly, this could lead to many major and even minor health hazards. However, while some have made it a point of duty, some have contributed to the prevalence of communicable diseases in the community. Some of these diseases include malaria, cholera, typhoid, poliomyelitis, measles and tuberculosis etc.

Now the attitude of students towards environmental sanitation and waste disposal generally in University of Benin City not quite serious with the impending damage involved in the process of indiscriminate waste disposal. In the hall of residences, the students residing in this hostel have not been really concerned about their surroundings and how they dispose the various wastes materials in their various day to day activities. The school management in general has made the necessary materials available like employed cleaners who help in the general cleaning of the hostel environment as well as the toilets, it is therefore left for the students to adequately dispose and contain the various wastes squarely.

In the University of Benin, the dramatic effects of rapid population in the hall of residence are very clear in the hostels and around the school environment. Although, the hostel serves as a place of residence for students for educational purposes, the population of the people and their practices towards waste disposal and sanitation can be threatening to the health of the residents of the hostel. With this rapid population growth, its implication can be predicted in terms of the students failing health caused by improper waste hereby generating environmental and air pollution, such that, the school authorities are struggling vividly to cope with the rapid growth in the hall of residents. Most of the infrastructures such as dump site, toilet facilities and rooms have exceeded their residential capacity. The high populations with its accompanying waste generation and indiscriminate waste disposal practices has impacted negatively on the drainage system and have consequently brought all water drainages in the hall of residence to the brink of extinction.

Statement of the problem

In Nigeria today many, people believe sanitation problems are caused by the government and most causes of the illness is by mosquito bites which

leads to malaria. Approximately 88 per cent of all infections worldwide are attributed to unsafe water supply, the lack of safe hygiene practices and basic sanitation infrastructure (Evans 2005). And the scale of the problem is immense: today, nearly twice as many people lack access to sanitation compared with water supply (UN, 2005).

(Badejo, 2009) Sanitation is one of the most basic services in human life. Improving environmental sanitation is known to have a significant beneficial impact on health both in households and across school communities. This use of plastics bags as packages for drinking water and other wares and the proliferation of fast food joints which package cooked food in Styrofoam, and the indiscriminate disposal of these materials in the environment is an eye sore in the hall of residence area. Parts of the residential hostels are almost dirty. Open spaces, fields and many other public and private places are littered with refuse. In most cases, drains are clogged or totally blocked and many compounds are hemmed in by solid waste, posing health threats to the students who play and live around the area. Several efforts have been made by the University of Benin to ensure that the residential hostels are always clean. It has engaged the services of

private waste management companies to ensure that hostels are always cleaned and also to ensure that communal dumpsters are emptied regularly. Coupled with these are the provision of new sanitation facilities and the maintenance of old ones.

However, the behaviour and attitude of students toward sanitation do not add to the effort. People do not seem to care about good environmental sanitation practices and constantly litter indiscriminately without considering the future effects of these poor sanitation practices on their health Lawal(2010). Poor environment sanitation is serious health risk and an affront to human dignity. There are many threats of pollution where there are no sanitation systems or where they do not work properly. The study sets out to examine the attitude of students in the hall of residential areas towards waste disposal and environmental sanitation, their effects on the health of the people and to offer intervention that could help ensure good environmental sanitation in halls of residential area.

Research Questions

The following research questions were raised to guide the study:

1. What are the attitudes of students living in hall of residences in university of Benin toward environmental sanitation?
2. What is the current environmental sanitation situation in the hall of residences in University of Benin?
3. What factors account for the environmental sanitation in the hall of residences in university of Benin?
4. What are the current practices of students towards a better way to dispose waste and environmental sanitation?

Purpose of the Study

The main purpose of the study is to find out attitude of undergraduate students in hall of residence in university of Benin towards environmental sanitation and waste disposal. This study is specifically design to:

- Examine the attitudes of students living in hall of residences in university of Benin toward environmental sanitation.
- Find out the current environmental sanitation situation in the hall of residences in university of Benin.

- Determine the factors account for the environmental sanitation in the hall of residences in university of Benin.
- Examine the current practices of students towards a better way to dispose waste and environmental sanitation.

Significance of the Study

The aim of this study is to improve students' knowledge on environmental sanitation and give insight into the adverse effects of improper disposal of waste in the immediate environment as it can lead to disease outbreak and several illness and also providing recommendations that would guide policy formulation and development of intervention for the prevention or mitigation of these negative effects. However, this study will be useful to school authority to enable them effectively and efficiently establish strategies that would promote the sanitary conditions in the school environment and inculcate in the students and staff the culture of healthful living and positive health hobbies towards environmental sanitation practices. Also, serve as a platform for the further related research.

Scope and Delimitation of the Study

The scope of the study is limited to the Local level, that the hall of residence in university of Benin. With the conceptual dimension, environmental sanitation management comprises all activities aimed at developing and maintaining a clean, safe and pleasant environment in all human settlement, to promote the social, economic and physical well-being of all sections of the population. For the purpose of this study, the research was focused on specifically selected components of environmental sanitation, the factors that contribute to the current condition and the extent to which the interventions such as institutional arrangements, legislation s, programs or projects aimed at promoting good environmental sanitation condition are achieving their intended purpose of breaking the cycle of disease. The study is not necessarily concerned with a detailed technical discussion of all the environmental themes such as air pollution, flora and fauna, human development and settlement, waste management, water management and pollution. However, those aspects of the various themes that do relate to filth and poor urban sanitation and hygiene environment were discussed. At the instructional level, the study focuses on the various department within the

assembly responsible for ensuring a hygiene residential environment, their capacities, strengths and weakness (with respect to staffing, financing and logistics) in managing environmental sanitation in halls of residence. The challenges are the limitation of this study which are as follows: Some of the respondent were reluctant to accept and give answers to the questionnaires and may have been bias in their opinions Inability to verify the response given by the respondents.

Furthermore, the study was not pre-finance by any resourceful organization, but rather, self-sponsored and commissioned for academic purpose. Thus, there were inadequate resources to carry out an extensive and intensive study throughout the halls of residence, hence, limiting the survey to only some rooms in each unit in halls of residence

Operational Definition of Terms

Attitude: is defined as a predisposition or tendency to respond positively or negatively towards a certain idea, person or situation.

Waste: waste is defined as something which the owner no longer wants at a given place and time and which has no current or perceived market value. It

is any substance or object which the producer or the person in possession of it discards or intends or required to discarded

Environment: the aggregate of social and cultural conditions that influence the life of an individuals in a community.

Environmental Sanitation: is defined as the control of all those factors which may contribute to disease transmission and or causation.

Sanitation: is the means of promoting the hygiene through the prevention of human contact with hazards of waste especially faeces, by proper treatment and disposal of waste, often mixed into waste water.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The main aim of this chapter is to present already existing view of people in related topic on attitude of undergraduate students towards environmental sanitation and waste disposal in University of Benin. This chapter is sequentially arranged and discussed under the following sub-headings:

- ❖ Concept of Environment
 - ✓ Biological environment
 - ✓ Physical environment
 - ✓ Environmental Sanitation
 - ✓ Social environment
- ❖ Factors Affecting Environmental Sanitation
- ❖ Attitude of students towards Environmental Sanitation
- ❖ Problems of Solid Waste Management
- ❖ How to Solve the Problem of Environmental Sanitation

Concept of Environment

Environment means that all the living and non-living things are surrounded by man. This is the aggregate of all external condition, which influence and affect the life and development of an organism (Christy, 2011).

Environment is further divided into three (3) components which are;

Biological Environment

This is the universe of living things that surrounds man and man itself. Some of these living things that surround man are animals, insects, parasites, viruses and plants. These are constantly working for their survival and in this process some of them produce disease agents' reservoirs of infection and intermediate host (Christy 2011).

Physical Environment

(Badejo, 2019) this applies to non-living things and physical factors which can be identified as air, water, soil, climate, weather, season and the food etc. which man is in constantly interaction with them.

Environmental Sanitation

Environmental sanitation is the control of all those factors in man's physical environment which exercise preventing diseases and promoting health and survival.

According to experts, environmental sanitation is a set of actions geared towards improving the quality of the environment and reducing the amount of diseases (WHO). By doing so, the hope is that living conditions will improve and health problems will decrease. From the above definition we see that they have something in common, that is the control of the environment in order to promote health entirely.

According to WHO (2014) environmental sanitation involves adequate disposal of waste, provision of safe water supply, provision of

good housing, safeguarding of food, proper disposal of sewage, proper control of insect, vectors and other pest, Air hygiene and prevention of atmospheric pollution, Elimination of other hazards e.g. noise.

Olojoba (2019) reviewed that sanitation be it in the rural or urban relate to the effective implementation of the above factors in order to promote life. Below is a brief explanation of one major aspect of environmental sanitation, adequate waste disposal.

Social Environment

Park (2015) viewed that it is those factors affecting personal health care and the community well-being and function of social group which include man custom, habit, occupation, religion, culture, health services and even income. The word “sanitation comes from French word Sanita”, which means cleanliness. So sanitation is a procedure involving measures to keep the environment or whole ecology of man clean and freeform waste decaying matters, animals and human excreta, gases, infective materials dangerous to life, insects and other agent and to provide safe and sufficient air, water and food etc. Sanitation is a way of life, which implies that it must

come from within the people to clean their homes, farm, business place and their community.

Factors Affecting Environmental Sanitation

Jenkins and Sugden (2016) note that use of the term ‘sanitation’ is in danger of blurring the important distinction between ‘on-site’ methods of handling human waste on the one hand, and connections to sewer systems on the other. Many developing countries face numerous challenges in order to get a conducive environment.

Inadequate waste disposal system: This is one of the major factors affecting environmental sanitation because when the available waste disposal facilities are not adequate enough, people tend to litter the environment thereby leading to poor sanitation Schenker (2014).

Lack of information/awareness: If majority of the occupants are not aware of the importance of proper environmental sanitation, they wouldn’t see the need to keep their environment clean. According to Asmatulu (2018) Awareness should be made by the government on the importance of the

environment sanitation so as to sensitize the members of the public into developing a positive attitude towards environmental sanitation.

Lack of law enforcement: This play a major role in ensuring compliance among members of the public to the laid down environmental regulations. Therefore, when these laws are not available to ensure compliance, people tend to neglect the practice of environmental sanitation.

Poverty: This is one of the ranging factors a developing country is facing and its contribution to preventing environmental sanitation is as a result of insufficient fund to pay for refuse disposal which hampers proper sanitation and leading to littering of refuse around the environment. Also lack of funds to get portable drinking water leaves the populous no choice to obtaining water from the steams which are not genuinely clean.

Attitude of students towards Environmental Sanitation

In carrying out any programme in any society awareness of the people is very important because the people are not aware of the programme, they will respond positively but their attitude will be negative leading to non-participation. Nigeria seems to portray lukewarm attitudes towards waste management. No wonder Mobogunje (2019) asserted that the general

deplorable and uninspiring characteristics of Nigeria cities continue to fester and appear as if there are no solutions to them. He further added that most of the wastes generated are not removed, and that in spite of the citizens cleaning their immediate environment, the inability of the local government to remove the numerous heaps of refuse all over the streets highlights the very poor level of waste management in Nigerian cities. Filth is thus a pervasive feature of most Nigerian cities and the poor have to survive and contend with this on daily basis due to inefficient urban waste management. Over the past 20 years, Nigeria according to Uchegbu (2012) has witnessed rapid economic growth. This growth according to him, has given rise to the rising mountains of garbage, which now characterized most of our towns and cities. He further remarked that in the case of refuse, its collection and disposal have become the most glaring problem in Nigeria's urban areas which defied solution by both military and civilian administrators since Nigeria's independence. Discussing further, Uchegbu (2012) contended that the volume of waste generated by Nigeria's populace in cities, towns or villages are directly related to the population density. Lagos is a case in point where two-thirds of its gutters have become free range – part dumping

grounds, part peeing and part defecation. This can pose serious public health problems. Explaining further, Falomi (2015) identified two broad categories of Nigeria urban populace on the basis of their waste management attitude, which include: 1. the unconcerned elite who have an out-of-sight, out of mind attitude towards pile of waste, which they drive passed on streets enroute their offices, and 2. the ignorant poor who have an attitude of helpless resignation to living with the filth. These negative attitudes of waste management undermine health. It is not surprising that UNICEF (2011) and Hodges (2011) studies found that the gaps in access to adequate sanitation remain very high in the rural areas. The study of Hodges (2001) indicated that about one third of rural households have no toilet facilities at all and as a result make use of the bush and rivers, while the study of UNICEF (2011) on environmental sanitation found that 40 per-cent of households did not have sanitary means of excreta disposal.

The study further revealed that 48 per cent of rural dwellers dispose of solid waste in the bush, while 45 per cent used dumping sites. Only 9 per cent used garbage pits and 3 per cent burned their refuse. Many households according to the study (46 per cent) also did not allow their children to use

latrines, even if these exist, mainly out of the fear that children may fall into pit (6 per cent) or mess up the latrine (52 per cent). These attitudinal problems underscore the need to accompany the construction of latrines with hygiene education. Another major waste management problem in the urban areas as Hodges (2011) opined is lack of refuse collection. Waste management authorities collect refuse from households and public containers on a regular basis only in very few urban communities. As a result, most urban households' resort to open dumping of refuse, engage private refuse collectors or burn or bury solid waste. He cited Lagos as an example where a survey in 1997 found that 21 per cent of households used dumping grounds, while 52 per cent employed the services of truck pushers to transport their solid waste to refuse skips. In most cities, the mounds of decomposing rubbish provide breeding grounds for rats, flies, and mosquitoes, contributing to unhealthy environment. Saleh (2018) the poor waste management attitudes and practices may be adduced to poor knowledge of the impact of improper waste management on health. Sufficient knowledge of the impact of waste management on health may help people to protect themselves from diarrhea, typhoid fever, cholera,

hepatitis, malaria and other infections. Adequate knowledge of the negative impact of poor refuse disposal may encourage people to adopt positive waste management practices and positive waste management practices may also promote personal hygiene and the health of the environs. (Boadi & Kuitunen, 2003) despite various programmes by different tiers of government to address the issues of waste management, many Nigerians including the environs of Jos south metropolis seem to possess low level of knowledge, negative waste management attitudes and practices. Regrettably, the poor knowledge, attitudes and practices associated with waste management might have predisposed the environs of Jos south metropolis to the dangers of air borne diseases such as whooping cough, asthma, measles, tuberculosis; water borne diseases such as typhoid fever, dysentery, cholera, hepatitis and insect/rodent borne diseases such as malaria, plague and Lassa fever. Diseases associated with poor waste management have caused numerous illnesses and the deaths of many Nigerians in general and Jos south metropolis in particular. This therefore necessitated the present study on attitudes of people towards environmental sanitation in Area of community of Nyanya Federal Capital Territory (FCT)

Problems of Solid Waste Management

Improper disposal of public solid waste can create unsanitary conditions, and these conditions in turn can lead to pollution of the environment and to outbreak of vector-borne diseases (that is diseases spread by rodents and insects) (Encyclopedia Britannica, 2019).

Large quantities of wastes are generated on daily basis, and this exerts much pressure on an over strained solid waste management system. Coupled with weak institutional capacity, and lack of resources, both human and capital, city authorities are facing difficulties in ensuring that all the waste generated is collected for disposal. Home collection of waste is limited to high and some middle-income areas (where practiced), while the poor are left to contend with the problem on their own. This leads to indiscriminate disposal of wastes in surface drains, canals and streams, creating unsanitary, unsightly environments on many cities (Boadi & Kuitunen, 2013). In Nigeria, solid waste management problems are classified into the following;

Pests and disease: Food waste attracts pests and vermin like feral pigs and rats. These pests and vermin can start or spread diseases in the community.

Pile of old garden waste and pieces of old furniture left in yards can shelter vermin and help them to breed. Dengue fever can be spread by mosquitoes that breed in anything that can hold water, like inside of old car tyres, litter and even old palm fronds lying on the ground.

Injury and disease: People can contract diseases like tetanus and leptospirosis if they cut or scratch themselves on pieces of metal, nails or glass, children can be seriously hurt by playing with old car batteries or household cleaners that they find lying around.

Litter: Litter can be a problem in any community. Broken bottles and tins, for example, can cause injury if people don't put them into bins. Mosquitoes and other vectors can breed in water trapped in old tyres and bottles. People are more likely to drop litter in places that already have litter lying around. If they see litter on the ground, they may think it is right for them to also throw litter on the ground (Government of Queensland, 2019).

How to Solve the Problem of Environmental Sanitation

According to Muir (2010). Sanitation in Nigeria is a multifold problem. The lack of urban planning, compounded by the fact that many

people (especially unskilled) are migrating to cities means that there is increase in slum population. There is also water scarcity, inadequate rural infrastructure, lack of education and homelessness to consider. To solve all of these situations, following may be implemented.

(Aadal, 2013), Government housing and planning- For the increasing migration to the cities, there has to be an appropriate city planning at municipal level. This means that the authorities need to ensure a compulsory connection of clean water and sanitation services to all the new house and start ensuring connections to old ones. Governments can also ensure that instead of relocating poorer migrants to slums, they can reside in government sanctioned house with at least one toilet per ten people. This can help reduce slum burden and can help in development of the unconnected slums also.

Public toilet facilities- Governments can also ensure establishment of multiple public toilets, which will help dramatically. The lack of public toilets leads to public defecation and in turn spreads infections. Most people are better if heavy investments can be made for the sake of public health.

Public toilets should also be maintained properly. It can be done by either private investments or by adopting pay and use format.

Provision of dumpsite- due to unavailability of dump sites people tends to dispose their refuse in drainage and around tier environment and this hampers the flow of water this leading to environmental degradation. Therefore, the government should make provision for disposable trucks that would assist in preventing littering around of refuse.

Public awareness- The need to educate the public of the dangers and health issues associated with poor sanitation is paramount in ensuring that they adopt a positive attitude towards environmental sanitation.

CHAPTER THREE

METHODOLOGY OF THE STUDY

This chapter describes the procedures adopted by the researcher while conducting the research work. This chapter is described under the following sub-headings:

- Research Design
- Population of The Study
- Sample and Sampling Techniques
- Research Instrument
- Validity of Instrument
- Reliability of The Instrument

- Administration of Instrument
- Method of Data Analysis

Research Design

Descriptive survey research design was employed for this study. This design was adopted for the study because it was a description of already existing phenomenon.

Population of the Study

The population of the study consist of eight thousand one hundred and fifty (8,150) students in the Faculty of Education in University of Benin. The Faculty of Education in University of Benin consists of Eight departments (examine and record 2019/2020 academic session record).

Sample and Sampling Technique

The sample of the study consist of 100L, 200L, 300L and 400L of University of Benin students in the Faculty of Education. A random

sampling method will be use to select two hundred (200) sample among the students from Faculty of Education.

Research Instrument

The research instrument that was used in collecting data from the respondents is the questionnaire. The questionnaire consisted of two parts. The first section (section A) was used to collect bio-data. Section (section B) contain questions bordering on attitude of undergraduate students towards environmental sanitation and waste disposal in university of Benin Questions were structured to get information on the raised researched questions.

Validity of the Instrument

The instrument was design by the researcher and subject to careful scrutiny by the project supervisor and two other experts from the Department of Health, Safety and Environmental Education.

Reliability of the Instrument

In order to determine the reliability of the instrument, it was administered to 20 respondents who were part of the population but were excluded from the study sample. The data collected was analysed using Cronbach alpha and it yielded a reliability coefficient of .77

Administration of Instrument

The administration of the questionnaire was carried out by the researcher by giving out the questionnaire to the students' individually and wait patiently to collect them in order to prevent loss.

Method of Data Analysis

The data collected was analyzed using basic descriptive statistics like frequency counts, percentages, mean and table will be used for the analysis.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter deals with data analysis and the discussion of the findings. The results of the analysis are presented according to the order of the research questions that guided the study.

Data Analysis for Demographic Information

The data analysis for the demographic information was carried out using simple percentage. The results are presented in Tables below.

Table1: Gender Respondent Distribution

Gender	Frequency	Percentage
Male	61	30.5%
Female	139	69.5%
Total	200	100%

Gender of Respondents: The results in Table 1 shows that 30.5% of the respondents were male while 69.5% were female. This implied that majority of the' respondents sampled for the study were female.

TABLE 2: Age Distribution

Academic level	Frequency	Percentage
100L	70	35%
200L	54	27%
300L	38	19%
400L	38	19%
TOTAL	200	100

Age Distribution: the academic level indicated that majority of the sampled respondent are 100L (70,35%). This was followed by respondents in 200L (54, 27%) followed by 300L (38, 19%) and 400L (38, 19%).

SECTION B

Table: 3 What are the attitudes of students living in hall of residences in university of Benin toward environmental sanitation?

ITEMS	N	MEAN	SD	REMARK
--------------	----------	-------------	-----------	---------------

1	students feel unconcerned toward environmental sanitation in their surrounding	200	2.70	1.070	Agree
2	Students feel unconcern towards pile of waste around their surrounding	200	2.73	.985	Agree
3	Students are reluctant in taking part in environmental sanitation	200	2.70	1.070	Agree
4	Students have a negative attitude toward health important of maintaining good environment.	200	2.70	1.070	Agree
5	Student do not find interest in participating in the environment sanitation	200	2.75	1.068	Agree
Grand Mean			2.716	1.0526	Agree

Significant Score > 2.50

In table 3 above, the researcher presents the responses by the respondents to questionnaire item 1 to 5 in relation to first research question which sought to find out the attitudes of students living in hall of residences in university of Benin toward environmental sanitation. In response to research question one, table 3 shows that the respondents agreed with items 1, 2, 3, 4 and 5 which has a mean ration of 2.70, 2.73, 2.70, 2.70, and 2.75, which is above the criteria mean of 2.50. Also the grand mean has a mean score of 2.716 which is denoted as agreed, indicated that students feel unconcerned toward environmental sanitation in their surroundings, students

feel unconcern towards pile of waste around their surroundings, students are reluctant in taking part in environmental sanitation, students have a negative attitude toward health important of maintaining good environment, student do not find interest in participating in the environment sanitation.

Table: 4 What is the current environmental sanitation situation in the hall of residences in University of Benin?

	ITEMS	N	MEAN	SD	REMARK
6	Polluted air from refuse dumping site brings out odour cause respiratory disease among students.	200	2.70	1.070	Agree

7	Indiscriminate disposal of solid waste causes aesthetic Nuisance	200	2.73	.985	Agree
8	Indiscrimination of disposal of waste impact student's health negatively	200	2.70	1.070	Agree
9	Indiscriminate disposal of waste leads to the breeding of insects such as mosquitos, flies, cockroaches, rats	200	2.70	1.070	Agree
10	Indiscriminate disposal of waste leads to air borne pollution that produces odour.	200	2.66	1.067	Agree
Grand Mean			2.698	1.0526	Agree

Significant Score > 2.50

In table 4 above, the researcher presents the responses by the respondents to questionnaire item 6 to 10 in relation to first research question which sought to find out the attitudes of students living in hall of residences in university of Benin toward environmental sanitation. In response to research question two, table 4 shows that the respondents agreed with items 6, 7, 8, 9 and 10 which has a mean ration of 2.70, 2.73, 2.70, 2.70, and 2.66, which is above the criteria mean of 2.50. Also the grand mean has a mean score of 2.698 which is denoted as agreed, indicated that polluted air from refuse dumping site brings out odour cause respiratory disease among students, indiscriminate disposal of solid waste causes aesthetic Nuisance,

indiscrimination of disposal of waste impact student’s health negatively, indiscriminate disposal of waste leads to the breeding of insects, indiscriminate disposal of waste leads to air borne pollution that produces odour.

Table: 5 What factors account for the environmental sanitation in the hall of residences in university of Benin?

ITEMS	N	MEAN	SD	REMARK
11 Inadequate waste disposal system is one of the major factors affecting environmental sanitation in hall of residence	200	2.73	.985	Agree
12 Lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence	200	2.66	1.067	Agree
13 Lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence	200	2.76	1.047	Agree
Grand Mean		2.717	1.033	Agree

Significant Score > 2.50

In table 5 above, the researcher presents the responses by the respondents to questionnaire item 11 to 13 in relation to first research question which sought to find out the factors account for the environmental

sanitation in the hall of residences in university of Benin. In response to research question three, table 5 shows that the respondents agreed with items 11, 12 and 13 which has a mean ratio of 2.73, 2.66 and 2.76, which is above the criteria mean of 2.50. Also the grand mean has a mean score of 2.717 which is denoted as agreed, indicated that inadequate waste disposal system is one of the major factors affecting environmental sanitation in hall of residence, lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence, lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence

Table 6: What are the current practices of students towards a better way to dispose waste and environmental sanitation?

ITEMS	N	MEAN	SD	REMARK
-------	---	------	----	--------

14	It became the duty of every Students to ensure that their toilet is always kept clean	200	2.66	1.067	Agree
15	Provision of dumpsite students are now trying to dispose their refuse in drainage and around tier environment	200	2.73	.985	Agree
16	Public awareness the students were educated about the dangers and health issues associated with poor sanitation	200	2.70	1.070	Agree
17	The students are encouraging to always have a good attitude towards environmental sanitation.	200	2.70	1.070	Agree
Grand Mean			2.698	1.2055	Agree

Significant Score > 2.50

In table 6 above, the researcher presents the responses by the respondents to questionnaire item 14 to 17 in relation to first research question which sought to find out the current practices of students towards a better way to dispose waste and environmental sanitation. In response to research question four, table 6 shows that the respondents agreed with items 14, 15, 16 and 17 which has a mean ratio of 2.66, 2.73, 2.70, and 2.70, which is above the criteria mean of 2.50. Also the grand mean has a mean score of 2.698 which is denoted as agreed, indicated that it became the duty of every Students to ensure that their toilet is always kept clean, provision of

dumpsite students are now trying to dispose their refuse in drainage and around tier environment, public awareness the students were educated about the dangers and health issues associated with poor sanitation, the students are encouraging to always have a good attitude towards environmental sanitation.

Discussion of Findings

From the data collated and analyzed the following are the findings:

In table 3, it is seen that the respondents agreed to the research question which sought to find the attitudes of students living in hall of residences in university of Benin toward environmental sanitation, and this is based on the responses from the sampled population which agreed that students feel unconcerned toward environmental sanitation in their surroundings. The respondents in the sample agreed that students feel unconcern towards pile of waste around their surroundings. It is also seen that respondents agreed that students are reluctant in taking part in environmental sanitation. Majority of the sampled respondents agreed that students have a negative attitude toward health important of maintaining

good environment. The finding revealed that majority of the respondents agreed that student do not find interest in participating in the environment sanitation. According to Mobogunje (2009) asserted that the general deplorable and uninspiring characteristics of Nigeria cities continue to fester and appear as if there are no solutions to them.

In table 4, it is seen that the respondents agreed to the research question which sought to find the current environmental sanitation situation in the hall of residences in University of Benin, and this is based on the responses from the sampled population which agreed that polluted air from refuse dumping site brings out odour cause respiratory disease among students. The respondents in the sample agreed that indiscriminate disposal of solid waste causes aesthetic Nuisance. It is also seen that respondents agreed that indiscriminate disposal of waste impact student's health negatively. Majority of the sampled respondents agreed that indiscriminate disposal of waste leads to the breeding of insects. The finding revealed that majority of the respondents agreed that indiscriminate disposal of waste leads to air borne pollution that produces odour.

In table 5, it is seen that the respondents agreed to the research question which sought to find the factors account for the environmental sanitation in the hall of residences in university of Benin, and this is based on the responses from the sampled population which agreed that inadequate waste disposal system is one of the major factors affecting environmental sanitation in hall of residence. The respondents in the sample agreed that lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence. It is also seen that respondents agreed that lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence. This is in accordance to Jenkins and Sugden (2006) note that use of the term ‘sanitation’ is in danger of blurring the important distinction between ‘on-site’ methods of handling human waste on the one hand, and connections to sewer systems on the other.

In table 6, it is seen that the respondents agreed to the research question which sought to find the current practices of students towards a better way to dispose waste and environmental sanitation, and this is based on the responses from the sampled population which agreed that it became

the duty of every Students to ensure that their toilet is always kept clean. The respondents in the sample agreed that provision of dumpsite students are now trying to dispose their refuse in drainage and around tier environment. It is also seen that respondents agreed that public awareness the students were educated about the dangers and health issues associated with poor sanitation. Majority of the sampled respondents agreed that the students are encouraging to always have a good attitude towards environmental sanitation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study was carried out to examine attitude of undergraduate students in hall of residence in university of Benin towards environmental sanitation and waste disposal. The study adopted the descriptive survey research design.

The sample size for the study is two hundred (200) Students, in the Faculty of Education, University of Benin. A questionnaire titled “Attitude of Undergraduate Students in Hall of Residence in University of Benin Towards Environmental Sanitation and Waste Disposal” was the main instrument used for data collection. Data from the questionnaire were analysed mean and standard deviation.

To guide the study, four research questions were raised which are outlined thus:

1. What are the attitudes of students living in hall of residences in university of Benin toward environmental sanitation?
2. What is the current environmental sanitation situation in the hall of residences in University of Benin?
3. What factors account for the environmental sanitation in the hall of residences in university of Benin?
4. What are the current practices of students towards a better way to dispose waste and environmental sanitation?

Findings

- Majority of the sampled population agreed that students feel unconcerned toward environmental sanitation in their surroundings. The respondents in the sample agreed that students feel unconcern towards pile of waste around their surroundings. It is also seen that respondents agreed that students are reluctant in taking part in environmental sanitation. Majority of the sampled respondents agreed that students have a negative attitude toward health important of maintaining good environment. The finding

revealed that majority of the respondents agreed that student do not find interest in participating in the environment sanitation.

- Majority of the sampled population agreed that polluted air from refuse dumping site brings out odour cause respiratory disease among students. The respondents in the sample agreed that indiscriminate disposal of solid waste causes aesthetic Nuisance. It is also seen that respondents agreed that indiscriminate disposal of waste impact student's health negatively. Majority of the sampled respondents agreed that indiscriminate disposal of waste leads to the breeding of insects. The finding revealed that majority of the respondents agreed that indiscriminate disposal of waste leads to air borne pollution that produces odour.
- Majority of the sampled population agreed that inadequate waste disposal system is one of the major factors affecting environmental sanitation in hall of residence. The respondents in the sample agreed that lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence. It is also seen that

respondents agreed that lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence.

- Majority of the sampled population agreed that it became the duty of every Students to ensure that their toilet is always kept clean. The respondents in the sample agreed that provision of dumpsite students is now trying to dispose their refuse in drainage and around tier environment. It is also seen that respondents agreed that public awareness the students were educated about the dangers and health issues associated with poor sanitation. Majority of the sampled respondents agreed that the students are encouraging to always have a good attitude towards environmental sanitation.

Conclusion

From the analysis carried out in the study, it can be concluded that;

This study reveal that it is seen that the respondents in the sample agreed that students feel unconcerned toward environmental sanitation in their surroundings. The respondents in the sample agreed that students feel unconcern towards pile of waste around their surroundings. The respondents

in the sample agreed that indiscriminate disposal of solid waste causes aesthetic Nuisance. It is also seen that respondents agreed that indiscriminate disposal of waste impact student's health negatively. The respondents in the sample agreed that lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence. It is also seen that respondents agreed that lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence. The respondents in the sample agreed that provision of dumpsite students is now trying to dispose their refuse in drainage and around tier environment. It is also seen that respondents agreed that public awareness the students were educated about the dangers and health issues associated with poor sanitation.

Recommendations

The following are the recommendations

1. It is a matter of urgency that we should improve on environmental sanitation because improve sanitation has been associated with better health and nutritional station.
2. Environment health offices should train and operate on the opinion that active participation of cleaning the environment is necessary because

people are more inclined to use and support of sanitation improvement if properly guided.

3. There should be legislation for proper sanitation on a regular basis to make every day count as it will enhance the health status of the environment
4. Laws for improper disposal of refuse should be put in place and enforced by the government. This will improve and change attitude of people towards environmental sanitation.
5. There should be free and regular distribution of mosquito next and other relevant materials that cab assist in checkmating the increase of disease outbreak.
6. The practice of plating grasses and flowers should be encouraged as this would enhance the supply of natural air which will make the environment conducive.

REFERENCE

- Aadal, A (2013). Investing households' attitude toward recycling of solid waste in Malaysia: *A case study. Int. J. Environ. Res.* 2009, 3, 275–288. *Uiterkampa*.
- Asmatulu, B (2018). Assessment of Awareness of Attitude and Willingness of People to Participate in Household Solid Waste Recycling Programme in Ado-Eketi, Nigeria, in the *Journal of Applied Sciences in Environmental Sanitation. Jakarta, Indonesia*. <http://www.explainthatstuff.com/recycling.html>.
- Babalola, A (2016). Why Is Recycling So Important? | Earth's Friends. Retrieved September 24, 2016, from <http://www.earthsfriends.com/why-recyclingimportant/>.
- Badejo, O (2009). The Impact of Recycling on the Environment. *Conservation Recycling* Vol. 8: 387-391. Retrieve October, 14, 2012.
- Boadi, U (2003). A comparative analysis of curbside recycling behavior in urban and suburban communities. *Prof. Geogr.* 1993, 45, 169–179.

- Christy, K. (2012). Implementing 3R Concept in Construction Waste Management at Construction Site. Retrieved November 27, 2016 from [http://www.textroad.com/pdf/JAEBS/J.%20Appl.%20Environ.%20Biol.%20Sci.,%203\(10\)160-166,%202013.pdf](http://www.textroad.com/pdf/JAEBS/J.%20Appl.%20Environ.%20Biol.%20Sci.,%203(10)160-166,%202013.pdf).
- Evans, M (2005). Management of People Living in the University Area of Ogbomso, Nigerian. *International Journal of Environment Ecology, Family and Urban* , 3, 51-56.
- Falomi, A (2015). Pay for your rubbish plans. Retrieve October,15,2012, from www.thesun.co.uk/sol/homepage/news/265576/Pay-for-your-rubbish-plans.html.
- Hodges, D (2001). Utilisation of energy from waste for sustainable development in Kaduna; *paper presented at the international conference on science, University Abuja*.
- Jenkins and Sugden (2016). Work Together to Recycle. Retrieved September 24, 2016, from <http://www.thestar.com.my/metro/views/2015/04/14/work-together-torecycle-alarming-statistics-a-wakeup-call-for-better-waste-management/>.
- Kuitunen, L (2003). Environmental Sanitation: A useful task for students of engineering and a ready reference for designers and planners, S Chard and Company Ltd, New Delhi.
- Kuitunen, L (2013). Recycling. Retrieved September 24, 2016.
- Milas, H (2010). *Assessment of Secondary School Students' Knowledge, Attitude and Practice towards Waste Management in Ibadan, Oyo State, Nigeria*. Retrieved from <https://www.interesjournals.org/articles/assessment-of-secondary-school-students-knowledge->.
- Mobogunje, O (2019). Impact of Building Material Recycle or Reuse on Selected Energy Ratios. *Resources, Conservation and Recycling* :

9-17. Retrieve October, 15, 2012, from
www.elsevier.com/locate/resconrec.

- Muir, N (2010). Solid Waste Management Awareness, Attitude, and Practices in a Philippine Catholic Higher Education Institution. Retrieved from https://www.researchgate.net/publication/327177428_Solid_Waste_Management_Awareness_Attitude_and_Practices_in_a_Philippine_Catholic_Higher_Education_Institution.
- Nosike & Opara, (2003). Intra-urban Environmental Quality: A case study Neighbourhood in Benin City, Nigeria, Mimeo, Department of Geography and Regional Planning, University of Benin, Benin City.
- Olojoba, B (2019). Sustainable Recycling Model: A Comparative Analysis between India and Tanzania. Resources, *Conservation and Recycling*:344355. Retrieve October, 15, 1974, from www.elsevier.com/locate/resconrec.
- Opara, R (2003). A new recycling course development for undergraduate education at WSU. In: 2008ASEE Midwest regional conference, Tulsa, OK, 18–19 September 2008.
- Park, E (2015). Investing households' attitude toward recycling of solid waste in Malaysia: A case study. *Int. J. Environ. Res.* 2009, 3, 275–288.
- Rao, S.R (2006). Resource recovery and recycling from metallurgical wastes. Elsevier, Amsterdam.
- Saleh, H (2018). Recycling Awareness Among Undergraduate Student Under KAED Environmental Education: A Case Study of KAED's Students Recycling Behaviour. Retrieved at 17 November, 2016 from http://irep.iium.edu.my/4354/1/Recycling_paper.pdf.
- Schenker, S (2014). Palacio, A.B. Recycling behavior: A multidimensional approach. *Environ. Behav.* 2005, 37, 837–860.

Ukpong, O (2000). Equal opportunity, unequal results: Determinants of household recycling intensity. *Environ. Behav.* 1999, 31, 267–290. [CrossRef].

W.H.O (2017) Environmental Health, Profile Technical Report Series 186, 50. U.S.A.

W.H.O/UNICEF (2014) Fact Sheet on Water and Sanitation.

APPENDIX

ATTITUDE OF UNDERGRADUATE STUDENTS IN HALL OF RESIDENCE IN UNIVERSITY OF BENIN TOWARDS ENVIRONMENTAL SANITATION AND WASTE DISPOSAL

Dear Respondents,

I am an undergraduate student carrying out a research on the above topic, from the Department of Health, Safety and Environmental Education (HSE). The purpose of this research is purely for academic purpose. I humbly appeal for your maximum honesty in responding to the questions. As all information given will be treated with utmost confidentiality

Yours faithfully,

the Researcher

SECTION A

Demographic Information

Instruction: Please tick (✓) the appropriate option and fill the spaces provided.

Gender: Male (), Female ()

Academic level: 1001 (), 2001 (), 3001 (), 4001 ()

SECTION B

Key: SA –Strongly Agree, A- Agree, D- Disagree, SD –Strongly Disagree and Yes and No

N/S	ITEMS	SA	A	D	SD
	What are the attitudes of students living in hall of residences in university of Benin toward environmental sanitation?				
1	students feel unconcerned toward environmental sanitation in their				

	surrounding				
2	Students feel unconcern towards pile of waste around their surrounding				
3	Students are reluctant in taking part in environmental sanitation				
4	Students have a negative attitude toward health important of maintaining good environment.				
5	Student do not find interest in participating in the environment sanitation				

	What is the current environmental sanitation situation in the hall of residences in University of Benin?	SA	A	D	SD
6	Polluted air from refuse dumping site brings out odour cause respiratory disease among students.				
7	Indiscriminate disposal of solid waste causes aesthetic Nuisance				
8	Indiscrimination of disposal of waste impact students health negatively				
9	Indiscriminate disposal of waste leads to the breeding of insects such as mosquitos, flies, cockroaches, rats				
10	Indiscriminate disposal of waste leads to air borne pollution that produces odour.				
	What factors account for the environmental sanitation in the hall of residences in university of Benin?				
11	Inadequate waste disposal system is one of the major factors affecting environmental sanitation in hall of residence				
12	Lack of information/awareness is also one of the factors facing of the environment sanitation in hall of residence				

13	Lack of law enforcement is a major factor facing effective environmental sanitation in hall of residence				
	What are the current practices of students towards a better way to dispose waste and environmental sanitation?				
14	It became the duty of every Students to ensure that their toilet is always kept clean				
15	Provision of dumpsite students are now trying to dispose their refuse in drainage and around tier environment				
16	Public awareness the students were educated about the dangers and health issues associated with poor sanitation				
17	The students are encouraging to always have a good attitude towards environmental sanitation.				