

**FACTORS INFLUENCING WASTE MANAGEMENT SYSTEMS: A CASE STUDY
OF EMBAKASI SOUTH CONSTITUENCY, NAIROBI**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
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DECLARATION

I would like to declare that the research project my original work and nobody else has submitted in any examination body. Therefore there should be no has person who should claim his or hers without my consent. I study at from the Management University of Africa.

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This project has been witnessed and approved by the Universitysupervisor stated below:

Signature:_____ **Date:**_____

Ms. Phoebe Mureithi

DEDICATION

I dedicate this work to my entire family as inspiration to seek more knowledge and also to motivate them to support the mankind efforts to maintain sustainable development. I also dedicate it to my friends who continually would want to add value to the education and in fighting ignorance to enhance human development and promote cohesive society which will be symmetrical with information. God's love you shall endure forever.

ACKNOWLEDGMENT

I would like to acknowledge everyone who played a role in my academic accomplishments. First and foremost, God Almighty, who blessed me with good health and also with wisdom and knowledge. He has gifted me with to accomplish much achievement.

Secondly, my family, who showed me, love, understanding and provided me with encouragement to achieve my dreams. Thirdly, my supervisors, school of Management and Leadership of Management University of Africa, colleagues, and friends, each of whom provided patient advice and guidance throughout the research process. All who have met in my process have been a blessing even those who positively critical have helped me a lot to accomplish this very vital task. I am duly and deeply indebted. Thank you all for your unwavering support.

ABSTRACT

Proper waste is the most important elements in human kind. Proper waste management is importance both to the environment but also to human health.

Research project was carried out to study the factors influencing waste management system in Embakasi South Constituency in Nairobi County. The factors studied included low waste collection, increase in waste creation, type of the waste material and the low residents' responsiveness in the activity

The research project has different areas of interest which include the following:

Background of study where the factors of study are explained from the global perspective to down to the sub county. Both dependent variable and independent variables are explained in this chapter. The chapter also expounds statement of the problem, objective of the study, significance of the study. In chapter literature related to the waste management was studied. The chapter is done after the researcher has reads different journals and articles on waste management. Different theories relevant to the topic of study, Empirical literature, Conceptual framework and research gaps. In Chapter three the following sub topics are discussed: Resign, target population, sample size and sampling techniques, data collection, data collection instruments, pilot study (validity and reliability), data collection procedure, data analysis and ethical considerations. In chapter four, data is analyzed and presented in form of tables and figures. SPSS was used in data analysis. Chapter five contains summary of the findings, conclusions and recommendations.

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ABBREVIATIONS AND ACRONYMS

NEMA National Environmental Management Authority

TPB Theory of Planned Behaviour

SWM Solid Waste Management

MCN Municipal Council of Nairobi

CBD Central Business District

OPERATIONAL DEFINITION OF TERMS

Waste Management: This is collection, transport, treatment and disposal of waste, (b) control, monitoring and regulation of the production, collection, transport, treatment and disposal of waste, and. (c) prevention of waste production through in—process modifications, reuse and recycling, Financial management: Overarching plan that establishes the firm's sources and

Innovations: This is a process which entails developing new ideas, inventing, and also bringing a new product, process, or service to the market

Strategic leadership: Refers to the management capability to foresee, maintain agility, and empower followers to build strategic changes as needed.

Strategic human management: Comprehensive approach that involves managerial functions of hiring, developing, and maintaining competent employees

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter contains Background of study, statement of the problem, objectives of the study which comprises of the main objective and the specific objective, research questions, importance/significance of the study, scope and the chapter summary.

1.1 Background

From (Golush, 2008) we can define waste management is well coordinated mechanism of taking care of wastes. The waste may be in form of liquid or solid waste. Through numerous plants' and animals activities, the end product is obtained which is termed as a waste. In recent ways of defining waste management, it may be defined as various methods of collecting and maintaining unused by products in the right way with the aim of improving the standard of living for the human life (Hornell, 2004). In previous centuries and recent times, different factors have influenced waste management like environmental management concerns are highly considered in both recent and previous centuries. Poor management of the waste has been a menace in the global arena in the present times Comparing previous and recent community, we find that modern governments across the globe has found it challenging to maintain reasonable waste management ways. There are various factors that affect waste management globally

1.1.1 Low collection.

The first reason for these challenges is low collection of waste which consequently results to high waste accumulation hence impacting the standard of living of the human kind. With the increase of human activities, wastes keep on increasing from time to time. It has been discovered worldwide that, the concerned parties has not paid enough attention to this parameter. When wastes accumulates, it is evident that the situation will result to various drawbacks like pollution, diseases, poor living conditions among other side effects. According to (Hounsell, 2014).

Landfills are installed when certain human activities takes place like mining, construction of roads and houses among other human activities. When such voids are created, they accumulate wastes like polythene papers, dead animals and plants and others. As a result of this more side effects are experienced like production of most dangerous chemicals, gases which are harmful to human health. This also has a air pollution effect

In Kenyan context, National Environment Management Authority is an agency tasked to carry out waste maintenance. The agency has done a tremendous work since its establishment. However, it has been face with so many challenges in discharging its duties in all the sub counties in Kenya. Considering Embakasi South Constituency in Nairobi County, we find that the agency has not been able to ensure frequency waste collection. This has impacted human life in various ways

1.1.2 Increase in waste Creation

The second factor affecting waste management is increase in waste creation amidst societal development towards. Low population resulted to low waste creation but with the increase of the population meant that human activity increased hence resulting to creation of more waste. The other reason why in traditional day the waste was low is that people had not developed technology, innovation and creativity. Upon development of technology, innovation and creativity it meant increasing wastes since human activities increased. In Central America, residents could gather in specific days like once in a week to collect and burn wastes. Unfortunately with the increase in the number of people, it meant human activities increased hence residents were overwhelmed with the waste maintenance; therefore they were pushed by the circumstances to relinquish the collection of the wastes. Based on (Hounsell, 2014), Waste generation per country is increasing every time. This is contributed by every growing population of people and their continuity activities throughout their life time

In Kenyan context, National Environment Management Authority is an agency tasked to carry out waste maintenance. The agency has done a tremendous work since its establishment. With the increase in waste productions avenues and more human activities the agency has found itself in a difficulty moment because of the ever growing population. Embakasi South Constituency is one of the most populated Constituency in this country; this has led to the increase of the number of wastes produced. Low number of collectors of the garbage and other wastes has greatly affected the entire process.

1.1.3 Nature (type) of the waste produced

A second reason recounts to the type of the waste been produced. In traditional times, it is true that most of the wastes that were produced were organic in nature. This made it easy to dispose these wastes. In current world, most of the waste produced is in inorganic in nature

which is very difficult to discard. On top of difficulty in discarding the waste, they are associated with most dangerous gases and chemicals (Hounsell, 2014).

Kenya is one of the developing countries where we expect numerous activities in industries, government agencies and education sector. These organizations are ever active to ensure that the ever growing population is indulged in terms of food provision, health care, housing among other amenities. Industrial areas are located in Embakasi South Constituency in its large part of it. More industries are found there and therefore more activities. Most of the raw materials used in such industries is inorganic in nature meaning that more heavy metals, harmful gases and solid waste is ever produced which affects human being in terms of health.

1.1.4 Low personal responsibility

In most cases the element of improper waste is influenced by individuals either with or without knowledge about waste management ignore their personal responsibility of ensuring proper waste management

Most of the developed countries such as USA, UK and China and Japan have improvised their mechanisms as a panacea of eliminating the side effects related to the waste management. This has been achieved through the following ways

- i) Disposing of the waste in proper land fills
- ii) Proper cycling
- iii) Proper composting
- iv) Ensuring energy recovery

From (Mwesigye et al., 2009). Waste management in Africa has been a problem since individuals dispose of the wastes gullibly without considering its environmental and human health effect which may also lead to more wastes in the cities and towns. Municipal Solid Waste (MSW) management has faced various problems in ensuring that the waste is eradicated from the towns

In Kenya, local authorities have not been in a position to discharge its duties with distinction as far as waste management is concerned. Several factors have hindered this endeavor. In Kenya we have over –hundred both private and public companies mandated to control wastes in the country.

In Nairobi County wastes especially solid waste is becoming as a major public health and environmental menace.

Former Nairobi governor Dr. Evans Kidero created a memorandum of understanding between Nairobi County Government and National Environment Management Authority (NEMA) to clean up the county. The Governor had noted that the issue had affected all sub counties in Nairobi including Embakasi South. The issues that were mentioned and addressed include: need to adopt the Integrated Solid Waste Management plan, good management of existing dumpsites by fencing them appropriately.

The governor once said that in NEMA, the county government of Nairobi has anchored some environmental legal laws that should be followed correctly to ensure efficient process. For the cleaning and restoring Nairobi River, any unapproved and unplanned structures should be contained in the standards set by the county government

1.2 Statement of the problem

According to (Mwesigye *et al.*, 2009). From various studies, it is evidenced that waste transportation, processing, recycling or disposal and monitoring, is handled ineffectively and inefficiently. In global arena, this has really being a challenge to both the developed and developing countries. Although some countries like USA and China have developed effective mechanisms to counter this effect, it is clear some countries most all the developing countries have found it as a challenge. In Kenya, has NEMA in conjunction with other private companies and NGOs have worked tirelessly to combat this. Never the less, county governments have not been left behind in this course. Nairobi county and its constituencies like Embakasi South Constituency has had a serious problems like health and sanitization problems as a result of this drawbacks according to (Roussel, 2012). The study was conducted to investigate factors influencing waste management in Embakasi South Sub-County. Thus, this would help improve well organized waste management by obtaining best waste management mechanisms that puts into consideration enhancing and providing of best services to the sub county's residents.

1.3 Objectives

1.3.1 Main Objective

Determine the factors affecting waste management systems in Embakasi South, Nairobi County in Kenya

1.3.2 Specific objectives

1.3.2.1 Determine to what extent does the low collection of the waste influence waste management

1.3.2.2 Assess how increasing waste creation affect waste management

1.3.2.3 Evaluating how type of waste being produced in the modern societies affects the waste influence waste management

1.3.2.4 Establishing how low personal responsibility for personal waste impact waste management

1.4 Research Questions

1.4.1 To determine to what extent does the low collection of the waste influence waste management?

1.4.2 To assess how increasing waste creation affect waste management?

1.4.3 To evaluate how type of waste being produced in the modern societies affects the waste influence waste management?

1.4.4 To establish how low personal responsibility for personal waste impact waste management?

1.5 Justification of the Study

The purpose of the research was to explore at crucial information that may assist us explicitly understand factors influencing waste management project. The acquired information would aid in discovering the factor influencing waste management in the Embakasi South sub county, attain hawk-eyedness on different institutions and procedural flow of the proper waste management activities. The readers of this research project would also be in a position to understand an important role they play in the success of waste management. Upon creating an awareness and training the residents on the importance of the waste management in general, they will be in a position to look at the appropriate practices as per as the waste management is concerned.

The inferences and findings of this study would help individuals, organizations, institutions and the nation at large in proper usage of materials, proper waste management through different ways. The study would also enlighten the readers in knowing the importance of

waste management, attending waste management awareness seminars.

Since the factors influencing waste management have not been expounded or exhausted, the findings would give morale to the reader to conduct further studies to determine or explore more factors affecting waste management. The study would also help the reader in decision making, well management and governance of human resources.

1.6 Scope

Content and time scope: The study will be confirmed to investigation of the factors affecting waste management specifically in Embakasi South Sub County in Nairobi County. The period of the study will range from 12th October 2021 to 12th May 2022. The study will benefit all the residents in the sub county and other readers who may find the research helpful in their endeavors.

Geographical Scope: Due to time and financial constraints, the study was conducted from the residents operating at Embakasi South in Nairobi County.

Population scope: considering the time frame, data analysis and report writing it is not possible to study the whole population. Consequently, target population and sample will be gotten from Embakasi South in Nairobi County. The study should be completed in six months time.

1.7 Chapter Summary

This section highlights what is contained in this chapter. The sections of the chapter are well highlighted briefly. The sections include: Background of study, statement of the problem, objectives of the study which comprises of both the main objective and the specific objective, research questions, importance/significance of the study, scope and the chapter summary.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this part of the research different perspective of literature is studied to aid study or indulge the research objectives, whereby the research gap is explicitly analyzed, best methods obtained to address the problem raised

2.1 Theoretical Literature Review

2.1.1 Implementation of Waste Management Project

Based on (Speth, 2008) controlling the waste has become a problem because the task has become very expensive. Problems are brought about by changing consumption patterns, industrial development, and urbanization. It is clear that ancient methods of waste management are no longer good.

In the developing countries like Kenya, waste management mechanisms are very minimal and cannot be sustained appropriately. People usually throw the waste everywhere without considering the side effects of the wastes. Firms and individuals mandated to carry out this task find difficult to actualize because of the high costs associated with it. Very few firms are able to finance and carry out the endeavor appropriately.

The core purpose of waste management and recycling mechanisms is to decrease the consumption level of natural resources to ensure that the production of more wastes is reused back with the aim of reducing the wastes production. Production of waste contributes a lot in this. Less developing countries are employing appropriate measures of proper waste management that are most sustainable. There are some best practices for mitigating this effect like, proper financing of waste management, training of staff of importance of waste management and proper organizational/institutional cultural practices.

In Kenyan context, wastes collection is done by the local authorities, who have really performed exemplary well but due the ever growing population and other active activities like industrial activities, it has been a challenge in managing wastes. Nairobi County is one of the counties whereby the population has affected the waste management. Eg. In Embakasi South Constituency is an example where the population is densely populated hence very difficult in controlling the wastes effects.

2.1.2 Theory of waste management

There existed an evolving theory which comprehensively highlights the origin of the wastes and its management. By constructing waste management theory, it meant positive contribution towards improved waste management. The theory comprehensively explains waste related concepts and methods of waste management. A lot of waste management variables are anchored in waste management theory.

Waste management theory represents more collective concepts that deal with the study of waste, activities resulting to waste and goals of the waste management.

It is true that the current formulated laws put into consideration issues pertaining waste management. The meaning emanating from this case may be antagonizing with the objective of waste control, because it very difficult to prevent something already existing from arising

Anything termed as 'waste' will be treated as that. Despite wish of waste prevention, legislation accumulates a lot of waste. The impact of such definition is that they are not in a position to enhance proper waste management mechanisms. Therefore, there must be clear definition of waste which must handle how waste is created, models for mitigating wastes.

The core role of managing waste is minimization of the waste or the reduction for the waste source. According to the European waste catalogue including waste in EWC, Doesn't mean that the material is a waste .In most cases, numerous disputes especially legal ones have been handled in European Court of Justice .This implies that waste appears simply a reaction to waste.

2.1.3 Theory of planned behavior (TPB).

The study is anchored on the theory of planned behaviour (TPB) concerned with the proper understanding of human activities (Ajzen 2002), whereby three parameters influencing waste management that is low waste collection, increase in waste creation and low personal responsibility.

According to Ajzen (2002), there exist four variables on waste management that is, the dependent variable on waste management and independent variable like low waste collection, increase in waste creation and low personal responsibility.

Low waste collection is a situation whereby the frequent of waste collection by individual, property owners and municipalities is generally low. Increase in Waste creation is whereby

as the human activities increases, waste is created in abundance while low personal responsibilities is whereby the residents don't take personal responsibilities in collection of the waste . Based on Gross (2017) the theory shows the relationship among the variable that is low waste collection, increase in waste creation and low personal responsibility.

2.2 Empirical Literature Review

This part of the research deals with the reviewing the previous existing literature with the aim of getting the other researchers findings and then help further examine the difficulties the encountered in fully addressing the issue. The study explores low personal responsibility; types of the waste, increase in waste creation and low collection affect the waste management

According to Chandrappa & Das (2012), waste is the sets of things that are not needed

There are different types of wastes waste; solid, liquid, raw, e-waste and so on. According to (Chakrabarty, 1992; DeLong, 1993; Lehmann, 2015; Oelofse, 2017) holding wastes carelessly is one of the weaknesses of the human kind.

2.3 Literature Review summary and Research Gaps

When the researcher read a lot of literature related to the topic of study, it is clear that there are alarming in improper waste management in the world, African Continent, Kenya and its constituencies for a long period of time.

In Kenya particular, we have a capital city which is highly populated hence the highly affected area. The cost of living in some areas like embakasi South Constituency is low hence attracting a lot of residents hence more creation of wastes. Majors areas of focus includes low personal responsibility, increase in waste creation, low collection of wastes

2.4 Conceptual Framework

This is a diagrammatic representation highlighting relationship among variables of the study. Relationship between dependent and independent variables is clearly exhibited in this section in a diagram form. Low personal responsibility, increase in waste creation, low collection of wastes is independent variables and waste management is the dependent variable

Independent Variables

Dependent Variable

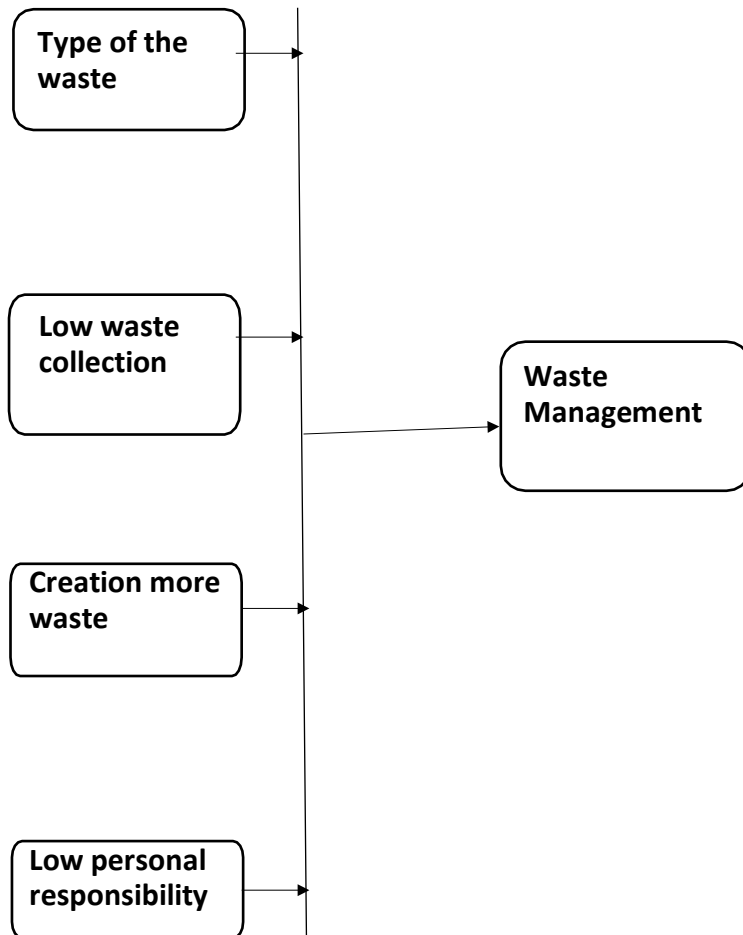


Figure 2.1: Conceptual Framework

2.5 Chapter Summary

Several items have been covered under the literature review that includes theoretical, empirical review, conceptual framework. Several theories relevant to the research variables have been expounded. Interrelationship among the variable are explained in the conceptual framework.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

The chapter intends to study the following; research design, Target population, sampling techniques (sample size and sample procedure), data collection instruments, pilot study (validity and reliability of the instruments), data collection procedure, data analysis and presentation, Ethical consideration and chapter summary.

3.1 Research design

Reading (Kothari, 2004), it is clear that a research design is a comprehensive plan whereby data collection and analysis is arranged to clearly display both the purpose and the relevance to study and solve a certain phenomenon in a society.

It can be in two ways that is both quantitative and qualitative ways according to (Matthews & Kostelis, 2011). Contemporary issues in the society are clearly expounded by the use of descriptive statistics. According to (Houser, 2011). It is used to explain in details the variables or elements of the study. (Denscombe, 2003). States that the data produced is as per the real world observation and in well-organized manner. Correlation design shows how the variables in the study relate to one another as per (Matthews & Kostelis, 2011). As per (Stangor, 2010) research is more useful compared to other designs because it can be applied where others are not possible and where the variables cannot be changed. In our study we combined descriptive survey and correlation research to determine contemporary issues in the society and determine relationship among the variables under study

3.2 Target Population

Population is defined as the pool of all sets in which conclusions (Cooper & Schindler, 2005) on the other hand target population is that specific group of people or elements where the researcher will base his or her study on (Carter & Quick, 2003). In our study, the target population consisted of men, women and young men and women aged between 15years to sixty (60) years in Embakasi South in Nairobi County. In our study, the total number of respondents engaged two hundred (200).

Table 3.1 Target Population

Strata	Population	Percentage	Sample Size
Men (15-60) years	50	25	25
Women (15-60) years	150	75	75
Total	2000	100	100

3.3 Sample Size and Sampling Technique

3.3.1 Sample Size

(Saunders *et al.* 2009) term a sample as a portion that is taken from the population to represent it. According to Gill and Johnson, (2010) we should consider the size of the selected sample in relation to the whole population, importance of the study among others issues considered important in the study. Based on (Sekaran & Bougie; Ross, 2010), most of researchers consider minimum sample size of 30 as appropriate

Considering our study, we have 100 respondents, 25 men and 75 women which is $\frac{1}{2}$ of the target population as considered appropriate for the study. Mugenda & Mugenda, 2003). Requirement for the sample size is indulged as per our study

3.3.2 Sampling Procedure

These are mechanisms the analysts use to identify sets of the study (Matthews & Kostelis, 2011). From (Jackson, 2011), stratified random sampling, considers varieties of sub sections from the population hence accurately exhibiting their features in the population. (Gravertter & Forzano, 2011), says that the tool is appropriate when describing a single or interrelation among the parameters in the study. Overall, he argues that the technique has some disadvantages and therefore in our study we chose stratified random sampling technique because of its simplicity

3.4 Data Collection Instruments

Considering different data collection instruments like personal observation, interview, focus group discussion and published statistics and questionnaire, decided to choose questionnaire method. The reason for this is that the method is simple to collect the data, accurate and cheap as compared to personal observation and other methods

3.5 Pilot Study

Pilot study is a situation whereby data is collected from a small group of people or items to test the appropriateness of the selected data collection instrument (Stangor, 2010). Therefore the questionnaire was piloted prior the process of data collection begins

Twelve (12) respondents from Embakasi South Constituency were issued with questionnaires. These respondents did not take part during the real data period. According to (Mugenda & Mugenda, 2003), it is advisable to carry out pilot study so as to ensure that the tool used is clear, short, precise, relevant and attractive to the respondents which ultimately fastens the data collection process.

3.5.1 Validity of the Instrument

According to (Zohrabi 2013), is the extent in which a selected tool of study measures what it is supposed to measure hence expounding the truthiness from the research findings. Validity is done by the group of experts and academicians suitable in evaluating the fitness.

Considering Mugenda and Mugenda (2003) findings, validity is the extent to which data obtained accurately measures a certain element in the study. Valid was made appropriate by my fellow academicians by improving on them

3.5.2 Reliability of the Instrument

By considering (Mugenda & Mugenda, 2003) findings, this is the where after doing different experiments, same results are obtained. Test-retest principle was employed to look at the assess reliability. The results of test one (T1) is the same as test two (T2). Therefore $T1=T2$.

3.6 Data Collection Procedures

Before collection of data, the researcher obtained authority from the County council of Nairobi in City Hall. The researcher issued questionnaires to the residents of Embakasi South Constituency for data. It is worth to note that the questionnaire contained both open ended and closed questions. The researcher encountered enthusiastic respondents although in rare cases could face resistance from a few.

3.7 Data Analysis and Presentation

According to (Marsh & Elliot, 2009), data analysis is converting raw figures and data to obtain the information in form of findings

Quantitative method of data analysis was employed and it is whereby numerical data is converted to units which can be quantified as observed by (Denscombe, 2003).

According to (Healey, 2005), descriptive method is most appropriate because large amount of data is presented into frequency distribution, graphs, bars, pie charts etc to transform it the more understandable manner. SPSS was used in data analysis as it is simple to understand and interpret its results.

3.8 Ethical Considerations

Management University of Africa (MUA) issued a letter to the researcher enable enhance getting research permit from the National Council for Science and Technology (NACOSTI). Approval was done to the Embakasi South Constituency office of the Area Member of parliament for the go ahead to carry out the exercise. The researcher informed the residents about the purpose of the undertaking. The researcher did not forced anyone for the responses. The researcher assured the residents that the responses they give cannot be used against them at whatever the circumstances.

3.9 Chapter Summary

The chapter summary shows what has been discussed in research methodology: Introduction, research design, Target population, sampling techniques (sample size and sample procedure), data collection instruments, pilot study (validity and reliability of the instruments), data collection procedure, data analysis and presentation and Ethical consideration.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

In this section, after the data has been collected by use of questionnaire is analyzed and inferences are drawn based on the findings. The analyzed data is presented using tables and figures as a result from the SPSS

4.2 Respondents findings

4.2.1 Respondents'

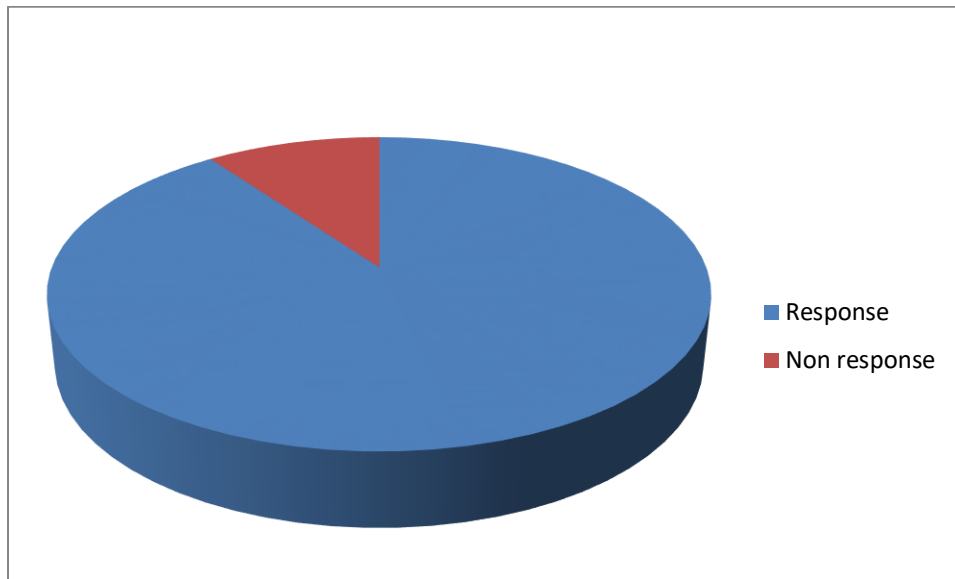
response Rate Table 4.1

Response Rate

	Frequency	Percentage
Response	180	90
Non Response	20	10
Total	200	100

Source: Author (2021) Fig

4.1 Figure on response rate



Source: Author (2021)

From the table able, Table 4.1 and figure 4.1 out of two hundred respondents targeted, one hundred and eighty (180) accounting for 90% responded while twenty(20) of the respondents accounting for 10% did not respond to the questionnaire. This shows that since the research tool was relevant, that's why most of the respondents were will to provide the responses.

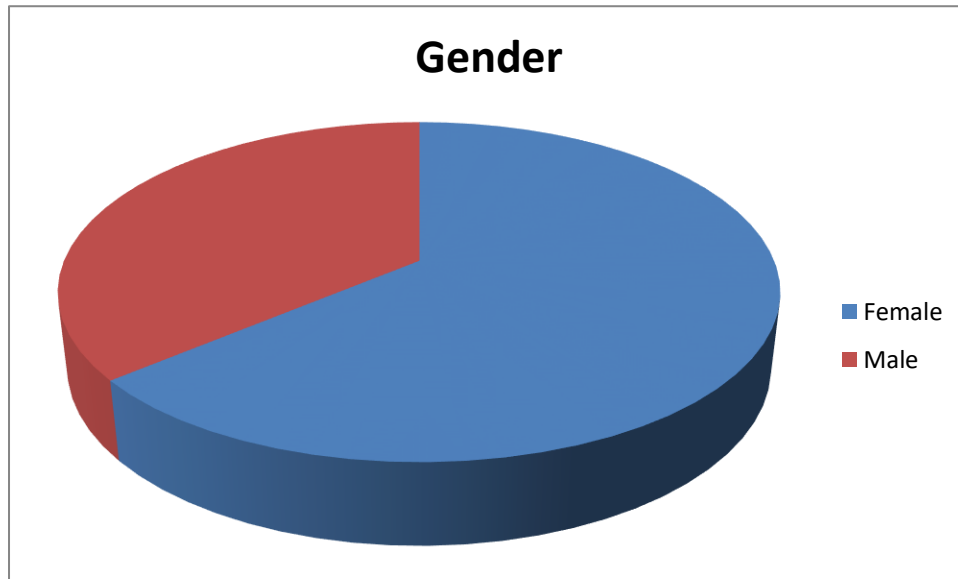
4.2.2 Respondents' gender

Table 4.2 Gender of Respondents

Category	F	%ge
Male	75	36.11
Female	105	63.89
Total	180	100

Source: Author (2021)

Fig 4.2 Gender of Respondents



Source: Author (2021)

From the table 4.2 and from figure 4.2, one hundred and eight (180) respondents responded to this variable. Male respondents were sixty five (65) accounting for 36.11% while that of the female was one hundred and fifteen (115) accounting for 63.89% .high number in the female was contributed by the fact that the research was carried out weekdays, when most of the male respondents are out for work as opposed to women who mostly stay in the houses to look after children

4.2.3 Ward of the sub county analysis

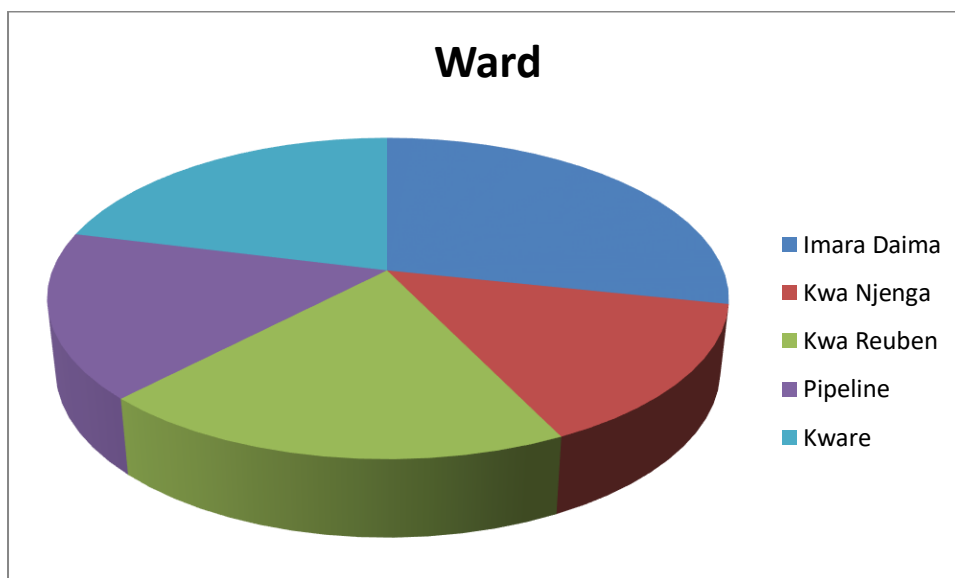
4.2.4 Table 4.3 Ward Analysis

Category	Frequency	Percentage
Imara Daima	51	28.33
Kwa Njenga	26	14.44

Kwa Reuben	35	19.44
Pipeline	30	16.67
Kware 3	38	21.11
Total	180	100

Source: Author (2021)

Figure 4.3 Ward Analysis



From Table 4.3 and figure 4.3, there were one hundred and eight (180) respondents, out of which fifty one (51) of the respondents accounting for 28.33% come from Imara Daima Ward, twenty six (26) of the respondents accounting for 14.44% come from Kwa Njenga, thirty five (035) of the respondents accounting for 19.44% come from Kwa Reuben, thirty (30) of the respondents accounting for 16.67% come from Pipeline and thirty eight (38) of the respondents accounting for 21.11% come from Kware ward. From the Analysis, it is clear that most of the respondents come from Imara Daima. Higher percentage of the respondents come from Imara Daima Ward may because the researcher resides there and he had bigger network compared to other parts of the sub county

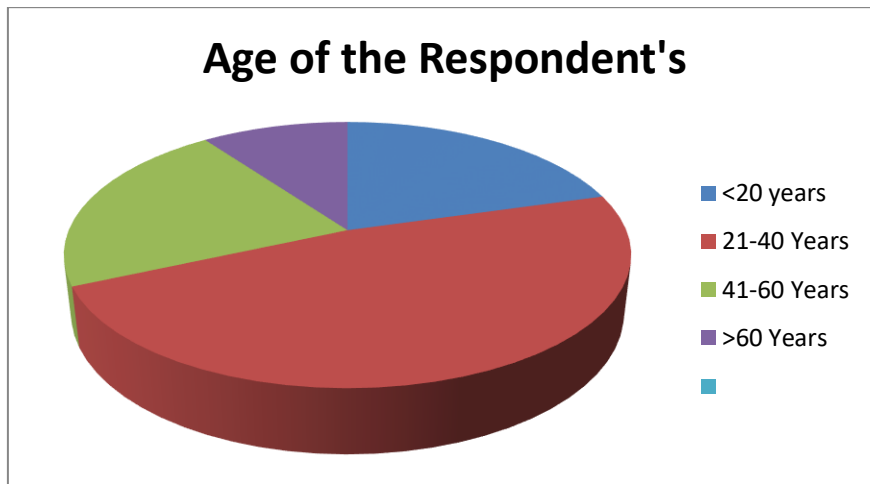
4.2.4 Age Analysis

Table 4.4 Age Analysis

Category	Frequency	Percentage
<20	37	20.56
20-40.	86	47.78
41-60.	39	21.67
>60	18	10
Total	180	100

Source: Author (2021)

Figure 4.4 Age Analysis



Source: Author (2021)

From Table 4.3 and figure 4.3, there were one hundred and eight (180) respondents. Thirty seven (37) of the respondents accounting for 20.56% were below twenty years, eight six (86) of the respondents accounting for 47.78% were between 21-40 years, thirty nine (39) of the respondents accounting for 21.67% were 41-60 years and eighteen (18) of the respondents accounting for 10% were sixty years (60) years and above. Most of the respondents were the age of 21-40 years which comprises of the youth. Most of the residents in Embakasi South Constituency are youths hence the reason.

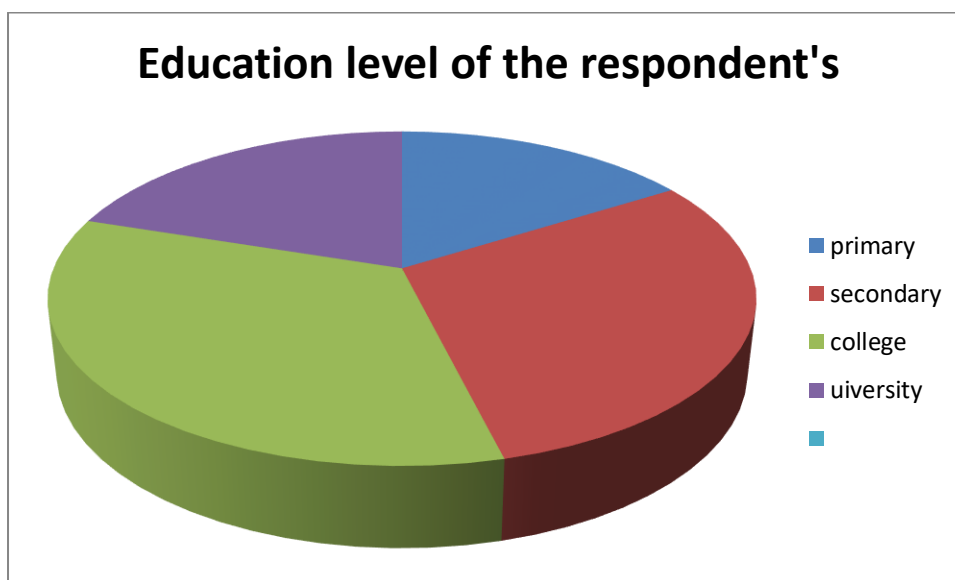
4.2.5 Education Level of the respondents'

Table 4.5 Level of Education of the respondents

Category	Frequency	Percentage
Primary	29	16.11
Secondary	54	30
College	61	33.89
University	36	20
	180	10

Source: Author (2021)

Figure 4.5 Highest Level of Education



Source: Author (2021)

From Table 4.5 and figure 4.5, there were one hundred and eight respondents (180). Twenty nine (29) of the respondents accounting for 16.11% were primary school graduates, fifty four (54) of the respondents accounting for 30% were secondary graduates,

sixty one (61) of the respondents accounting for 33.89% were college graduates and thirty six (36) of the respondents were university graduates. Most of the respondents in the education level are college graduates and this is because most of the youths residing in Embakasi South Constituency are college graduates.

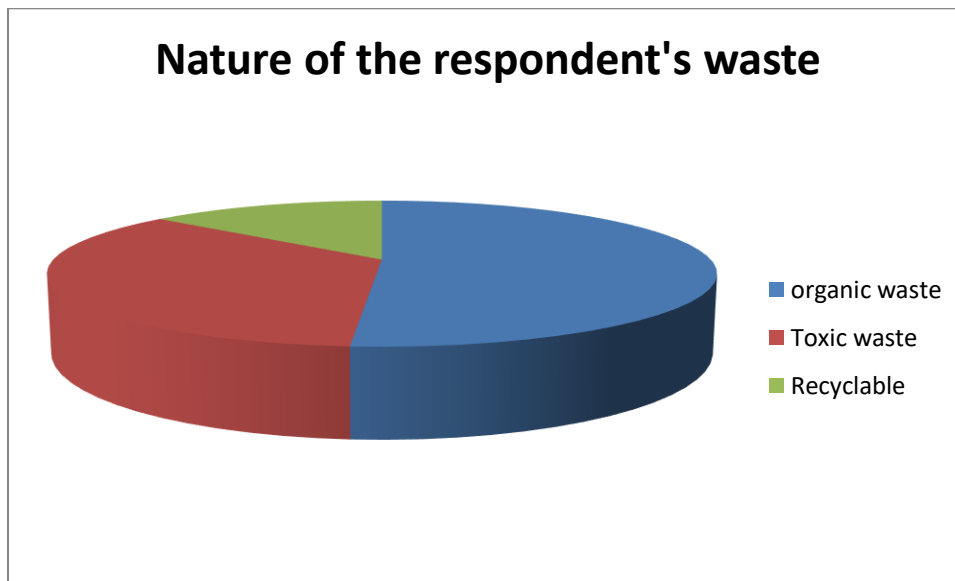
4.2.6 Nature of the respondents waste he/she disposes from home

**Table 4.6 Nature of the respondents
waste**

Category	Frequency	Percentage
Organic waste	41	22.78
Toxic waste	28	15.56
Recyclable	111	61.67
Total	180	100

Source: Author (2021)

Figure 4.6: Nature of the respondents waste



Source: Author (2021)

From Table 4.6 and figure 4.6, there were one hundred and eight responses (180). Forty one (41) of the respondents accounting for 22.78% had Organic waste (kitchen waste, vegetables, flowers, leaves, fruits), twenty eight (28) of the respondents accounting for 15.56% had Toxic waste and one hundred and eleven (111) of the respondents accounting for 61.67% had Recyclable (paper, glass, metals, plastics). Most of the respondents had recyclable wastes may because most of the wastes are recyclable

4.2.7 Persons responsible for waste collection

Table 4.7 Persons responsible for waste collection

Respondent Category	Frequency	Percentage
Private individuals	61	33.89
Property owners	47	26.11
Municipalities	72	40
Total	180	100

Source: Author (2021)

Figure 4.7 persons responsible for waste collection responses



Source: Author (2021)

From Table 4.7 and figure 4.7, there were one hundred and eight (180) responses. Sixty one (61) of the respondents accounting for 33.89% were private individual, forty seven (47) of the respondents accounting for 26.11% were private owners and seventy two (72) of the respondents accounting for 40% depended on the municipalities. Most of the respondents' wastes are collected by municipalities

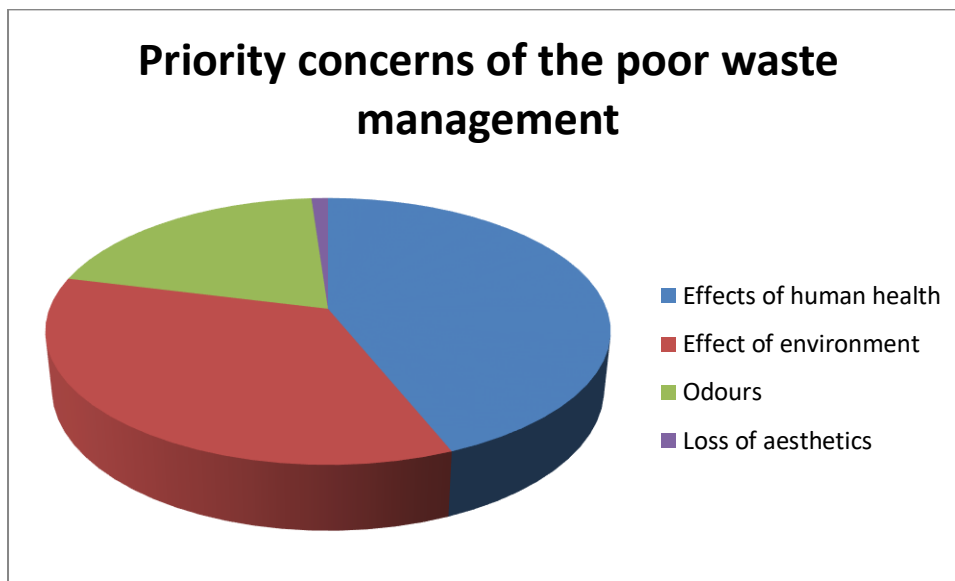
4.2.8 Priority areas of concern about poor waste management

Table 4.8 Priority areas of concern about poor waste management

Category	Frequency	Percentage
Effects of human health	79	43.89
Effects of environment	63	35
Odours	36	20
Loss of aesthetics	2	1.11
Total	180	100

Source: Author (2021)

Figure 4.8 Priority areas of concern about poor waste management



Source: Author (2021)

From Table 4.8 and figure 4.8 there were one hundred and eighty respondents (180). Seventy nine (79) of the respondents accounting for 43.89% said that the priority concern is human health, sixty three (63) of the respondents accounting for 35% mentioned effect of environment, thirty six (36) of the respondents accounting for 20% said because of odours and two (2) of the respondents accounting for 1.11% talked of loss of aesthetics. From the analysis most of the respondents suggests that the priority concern of the poor waste management is the effects of human health.

4.2.9 Whether the sub county is creating enough awareness

Table 4.9 whether the sub county is creating enough awareness on waste management

Category	Frequency	Percentage
Yes	73	40.56
No	107	59.44
Total	180	100

Source: Author (2021)

Figure 4.9 whether the sub county is creating enough awareness on waste management



Source: Author (2021)

From Table 4.9 and figure 4.9, there were a total of one hundred of eight (180). Seventy three (73) of the respondents accounting to 40.56% agreed while one hundred and seven (107) disagreed that enough awareness is created to the respondents on waste management. Most of the respondents disagreed that enough awareness is not made to the respondents hence creating a lot of problems

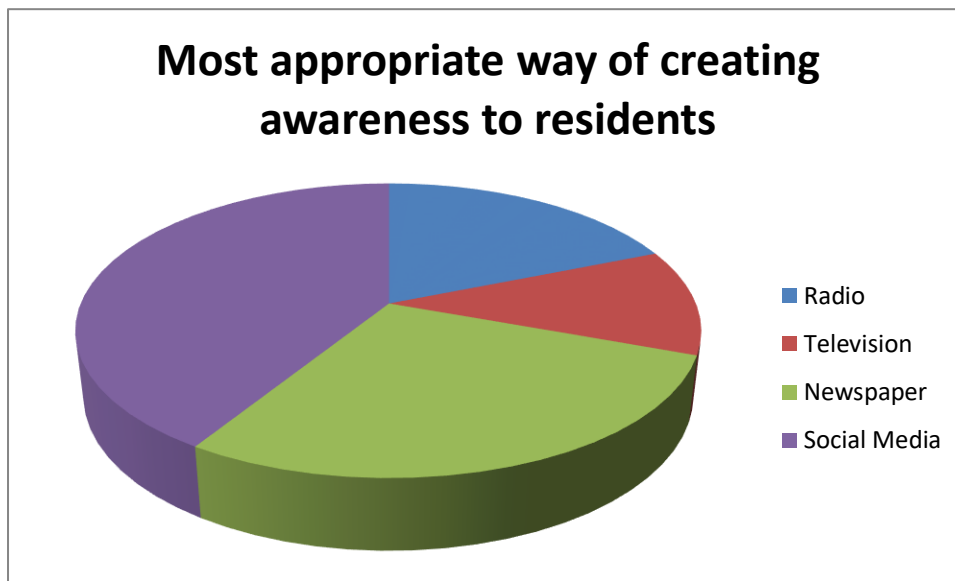
4.2.10 Most appropriate way of creating awareness to residents

Table 4.10 Most appropriate way of creating awareness to residents

Category	Frequency	Percentage
Radio	34	18.89
Television	21	11.67
Newspaper	51	28.33
Social Media	74	41.11
Total	180	100

Source: Author (2021)

Figure 4.10 Most appropriate way of creating awareness to residents



Source: Author (2021)

From Table 4.10 and figure 4.10, there were one hundred and eight respondents (180). Thirty four (34) of the respondents accounting for 18.89% agreed that the awareness is created through radio, twenty one (21) of the respondents accounting to 11.67% agreed that the awareness is created through television, fifty one (51) of the respondents accounting to 28.33% agreed that the awareness is created through the newspaper and seventy four (74) of the respondents accounting to 41.11% agreed that the awareness is created through social media. Social media is high used platform hence it attracts more respondents as compared to other forms

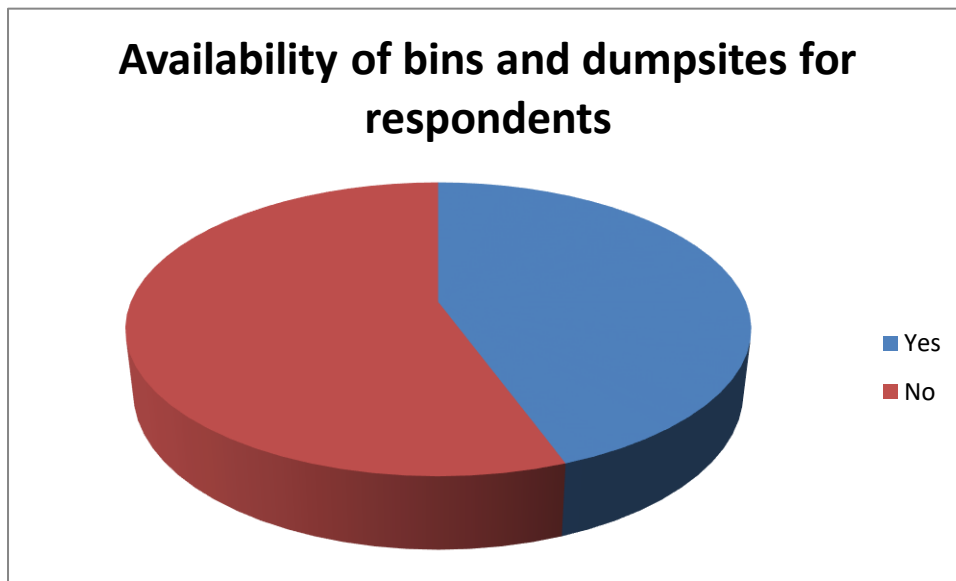
4.2.11 Availability of bins and dumpsites

Table 4.11 Availability of bins and dumpsites

Category	Frequency	Percentage
Yes	80	44.44
No	100	55.56
Total	180	100

Source: Author (2021)

Figure 4.11 Availability of bins and dumpsites



Source: Author (2021)

From Table 4.11 and figure 4.11, there were one hundred and eight (180) respondents. Eight (80) of the respondents accounting for 44.44% agreed while 55.56% disagreed that bins and dumpsites are available for the respondents to use in disposing the wastes. Effects of the wastes is there meaning that there is no enough mechanisms for disposing the wastes

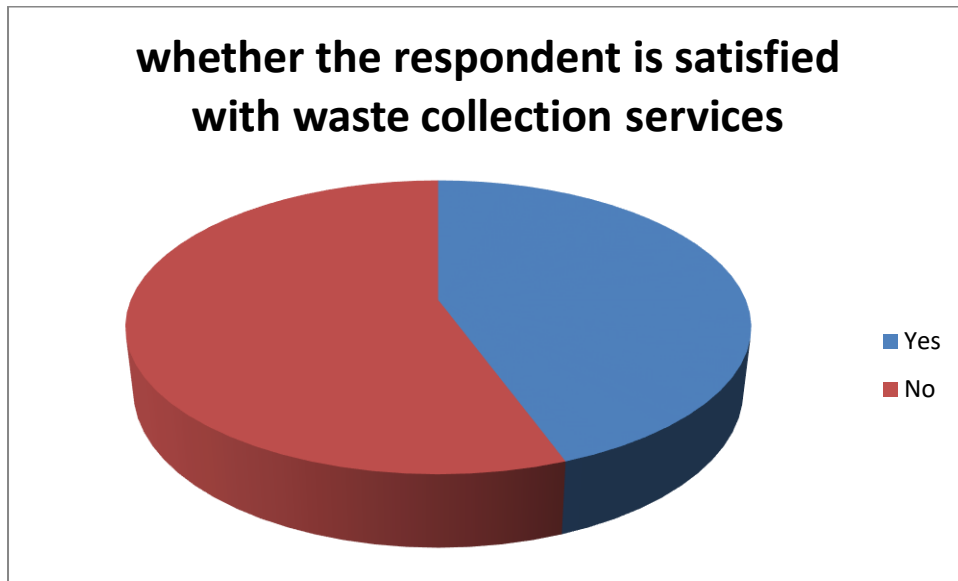
4.2.12 Whether the respondent is satisfied with waste collection services

Table 4.12 whether the respondent is satisfied with waste collection services

Category	Frequency	Percentage
Yes	80	44.44
No	100	55.56
Total	180	100

Source: Author (2021)

Figure 4.12 whether the respondent is satisfied with waste collection services



Source: Author (2021)

From Table 4.12 and figure 4.11, there were one hundred and eight (180) respondents. Eight (80) of the respondents accounting for 44.44% agreed while 55.56% disagreed that the respondents are satisfied with waste collection services.

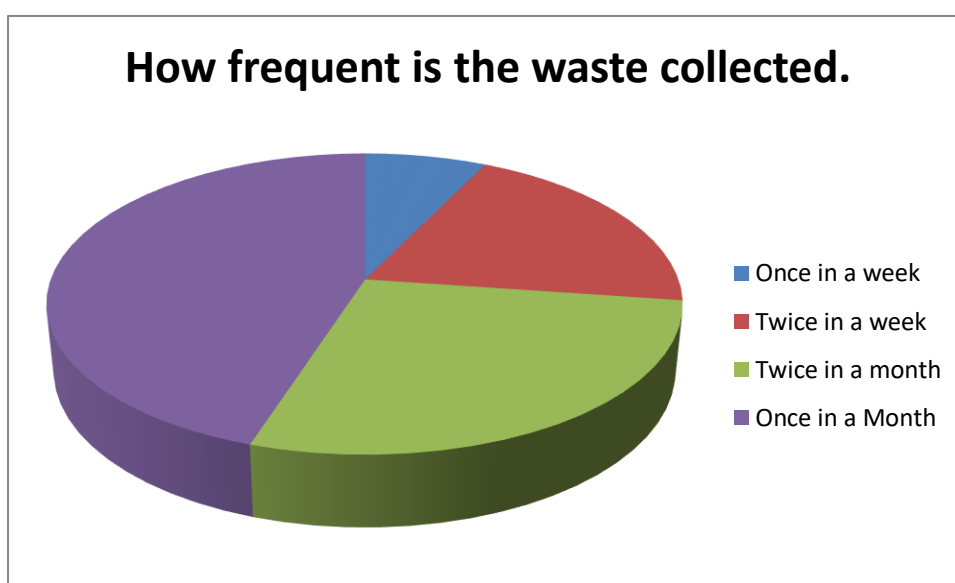
4.2.13 How frequent is the waste collected

Table 4.13 How frequent is the waste collected

Category	Frequency	Percentage
Once a week	13	7.22
Twice a week	36	20
Twice in a month	50	27.78
Once in a month	81	45
Total	180	100

Source: Author (2021)

Figure 4.13 How frequent is the waste collected.



Source: Author (2021)

From Table 4.13 and figure 4.13, there were one hundred and eight respondents. Thirteen (13) of the respondents accounting for 7.22% said that waste is collected once in a week, thirty six (36) of the respondents accounting for 20% suggested that the waste is collect twice in a week, fifty (50) of the respondents accounting for 27.78% said that the waste is collected twice in a month while eighty one (81) of the respondents accounting for 45% said that the waste is collected once in a month. Most of the respondents said that the waste

is collected once in month may be because waste is rarely collected and also residents depend on the municipalities in waste collection

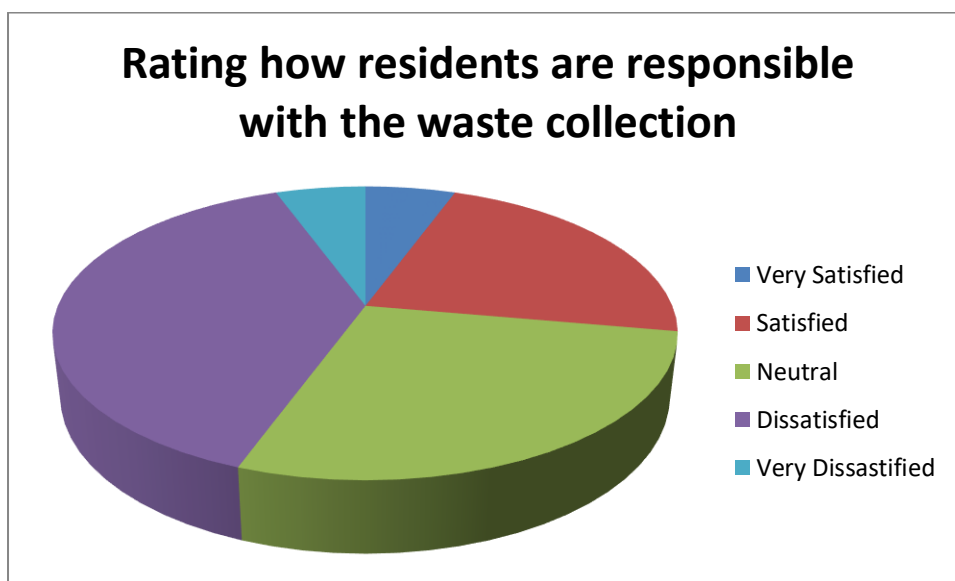
4.2.14 Rating how residents are responsible with the waste collection

Table 4.14 Rating how residents are responsible with the waste collection

Category	Frequency	Percentage
Very satisfied	10	5.56
Satisfied	40	22.23
Neutral	50	27.78
Dissatisfied	70	38.89
Very Dissatisfied	10	5.56
Total	180	100

Source: Author (2021)

Figure 4.14 Rating how residents are responsible with the waste collection



Source: Author (2021)

From Table 4.14 and figure 4.14, there were one hundred and eight (180) respondents. Ten (10) of the respondents accounting for 5.56% were very satisfied that the residents are responsible with the waste collection, forty (40) of the respondents accounting for 22.23% were satisfied that the residents are responsible with the waste collection, fifty (50) of the respondents accounting for 27.78% were neutral that that the residents are responsible with the waste collection, seventy (70) of the respondents accounting for 38.89% were dissatisfied that the residents are responsible with the waste collection and ten (10) of the respondents accounting for 5.56% were dissatisfied that the residents are responsible with the waste collection. Most of the respondents were dissatisfied that that the residents are responsible with the waste collection may be because they are not motivated at all to carry out this activity

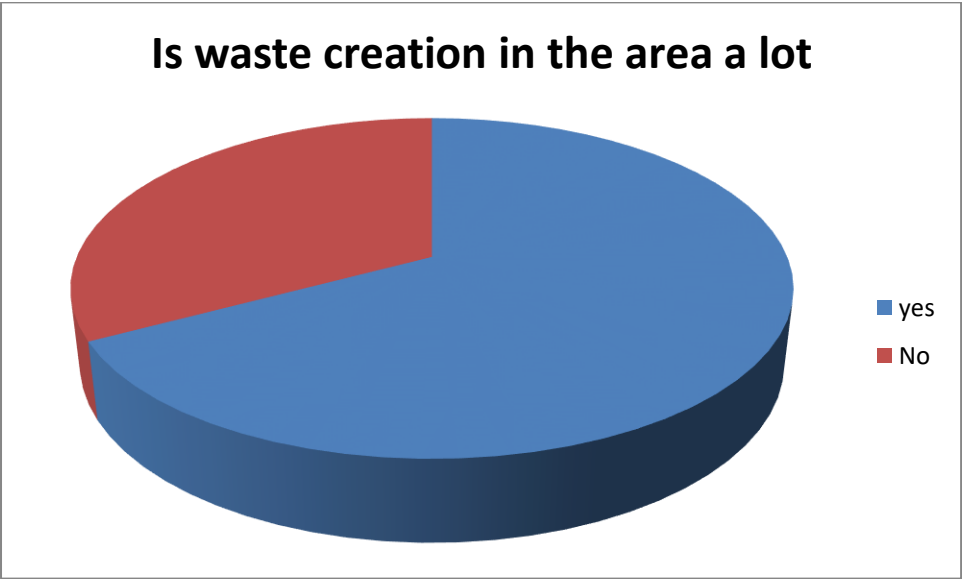
4.2.15 Rate of waste creation

Table 4.15 how a lot is the waste created in the area

Category	Frequency	Percentage
Yes	121	67.22
No	59	32.78
Total	180	100

Source: Author (2021)

Figure 4.15 how a lot is the waste created in the area



Source: Author (2021)

From Table 4.15 and figure 4.15, there were one hundred and eight (180) respondents. One hundred and twenty one (121) of the respondents agreed that the waste creation in the area is abundant while fifty nine (59) accounting for 32.78% disagreed that waste creation is high in the area

4.2.16 Is the waste produced decomposable

Table 4.16 Is the waste produced decomposable

Category	Frequency	Percentage
Yes	75	41.67
No	105	58.33
Total	180	100

Source: Author (2021)

Figure 4.16 Is the waste produced decomposable



Source: Author (2021)

From Table 4.16 and figure 4.16, there were one hundred and eight (180) respondents. Seventy five (75) of the respondents accounting for 41.67% agreed that the type of the waste produced is decomposable while one hundred and five (105) of the respondents accounting for 58.33% disagreed that that the type of the waste produced is decomposable. This is because most of the waste produced is not decomposable.

Ways of mitigating improper waste management

- a. Dispose of unusable bags and containers
- b. Recycling of water mugs, water bottles and plates
- c. Take personal responsibilities to dispose of wastes
- d. Go paperless when cooking in the kitchen
- e. Do decomposition where applicable appropriately
- f. Always purchase in bulk to avoid accumulating wastes
- g. Donate old goods to your friends to avoid accumulation in form of waste

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

This chapter gives the researchers feeling about the study clearing giving solution for mitigating the problem. The sections presented include: findings, conclusion, recommendations, factors influencing waste management and appropriate practices to be employed to tame the effect.

5.2 Summary of Findings

5.2.1 To what extent do low waste collection influence waste management

From the study there were one hundred and eight respondents. Thirteen (13) of the respondents accounting for 7.22% said that waste is collected once in a week, thirty six (36) of the respondents accounting for 20% suggested that the waste is collect twice in a week, fifty (50) of the respondents accounting for 27.78% said that the waste is collected twice in a month while eighty one (81) of the respondents accounting for 45% said that the waste is collected once in a month. Most of the respondents said that the waste is collected once in month may be because waste is rarely collected and also residents depend on the municipalities in waste collection. The low response in waste collection makes it hinder the other activities in the sub county.

5.2.2 How are the residents responsible with waste collection in the areas?

Form the study there were one hundred and eight (180) respondents. Ten (10) of the respondents accounting for 5.56% were very satisfied that the residents are responsible with the waste collection, forty (40) of the respondents accounting for 22.23% were satisfied that the residents are responsible with the waste collection, fifty (50) of the respondents accounting for 27.78% were neutral that that the residents are responsible with the waste collection, seventy (70) of the respondents accounting for 38.89% were dissatisfied that the residents are responsible with the waste collection and ten (10) of the respondents accounting for 5.56% were dissatisfied that the residents are responsible with the waste collection. Most of the respondents were dissatisfied that that the residents are responsible

with the waste collection may be because they are not motivated at all to carry out this activity

5.2.3 From the sub county, is the waste creation high?

From the study there were one hundred and eight (180) respondents. One hundred and twenty one (121) of the respondents agreed that the waste creation in the area is abundant while fifty nine (59) accounting for 32.78% disagreed that waste creation is high in the area

5.2.4 Is the waste in the area decomposable?

From the study there were one hundred and eight (180) respondents. Seventy five (75) of the respondents accounting for 41.67% agreed that the type of the waste produced is decomposable while one hundred and five (105) of the respondents accounting for 58.33% disagreed that that the type of the waste produced is decomposable. This is because most of the waste produced is not decomposable

5.3 Conclusions.

From the study, it is clear that waste management is one of most important activities which should be taken serious in the society. Most of the developed countries have taken measures in mitigating the waste management practices. From the literature review, it was clear that most of the researchers have tried to find lasting solutions to the improper waste management but with fail. From the findings, Embakasi South constituency as one of the sub county of Nairobi, poor management of waste has been witnessed. To counter this, Government should employ proper mechanisms for waste collection Nairobi general. The efforts of residents to have proper management of wastes should also be used to curb the situation among other best practices like creating awareness and providing relevant training to the residents on waste management practices

5.4 Recommendations

5.4.1 Low collection of waste

From the study, it was clear that most of the residents found it that waste collection is rarely done frequently. The government and most the county government should have a proper mechanism of waste collection such that waste collection every day. This would

minimize wastes in Nairobi and make the city clean

5.4.2 Responsible in waste collection

From the study most of the residents don't take personal responsibility of waste collection and proper waste management. The government should liaise with county government to create awareness to the residents to inform them the importance of waste collection.

5.4.3 Creation of wastes

Considering our findings, human activities and industries produce a lot of wastes. When ways of waste creation increases, then residents and all of us in general should look for more ways of countering this effect

5.4.4 Type of the waste materials

Most of the waste materials are not decomposable and therefore there should be better ways of taming them

5.5 Suggestion for further Study

The analyst concluded that since only four factors that affect improper waste management were examined, it is important to do further studies to exhaust all the factors.

APPENDICES

APPENDIX I: INTRODUCTION LETTER TO RESPONDENTS

Peter Mwendwa Mwinzi

Tel. No.0724801967

26th October 2021

Dear Sir/Madam,

My name is Peter Mwendwa Mwinzi studying at Management University of Africa undertaking undergraduate a diploma in management and leadership. I am currently doing my research project on the factors influencing waste management systems: a case study of Embakasi South in Nairobi County.

The aim of the research is to enable academicians, entrepreneurs, shareholders in various business ventures and other stakeholders to understand factors that influence waste management and mitigate proper ways of waste control

I am targeting residents of Embakasi South Constituency. The reason for carrying out this study is for the benefits of the residents and not to punish the respondents at all. The information provided will not be disclosed to any one

This letter is therefore an introduction letter. Concerning this I request to read through questions carefully and assist me with the feedback.

Kindly provide clear answers to different asked questions

Thank you for cooperation and feedback

Yours Faithfully, Peter Mwendwa Mwinzi

School of Management and Leadership Management University of Africa.

APPENDIX II: SURVEY QUESTIONNAIRE

Name of Researcher: Peter Mwendwa
Mwinzi

Institution: Management University of
Africa

Registration Number: DIP.ML/9/00104/3/20

The survey is created to undertake a research for the partial fulfilment of the award of Diploma in Management and Leadership. The questionnaire is aimed to assess how waste is managed at the household in Embakasi South Constituency. Your response will help decision makers in making informed policies and develop best practices in waste management practices. Please take a few minutes to help in providing me with responses.

SECTION A: RESPONDENTS BANKGROUND

1. State the gender Male.....Female.....
2. State the ward you come from.....
3. State the age <20.....20-40.....41-60.....>60.....
4. Level of education: Primary () , secondary () , college () , university ()

SECTION B: RESPONSES ON MANAGEMENT OF WASTE

1. State the nature of the waste you dispose from your home
 - a) Organic waste material
 - b) Toxic waste material
 - c) Recyclable material
2. State who is responsible for collecting wastes from your area of residents

3. From below parameters which the of these is a priority concern about poor waste management

- a) Human health
- b) Environment
- c) Odours
- d) Loss of aesthetics

4. Do you think that the sub county government is creating enough awareness in waste management Yes () No ()

5. Which do you think is the most appropriate in creating awareness to the residents

Radio () Television () Newspaper () Social media ()

SECTION C: ATTITUDES ON WASTE MANAGEMENT

1. Are you okay with your current waste collection service? Yes () No ()

2. Are frequent is waste collected from your area
Once in a week () twice in a week () twice in a month () once in month ()

3. Rate the satisfaction level on how residents are responsible with the waste collection
Very satisfied () satisfied () neutral () dissatisfied () very dissatisfied ()

4. Which collection service do you use? Public () Private() Other-specify
.....

5. Is waste creation the area a lot? Yes () No ()

6. Are the waste materials decomposable? Yes () No ()

SECTION D: SUGGESTION AND AREAS OF IMPROVEMENT

1. Suggest what can be done to mitigate improper waste management in the areas

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2. State any other areas of improvement as far as proper waste management is concerned

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Thank you for your response

APPENDIX III TIME PLAN

Activity	<i>December 2021</i>	<i>January</i>	<i>Feb</i>	<i>March</i>	<i>April</i>	<i>May</i>
Identify research topic	<i>1st -31st</i>					
Chapter One		<i>1st -31st</i>				
Literature review			<i>1st -28th</i>			
Formulating research design				<i>1st -31st</i>		
Seeking access				<i>1st -31st</i>		
Data collection				<i>1st -31st</i>		
Data Analysis					<i>1st -30th</i>	
Completing Research project						<i>1st -20th</i>
Project due						

APPENDIX III FINANCIAL BUDGET

Particulars	Cost
Stationary	Ksh 6500
Transport	Ksh 6500
Binding	Ksh 2500
Internet	Ksh 5500
Photocopy	Ksh 1100
Risk Assessment	Ksh 7500
Total	Ksh 29,600

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