CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Public policy is a government framework used to accomplish specific aims and objectives. Governments at the federal, state, and local levels, for instance, create regulations to extract resources and provide services from domestic and foreign environments; to distribute money, products, and services; and to control human conduct through rewards, sanctions and inducements to enforce public compliance to government policies. Public policy works more in a society where democracy prevails to enhance the dividends of democracy. Thus, the public policy offers solutions to societal problems while also serves as a guideline on how government at all levels deliver their statutory duties to the public optimally (Almond, Powell, Strom and Dalton in Obamwonyi and Aibieyi, 2014). Management of waste is fundamental to public policy. This is because most human activities generate waste, which is an inescapable event in day-to-day life around the world. As a result, waste management must be effectively controlled. However, many communities still struggle to implement effective waste management systems, and population expulsion makes matters worse since the more people a region has, the greater the amount of garbage output is recorded and the more waste there is to handle. Nonetheless, poorly managed wastes are apparent as environmental hazards and societies' inability to effectively manage waste generation plays a significant role in increasing existing environmental burdens and degradation (Alam et al., 2007).

The environment in Africa is ever-changing, and as it does, so is the need for increased knowledge of the environmental issues. Natural catastrophes, warming and cooling cycles, and varied weather patterns are all on the rise, therefore people should be careful with how they live their life in connection with the sorts of environmental concerns our planet is facing to maintain a balance between man and the environment. With little to no ability to handle them, Nigeria produces an estimated 42 million tons of trash yearly at a rate of 0.65 to 0.95 kg per day. (Ike et al., 2018). Urban areas require a health-safe environment, one in which water, land, rivers, forests, public health, sewage, and adequate rubbish disposal in the industry are all critical to long-term environmental security, but this is often not the case in Nigeria, thus leading to environmental degradation, health hazard and communicable diseases in many instances (Alhaji and Lawal 2017, Best and Seiyefa, 2013).

Invariably, the weakness of public policies on waste disposal in Nigeria partly exposes citizens to environmental hazards, including flooding and environmental pollution. Despite all efforts to promote environmental sanitation and security towards hygienic existence, disposal management has become a serious challenge in Nigeria as the country is largely bedeviled by environmental mismanagement. The types of environmental mismanagement in Nigeria differ from region to region in the six geographical zones. (Vanguard, 2010; Bakare, 2016).

In Kwara State, in particular, there are a lot of issues of environmental mismanagement. For instance, one common method of disposal in the State is the open dumping of solid wastes into wetlands, water courses and drains, as well as the burial of such wastes in pits. This behaviour has caused the area to become litter, which is an eyesore and a nuisance in terms of stench (Ihuoma, 2020). The Kwara State Environmental Protection Agency Law went into effect in 1992. The Act created the Kwara State Environmental Protection Agency (KWEPA) to provide a secure and wholesome environment for the residents of Kwara State. The Agency is responsible for all environmental protection measures, environmental research and development, and educating the general public on proper waste disposal practices appropriate for household and industrial wastes (Adebayo, 2022). This paper attempts to examine the public policy on waste management in Kwara State and its implications on environmental security.

1.2 Statement of the Problem

The public policy on environmental protection, including the policy on waste management, is contained in the Kwara State Environmental Law 1992. The law is being implemented by the Ministry of Environment and Forestry and the Kwara State Environmental Protection Agency (KWEPA). Despite the efforts of these two regulatory bodies to guarantee the correct disposal of waste in Kwara State, The State is severely plagued by waste mismanagement, with several regions being noted for the incorrect dumping of trash in egregiously unsuitable locations including the center of roadways and unlicensed disposal facilities. This negative practice is prevalent in parts of Kwara State including Ilorin in Oja-Oba, Oja-Tuntun, Mandate Market, Dada, Sango, Pakata, Aluko, Gambari and Taiwo areas in the Kwara Central geo-political zone. The illegal sites in Kwara South geo-political zone include Ajase, Kara Market, Owode-Offa, Oke Ode Market and Share Market. Places like Gbugbu, Bode-Saadu and Tsaragi are also notorious for improper waste management in Kwara North geo-political zone.

The problem of waste mismanagement in Ilorin, the state capital of Kwara State, is highly worrying since the more these wastes are evacuated, the more new ones are created every day. As a result, massive amounts of refuse are found deposited in unauthorised locations, while gutters and roadways are clogged with solid and liquid wastes, obstructing the free flow of water and generating floods during the rainy season. While the only approved dump site for the Kwara State capital is Sokoto Ayekale along Eye-Nkorin, illegal dump sites are springing up frequently in other areas in the metropolis, including Gaa-Saka, Wara, Tanke Iledu, Oke Oyi, Asa Dam, Amayo, and Ifokanbale area along the Navy College of Health Science Offa, among others. The results of improper waste disposal have led to pollution of different types in Kwara State including flooding. Such waste management is assumed to be a reflection of the failure of public policy on waste management in Kwara State. This study examines the public policy on waste management and its implications for environmental security in Kwara State, Nigeria.

Many scholars have worked on waste management and environmental security such as Ahmed (2008), Eze (2008), Momodu, Dimuna, and Dimuna (2011), Oladepo (2012), Zacho and Mosgaard (2016), and Luke and Henry (2018), Aderogba and Afeolumo (2022 but

none has written on public policy on waste management and its implications for environmental security in Kwara State. This study intends to fill this academic gap.

1.3 Research Objectives

i. To appraise the effects of the public policy on waste management on environmental security in Kwara State;
ii. Examine the challenges of implementing the policies on waste management in Kwara State; and
iii. Explore what can be done to improve public policy on proper waste management for environmental security in Kwara State.

1.4 Research Questions

i. What are the effects of public policy on waste management on environmental security in Kwara State?
ii. What are the challenges of implementing public policy on waste management in Kwara State?
iii. How could public policy on waste management be improved for environmental security in Kwara State?

1.5 Significance of the Study

The study will contribute to academic knowledge by revealing the extent to which Kwara State has been able to manage waste and its implications for environmental security. The study will serve as a guide to policymakers and other researchers on what can be done to improve public policy on proper waste management for environmental security in Kwara State while also contributing to the body of existing knowledge on public policy and waste management as well as environmental security. The study locations include Amilengbe, Gaa Saka, Okolowo, Wara, Harmony Estate, Oke Oyi, Asa Dam, Tanke, Amayo, and Ifokanbale area along with the Navy College of Health Science Offa among others.

1.6 Scope and Limitations of the Study

The geographical scope of this study is Kwara State, Nigeria while the subject scope focuses on public policy, waste management and environmental security. The timeline for this study will cover 1999 to 2023. The reason for choosing the timeline is to cover the fourth republic. The reason for choosing Kwara as a case study is that Kwara State is among the states that are facing a serious challenge of waste disposal and environmental security, especially in the state capital (Ilorin). The state is littered with refuse and people pay less attention to sanitising their environments.

1.7 Definition of Terms

a. **Policy:** This refers to a course of action proposed by the government or individual or organization
b. **Public:** This refers to the members or people as a whole.
c. **Security:** This means a state of being free from disease, danger or threat.
d. **Environment:** This is referred to the conditions in which a person operates.
e. **Waste:** This refers to an act of using something carelessly or for one purpose.
f. **Management:** This refers to the process of dealing with and controlling both humans and materials**.**
g. **Implementation:** This means putting a decision or plan into execution.
h. **Challenge:** This refers to obstacles encountered in the process of duty discharge.

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CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter reviews scholars' opinions gathered from secondary sources; articles, journals, books, etc. on waste management and environmental security. The chapter consists of three sections, the conceptual clarification, the review of the empirical literature, and the theoretical review.

2.2 Conceptual Discourse

2.2.1 Public Policy

Clarke (2009) defines public policy as an active component of governance. According to Lassance (2020), public policy is an institutionalised solution to a major issue that is motivated by an idea. Public policy, according to Dye (1975), is everything that the government choose to do or not do. As a result, public policy is the portion of government that takes action to meet the demands of the populace. Public policy could also be referred to as the action deliberately taken by the government to achieve the desired result. This study adopts Dye's (1975) definition. *"Public policy is whatever government choose to do or not to do".*

2.2.2 Environmental Policy

Ambali, (2015) sees environmental policy as a sort of policy action that is consciously implemented to control human activities to prevent and reduce negative impacts on nature and natural resources as well as guaranteeing that changes to the environment brought about by people do not have negative consequences on humans. A government's or organization's adherence to environmental-related laws, rules, and other policy processes is known as its environmental policy.

2.2.3 Environmental Security

Environmental security is referred to by the United Nations (UN) as a "conceptual envelope" that encompasses a range of issues relating to the role that the environment and natural resources can play throughout the peace and security continuum, including environmental causes and drivers of conflict, environmental impacts of conflict, environmental recovery, and post-conflict peacebuilding. The absence of dangers such as risks or hazards might be regarded as environmental security (Luke and Henry, 2018). Environmental security also refers to freedom from social instability due to environmental degradation. This study adopts Luke and Henry's (2018) definition. *"Environmental security could be defined as the absence of threats such as risks or hazards".*

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2.3 Waste

Audu (2007) defines waste as the leftover or previously used items awaiting reuse or disposal. The United Nations Statistics Division (UNSD, 2018) defines waste as "materials that are not prime products (that is products produced for the market) for which the generator has no further use in terms of his/her purposes of production, transformation or consumption, and of which he/she wants to dispose of". Waste is defined as disposable, abandoned, or underused items (Coker et al., 2016). According to Coker et al. (2016), waste mix varies by user owing to culture, social standing, and financial level. The European Communities (EC,1999) defined waste management by its actions, which included waste prevention, collection, transportation, treatment, control, and monitoring. According to Oyedele (2009), solid waste is leftovers from human, animal, or plant activity that are rejected as unproductive and lacking in consumer value. Festus and Omoboye (2015) see waste as materials or substances that are either spoiled, rejected or no longer required for their original purpose. This study adopts the definitions of Coker et al. (2016) "*Waste refers to disposable, discarded, or unused portions of materials"*. And Festus and Omoboye's (2015) *"Wastes are materials or substances that are either spoiled, rejected or no longer required for their original purpose".*

2.4 Waste Management

Waste management is defined as "the discipline associated with controlling the generation, storage, collection, transfer and transport, processing, and disposal of waste in a manner that is by the best principles of health, economics, engineering, conservation, aesthetics, and other environmental considerations, and that is also responsive to public attitudes" (Tchobanoglous, 1993).

2.5 Waste Management Activities in Nigeria

Recycling activities are not common or even present in Nigeria. Scavenging, on the other hand, is a widespread practice that involves recovering resources from waste. Scavengers looking for precious metals, plastics, and bottles in both legal and illicit dump sites where they may be reused or sold to purchasers of various sorts of scrap regularly. Generally speaking, additional waste disposal methods are used in Nigeria in addition to treating solid wastes, including the following:

2.5.1 Composting

This is a biological process that employs microbes to decompose organic materials using oxygen from the atmosphere. When compared to the starting materials, the stabilised end product takes up less space. The main emissions include carbon dioxide and water vapour, as well as bioaerosols and smell. Estimates show that over a quarter of all home waste is organic and biodegradable. Compositing is done in the open, and the finished product is utilised on farms in Nigeria (Ahmed, 2013).

2.5.2 Collection and Transfer

Waste management firms utilize waste transfer points to bulk up waste into bigger consignments before transferring it to dump and disposal sites, hence boosting the efficiency of their waste collecting service. Throughout the process, waste is directly loaded into large bulk container vehicles and transported by road to the dump site. The most typically stated environmental consequences include smell, dust, bioaerosols, bird attraction, noise, and water pollution, as well as water runoff management (Ahmed, 2013).

2.5.3 Combustion:

Waste combustion emits carbon dioxide ($C0_2$) and nitrous oxide (N_20) since all of the carbon in MSW is oxidised to $C0_2$ under ideal circumstances. Because $C0_2$ from burning biomass sources is biogenic, it is not counted as a Green House Gas (GHG) (Ahmed, 2013).

2.6 Waste Management Activities in Kwara State

In Kwara State, during the late Governor Muhammad Lawal-led administration (1999-2003), open dumping and burning of waste in residential areas was the most typical waste management practice. The waste management was anchored by the Kwara State Ministry of Environment and Forestry. There were a lot of issues of environmental mismanagement. Because the Ministry did not have enough material to operate and waste was dumped illegally. Poor waste disposal led to littering, thereby, creating an eyesore and odour nuisance; all efforts by the Kwara State Ministry of Environment and Forestry monthly programs tagged: Kick Against Indiscipline (KAI) to promote environmental sanitation and security towards hygienic existence disposal management have become a serious challenge in Kwara state.

However, former Governor Dr Bukola Saraki-led administration introduced the clean and green policy in 2004 in which some vehicles and trucks were imported to evacuate waste across the State. The administration established Kwara Waste and Environmental Protection Agency (KWEPA) under the Kwara State Ministry of Environment to complement the activities of the Ministry. Unfortunately, the policy suffers mismanagement of materials and poor maintenance by the contractors.

From 2011-2019, former Governor Abdulfatah Ahmed's administration inherited the clean and green policy. He introduced and sponsored Kwara Waste Waste Management Company. The company was tasked with removing and disposing of waste from cities around the state. In addendum, Governor Abdulfatah Ahmed-led administration bought Roro Bins, Dano trucks, and Compactor trucks to evacuate municipal waste but the materials were not properly maintained.

The present administration of Mallam Abdulrahman Abdulrasaq introduced Social Waste Collectors and Commercial Waste Collectors to keep Kwara clean. Social Waste Collectors evacuate waste free of charge in public areas daily across the state while Commercial Waste Collectors move from house to house, office to office to collect with meagre charges either weekly(₦500) or monthly (₦2000). The Commercial Waste Collectors pay revenue to the State Government monthly. The Mallam Abdulrahman Abdulrasaq-led administration also introduced Waste Management Intervention that cut across over 50 zones in the State. Like previous administrations, bought new materials (Roro Bins, Dano trucks, and Compactor trucks) and repair some damaged ones. The previous administrations (Governor Dr Bukola Saraki and Governor Abdulfatah Ahmed) adopted 3Ms (Money, Man and Material), while the current administration adopts 4Ms (Money, Man, Material, and Method) to carry out the operation.

2.7. Challenges of Waste Management in Nigeria

There are many challenges confronting waste management in Nigeria as discussed below.

2.7.1. Inadequate Funding

Funding is a critical component for effective waste management. Its sufficiency and timeliness frequently affect the efficacy of waste management. The cost of acquiring and accessing finances in the state is significant.

2.7.2. Socio-Economic Factors

Less Willingness to Pay (WTP) for a waste service, as well as payment for service delivery by the ostensible collection recipient. In Nigeria, the inadequate attitude towards contemporary waste management practices and informal waste picking poses a problem to appropriate waste management (Agunwamba, 2003).

2.7.3 Low Technology

The available technologies are insufficient, and the present ones are inadequate for dealing with the volume, pace, and complexity of contemporary waste output, whereas the necessary ones are more complicated or, at the very least, more expensive for local adaption, usage, and maintenance (Agunwamba, 2003).

2.7.4 Weak and Inadequate Personnel

The amount and quality of technical and scientific support services necessary for conducting appropriate waste management initiatives remains insufficient. This also contributes to Nigeria's lack of individuals knowledgeable in current waste management data and information collecting techniques, and it stifles actual effective capacity building for optimal practice (Agunwamba, 2003).

2.8. Empirical Review

Onuminya and Nze (2017) found that waste accumulation happens when waste is not easily disposed of, resulting in squalor, unhealthy conditions, and low aesthetic appeal. According to Wilson et al. (2010), it took more than 30 years for waste reduction to be taken seriously, but its importance is now fully accepted and even prioritised. Waste prevention is seen as the waste hierarchy's top priority, and it gives the best opportunity of reversing Nigeria's present waste-producing patterns. Ajibade (2017) feels that reducing waste is desired for Nigeria. According to Afun (2009), the waste hierarchy should be a key component of the national policy drive for waste management. Ahmed (2008) discusses waste management in the city of Ilorin. His research found that a metropolis (Ilorin) is frequently contaminated with mountains of waste, causing traffic jams in several critical parts of the city.

2.9 Theoretical Framework

Risk Society theory was developed by Ulrich Beck (1982). The idea of manufactured risks contributes to the analysis of environmental issues. Beck focused on environmental and health hazards, particularly those posed by genetic technologies. Beck's key contribution was to include risk in a comprehensive explanation of modern society and its difficulties. Changes in social interactions, family structure, and political and cultural organization are prompted by risk. Current dangers are not socially, regionally, or chronologically defined; there are no clear-cut remedies; and it is impossible to track culpability or calculate compensation for those harmed. The concept of manufactured environmental risks is applied to the field of social and management sciences to organize a research agenda to address environmental issues. While uncertainty is linked to precaution, the risk is linked to prevention (Godard et al. 2002). The likelihood and consequences of an unforeseen accident are referred to as environmental risks. Several contaminants are discharged into the environment as a result of shortcomings in waste management, waste transport, and waste treatment and disposal, presenting major dangers to human health. The critics of this theory argue that natural hazards are not a substantial environmental issue in today's risky society. It demonstrates that those natural hazards are, indeed, a still existing threat. It also does not acknowledge technology as a possible tool for solutions. The universal character of manufactured risks overlooks the regional differences between nations. Beck argues that once risk is a universal issue, it enables societies to overcome differences of class that used to divide nations. The world risk society does not take those inequalities into account, limiting its use for comparative analysis of environmental protection.

The relevance of environmental risk management to the study is that it gives a better understanding of the environment, which may make a better decision-making on environmental strategy. Having a better understanding of information about environmental risks, the government can avoid some risks by locating the facilities in the best place. So, the risk is reduced and a better plan can be run by the government. The Kwara State Environmental and Protection Agency carries out an operation on a daily basis to protect people from contracting diseases such as cholera, malaria, communicable disease and other forms of illness that occur through waste. The agency evacuates waste in market areas, and public places, as well as stations, waste bins and containers in every strategic place in the state. Such provision has allowed Kwara residents to dispose of their waste on a daily or weekly basis free of charge. However, many users abuse the use of the waste container. They dump refuse on the roadside instead of packing it in a sack and dumping it inside the bin. Some of the residents also dump shit and dead animals into the waste container. Thus, the agency at times does not evacuate waste at the right time and this threatens the health and security of people in the affected area (s).

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology to be used in this research work successfully. It explains the research design. It also gives details about the population and sample used for the research.

3.2 The Purpose of the Study

This study is to explore the main thrusts of public policy on waste management and its implications for environmental security in Kwara State. It aims to investigate the issues associated with waste disposal in Kwara State. The study examines the relationship between waste management and environmental security. The study equally aims at examining the effects of public policy on waste management for environmental security in Kwara State. It investigates the challenges of proper implementation of waste management in Kwara State.

3.3 Research Design

This research is anchored on a descriptive study as its designed.

Table: 3.3 Workflow.

S/N	**Research Objectives**	**Research Questions**	**Methods/Research Instrument**
i	Appraise the effects of the public policy on waste management on environmental security in Kwara State.	What are the effects of the public policy on waste management on environmental security in Kwara State?	Survey Questionnaire
2	Examine the challenges of implementing the policies on waste management in Kwara State.	What are the challenges of implementing public policy on waste management in Kwara State?	Survey Questionnaire
3	Explore what can be done to improve public policy on proper waste management for environmental security in Kwara State.	How could public policy on waste management be improved for environmental security in Kwara State?	Survey Questionnaire

Source: Researcher's Field Survey, 2025

3.4 Sources of Data Collection

To carry out this study, the data was collected from two major sources. These sources will include primary and secondary sources.

3.4.1. Primary Sources of Data

The primary sources of data for the analysis of this study was collected from the respondents through the design questionnaire and interview. The questionnaires administered by the researcher. The researcher conducts an individual oral interview with people of the region. This was done to elicit further information from them concerning the issue under study.

3.4.2 Secondary Sources of Data

The secondary data for this study was collected from textbooks both published and unpublished that are found to be relevant for this study. These already written works include; textbooks, journals, magazines, newspapers, and some relevant documents that are relevant to this research work.

3.5 Population and Sample of the Study

The term "population" has been defined by Odo (1992) as "the entire number of people, objects events and things that all have one or more characteristics of interest to a study". The population of this study shall be drawn from the staff of the Ministry Kwara Environmental and Protection Agency, Kwara State Ministry of Health, Kwara State Ministry of Agriculture, Management Managers, Waste Management Pushers, Waste Management Vehicle Drivers, Environmental mobile court, sanitary inspectors and residents. The population is 3,259,613 while the sample size is 400.

3.6 Method of Data Collection

Primary data is collected with the aid of a structured questionnaire administered to various levels of staff of the local government. The researcher will administer a questionnaire directly to the respondents based on the sample size. The questionnaire is divided into two sections. The first section will capture bio-data information of the respondents while the second section focuses on information based on the concept of this research, using a 5-point Likert scale with "1= Strongly Disagree, 2= Disagree, 3 = Undecided, 4 = Agree and 5=Strongly Agree". More so, the researcher will also interview in addition to the questionnaire.

3.7 Method of Data Analysis

The data gathered is analyzed using the Statistical Package for Social Sciences (SPSS) version 21 for easy analysis. This primary data is analyzed through a pilot study, regression, correlation analysis.

3.8 Validity of the Instrument

The content approach to estimating validity is used to establish the validity of the research instrument. The questionnaire is drafted and submitted to the supervisor who scrutinize and evaluate the strength of the instrument. The correction, evaluation and suggestions made by the project supervisor enrich the research work.

3.9 Ethical Consideration

The issue of ethics in conducting research is highly adhered to. And also, ensure that high moral and ethical values are highly maintained; thus ensuring the protection of the right of individuals and organizations. In the case of the participants, enrolments are done voluntarily. This ensures that the persons engaging in the study give information at ease and do not intrude into their privacy in any way. The aspect of confidentiality also given optimum attention to ensure that, the identities of the participants are not disclosed.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents findings based on the administered questionnaire. The analysis comprises the results of the demographic characteristics of the respondents from each sampled and the regression estimates of the variables. The total of thirty-two questionnaires were distributed and returned correctly. The survey cut across department of environment in Kwara State Environmental and Protection Agency. Statistics Package for Social Sciences (SPSS) Statistical software version 21 was used for analysis to determine the answer to the objective; the study was tested by pilot, correlation and regression.

The population of this study was 3,259,613 while sample size was 400 and it was determined through Taro Yamane formula. 400 questionnaires were distributed but 361 were retrieved for analysis. The questionnaires were distributed among the relevant stakeholders which include; the staff of Kwara State Environmental and Protection Agency (KWEPA), Kwara State Ministry of Environment and Forestry, Kwara State Ministry of Health, Waste Management Managers, Waste Management Pushers, Waste Management Vehicle Drivers, Environmental mobile court, sanitary inspectors and residents.

4.2 The Study Area

Kwara State is a derivative of the local name for the River Niger. It was created on May 27, 1967, when the Federal Republic of Nigeria was split into twelve states by General Yakubu Gowon. Its original name "West Central State" has subsequently changed to Kwara. Before its creation, the area currently known as Kwara was part of the former Northern Region of Nigeria. The structure of the state has undergone several alterations. First, in 1976, a segment of the eastern part of the state was merged with the current Benue state. Second, in 1991, part of the areas of the state was merged with the current Niger state and Kogi state. The capital city, Ilorin, is a historically ornate centre, with one of the most distinguished Emirates in the country.

The Kwara State Environmental Protection Agency Law was enacted in 1992. The Act created the Kwara State Environmental Protection Agency (KWEPA) to promote a safe and healthy environment for the people of Kwara State. The Agency is saddled with the powers to carry out all environmental protection activities, carry out research and development activities for environmental protection and educate the general public on proper waste disposal methods acceptable by the State Government for domestic and industrial wastes (Adebayo, 2022). The Kwara State Environmental law provided that any person who contravenes any of the offenses mentioned above commits nuisance and would be tried by either a Magistrate Special Environmental Court or Area Court within the jurisdiction and upon conviction shall be liable to a maximum fine of ₦ 5000.00 (five thousand naira) or imprisonment for six months.

4.3 Data Presentation and Analysis

Table 4.31: Pilot Test

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
.669	.677	9

Table 1 shows the reliability of coefficients for all scales used in the study. The table contains six items. It has Cronbach's Alpa of .669 and Cronbach's Alpha on standardized items is .677. Therefore, the variable is acceptable because it is above 0.69.

Table 4.3.2: Impact of Public Policy on Waste Management in Kwara State on Environmental Security (n=361)

Items	SD	D	U	A	SA	Mean	Std Dev	Remark
The public policy helps the officer to create fear in the heart of the people who want to defraud	15 (4.2%)	23 (6.4%)	3 (.8%)	168 (46.5%)	152 (42.1%)	4.16	1.02	Agreed
Policy on waste management makes the operation easier so as to ensure a secured environment	14 (3.9%)	36 (10%)	–	159 (44%)	152 (42.1%)	4.11	1.01	Agreed
The policy makes the environment tidy because of the fear of arrest	6 (1.7%)	9 (2.5%)	39 (10.8%)	156 (43.2%)	151 (4.8%)	4.21	.856	Agreed
Policy creates embarrassment to the staff by the people	6 (1.7%)	9 (2.5%)	45 (12.5%)	178 (49.3%)	123 (34.1%)	4.12	.838	Agreed
Policy at times tarnishes the image of the government	5 (1.4%)	6 (1.7%)	2 (.6%)	182 (50.4%)	166 (46%)	4.38	1.72	Agreed

Source: Researcher's Field Survey 2025

Table 4.3.3: Challenges of Proper Implementation of Waste Management in Kwara State (n=361)

Items	SD	D	U	A	SA	Mean	Std Dev	Remark
Financial handicap	10 (2.8%)	12 (3.3%)	1 (.3%)	186 (51.5%)	152 (42.1%)	4.27	.858	Agreed
Insecurity	7 (1.9%)	20 (5.5%)	4 (1.1%)	171 (47.4%)	159 (44%)	4.26	.884	Agreed
Inadequate operational vehicles	8 (2.2%)	10 (2.8%)	3 (.8%)	300 (83.1%)	40 (11.1%)	3.98	.656	Agreed
No enough technical environmentalist	12 (3.3%)	18 (5.0%)	1 (.3%)	133 (36.8%)	197 (54.6%)	4.34	.965	Agreed

Source: Researcher's Field Survey 2025

Table 4.3.4: Correlations

		avimpact2	avchallenge2
avimpact2	Pearson Correlation	1	.630**
	Sig. (2-tailed)		.000

	N	361	361
avchallenge2	Pearson Correlation	.630**	1
	Sig. (2-tailed)	.000	
	N	361	361

**. Correlation is significant at the 0.01 level (2-tailed).

The table was used to know the correlation coefficient among the variables used. It is observed from the result above that challenges of proper waste management in Kwara State have the highest value .630 which is greater than the P-value of 0.05.

Table 4.3.5: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.630[a]	.397	.395	.35250	.949

a. Predictors: (Constant), avchallenge2
b. Dependent Variable: avimpact2

Table 5 shows that R .630[a], R Square is .397 Adjusted R Square .395 and Durbin Watson is .949

Table 4.3.6: ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	29.382	1	29.382	236.469	.000[b]
Residual	44.607	359	.124		
Total	73.989	360			

a. Dependent Variable: avimpact2
b. Predictors: (Constant), avchallenge2

Table 6 shows that the significant value of regression is .000[b] and the sum of square of regression is 4.996.

Table 4.3.7: Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	2.139	1.35		15.850	0.000
avchallenge2	.488	.032	.630	15.378	0.000

a. Dependent Variable: avimpact2

Table 7 shows that the difference between the impact of public policy and challenges of waste management on environmental security in Kwara State is .488 while the significant level of AVCHALLENGE2 is .000. Therefore, the hypothesis is rejected.

4.4. Discussion of Findings

The study reveals that the majority agreed to public policy on waste management helps the officer to create fear in the heart of the people who want to defraud and the majority of the respondents agreed that policy on waste management makes the operation easier for the staff. The study showed that more than 80% of respondents agreed that the policy makes the environment tidy because of fear of arrest by the members of the public. Also, more than half of the respondents agreed that policy creates embarrassment to the staff by the people while a majority of the respondents strongly agreed that policy tarnishes the image of the government in many areas.

The study shows that the majority of the respondents strongly agreed that financial handicap is one of the challenges to the proper implementation of waste management in Kwara State. This is in line with (Hakeem, 2013) that the Agency faces several problems including a lack of funding, a lack of professionally trained waste managers, an ineffective monitoring and control system, the peculiar attitude of Nigerians, the idea that "the government does everything," a lack of modern technology and a sluggish implementation of effective waste management practises, as well as corruption. It is also similar to a previous study by Agunwamba (2003) that 15% of less developed nations, including Nigeria, on the basis that such countries have a deficient infrastructural foundation that must be strengthened to solve the problem.

The finding revealed that the majority of the respondents agreed that insecurity is a contemporary challenge to waste management in the State. In addition, the majority of the respondents agreed that inadequate operational vehicles affect the evacuation and disposal of waste in Kwara State. The study is in line with Onuminya and Nze (2017) that the breakdown of waste evacuation vehicles is a serious hindrance in service delivery. while the majority of respondents strongly agreed that not enough technical environmental staff or workers hinder the effective operation of waste management in the State. This is similar to Onuminya and Nze (2017) that inadequate manpower and maintenance capabilities, as well as residents' lack of cooperation in guaranteeing efficient waste management. It is also similar to a previous study by Agunwamba (2003) who affirmed that the necessary technical and research support service for implementing appropriate waste management initiatives remains woefully inadequate (both in number and quality). A lack of experience in current dependable waste management data and information collection methods also poses a hurdle, impeding actual effective capacity growth for best practice.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study reveals that the majority agreed to public policy on waste management helps the officer to create fear in the heart of the people who want to defraud and the majority of the respondents agreed that policy on waste management makes the operation easier for the staff. The study showed that more than 80% of respondents agreed that the policy makes the environment tidy because of fear of arrest by the members of the public. Also, more than half of the respondents agreed that policy creates embarrassment to the staff by the people while a majority of the respondents strongly agreed that policy tarnishes the image of the government in many areas. The study shows that the majority of the respondents strongly agreed that financial handicap is one of the challenges to the proper implementation of waste management in Kwara State.

The finding revealed that the majority of the respondents agreed that insecurity is a contemporary challenge to waste management in the State. In addition, the majority of the respondents agreed that inadequate operational vehicles affect the evacuation and disposal of waste in Kwara State. A lack of experience in current dependable waste management data and information collection methods also poses a hurdle, impeding actual effective capacity growth for best practice.

5.2 Conclusion

The paper examined the impact and challenges of waste management in Kwara State. The study concluded that the majority agreed with public policy on waste management helps the officer to create fear in the heart of the people who want to defraud and the majority of the respondents agreed that policy on waste management makes the operation easier for the staff. It is also concluded that financial handicaps and insecurity are the challenges to the proper implementation of waste management in Kwara State.

5.3 Recommendations

The Kwara State Ministry of Environment and Forestry should deploy more environmental personnel to Kwara State Environmental Protection Agency. The State Government should pour more capital into the agency. Environmental regulations should be implemented throughout the state to allow for harsher penalties for violations committed during environmental cleaning. The government should follow the World Bank's advice that budget allocation for solid waste in industrialised nations with suitable infrastructure should be around 10% of monthly recurring expenditure. The Kwara State government should guarantee that the trucks utilised by KWEPA are regularly maintained, as well as public education, orientation, and awareness programmes on safe waste handling through the media. More legal disposal sites should be established. The Kwara state government should provide more equipment in order to enhance proper waste management in the State.

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