COMMUNITY PARTICIPATION IN URBAN WASTE MANAGEMENT OF ZURU TOWN, KEBBI STATE, NIGERIA

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DEDICATION

This thesis is dedicated to my father and mother who have sponsored my education right from the elementary stage, despite their limited resources

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In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, Dr. Noor Aimran Samsudin, for encouragement, guidance, critics and friendship. I am also very thankful to my lecturers Dr Nafisa Hosni.Dr Gabriel Ling Tek Hong,Dr Siti Hajar Misnan, and Dr Adila Rusli for their guidance, advice and motivation.. Without their proceeded help and interest, this study would not have been possible to conduct.

. My colleague's postgraduate students ought to likewise be mentioned for their help. My genuine appreciation likewise reaches out to every one of my associates and other people who have given help at different events. Their perspectives and tips are helpful in fact. Shockingly, it is absurd to expect to list every one of them in this restricted space. I'm appreciative to all my relatives

ABSTRACT

The study assessed community participation in urban waste management approaches in Zuru Town Kebbi State Nigeria. Two suburbs of Zuru Town were investigated, namely the neighbourhood of Rafin Zuru and Rikoto. Zuru Town i is located within the Local Government Area of Zuru one of the twenty-one States Local Government Areas in Nigeria. The purpose of this study is to assess community participation level in urban waste management. The study employed mixed-methods sequential explanatory design, comprising a short survey to assess community activities, level of participation, and waste management approach employed. Qualitative approach also used to explain phenomenon and understand the roles of community in waste management. Survey data has been analysed by using SPSS (version 26) descriptive statistics, including frequency and percentages to describe information regarding activities of community-based groups, level of participation in waste management, and waste management approaches employed.

Participants involved members of community-based groups, community leaders, officials of the ministry of Environment, Environmental Protection Agency (EPA), and Kebbi State Urban Development Agency (KUDA). There are 193 respondents involved in the study. Among these participants, 53.4% were male, 46.6% were female, Findings from research questions revealed that the community-based groups are highly engaged in waste administration activities such as clean-up functions, fundraising, and initiatives to prevent indiscriminate waste disposal. Despite this effort, it was revealed that other important activities such as awareness campaigns, organization of workshops and seminars, and sensitization were largely neglected by the groups. While fundraising and clean-up activities are essential for a safe and friendly environment, awareness of citizens is also important for sensitizing them on the negative effects of indiscriminate waste disposal. While the importance of community participation in waste management has been widely discussed in the literature. However, the community should be tasked with the responsibility of decision making, preparation, execution and monitoring waste management projects. The finding that open dumping and burning were the dominant waste management techniques employed by the community-based groups should attract the attention of policy makers towards banning such techniques to save the environment**.**

ABSTRAK

Kajian ini menilai penyertaan masyarakat dalam pendekatan pengurusan sampah bandar di Zuru Town Kebbi State Nigeria. Dua pinggir bandar Zuru disiasat, iaitu kejiranan Rafin Zuru dan Rikoto. Bandar Zuru i terletak di Kawasan Pemerintahan Tempatan di Zuru salah satu daripada dua puluh satu Kawasan Kerajaan Tempatan di Nigeria. Tujuan kajian ini adalah untuk menilai tahap penyertaan masyarakat dalam pengurusan sampah bandar. Kajian ini menggunakan reka bentuk penjelasan berurutan kaedah campuran, yang merangkumi tinjauan pendek untuk menilai aktiviti masyarakat, tahap penyertaan, dan pendekatan pengurusan sampah yang digunakan. Pendekatan kualitatif juga digunakan untuk menjelaskan fenomena dan memahami peranan masyarakat dalam pengurusan sampah. Data tinjauan telah dianalisis dengan menggunakan statistik deskriptif SPSS (versi 26), termasuk frekuensi dan peratusan untuk menerangkan maklumat mengenai kegiatan kelompok berbasis masyarakat, tingkat penyertaan dalam pengurusan sampah, dan pendekatan pengurusan sampah yang digunakan.

Peserta melibatkan anggota kumpulan berasaskan komuniti, pemimpin masyarakat, pegawai kementerian Alam Sekitar, Agensi Perlindungan Alam Sekitar (EPA), dan Badan Pembangunan Bandar Negeri Kebbi (KUDA). Terdapat 193 responden yang terlibat dalam kajian ini. Di antara peserta ini, 53.4% adalah lelaki, 46.6% adalah wanita, Hasil kajian menunjukkan bahawa kumpulan berasaskan komuniti sangat terlibat dalam aktiviti pentadbiran sampah seperti fungsi pembersihan, pengumpulan dana, dan inisiatif untuk mencegah pembuangan sampah tanpa pandang bulu. Di sebalik usaha ini, terungkap bahawa kegiatan penting lainnya seperti kampanye kesedaran, penganjuran bengkel dan seminar, dan kepekaan sebagian besar diabaikan oleh kelompok. Walaupun aktiviti penggalangan dana dan pembersihan sangat penting untuk persekitaran yang aman dan mesra, kesedaran warga juga penting untuk menyedarkan mereka tentang kesan negatif dari pembuangan sampah tanpa pandang bulu. Walaupun pentingnya penyertaan masyarakat dalam pengurusan sampah telah banyak dibincangkan dalam literatur. Namun, masyarakat harus diberi tanggungjawab membuat keputusan, penyediaan, pelaksanaan dan pemantauan projek pengurusan sampah. Penemuan bahawa pembuangan sampah dan pembakaran terbuka adalah teknik pengurusan sampah yang dominan yang digunakan oleh kumpulan masyarakat harus menarik perhatian para pembuat dasar untuk mengharamkan teknik tersebut untuk menyelamatkan alam sekitar.

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LIST OF ABBREVIATIONS

WHO - World Health Organization

SPSS - Statistical Package for Social Sciences

KUDA- Kebbi Urban Development Authority

EPA- Environmental Protection Agency

MSW- Municipal Solid Waste

FEPA- Federal Environmental Protection

Agency

NESREA- National Environmental Standard

Regulation Enforcement Agency

EPI- Environmental Performance Index

UNO- United Nation Organisation

UWEP- Urban Waste Expertise Programme

BEN- Bangladesh Environmental Network

LIST OF SYMBOLS

Kg = Kilogram

% = Percentage

Sq = square

Km = kilometre

ρ_T = tau-equivalent reliability

k = number of items

σ_{ij} = covariance between Xi and Xj

σ_X^2 = item variances and inter-item covariances

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CHAPTER 1

INTRODUCTION

1.1 Background to the study

Over the years, globalization has brought tremendous development across the world, but it has also brought unprecedented challenges especially in developing countries. One major concern is the adverse effect and ramification that go with urbanization. Much attention has been given in recent years to the rapid pace of urbanization in developing countries and to the possibility of declining living standards in cities as a result of this trend. It is considered that unless prompt and adequate measures are taken, the influx of people into the cities will greatly overburden the municipal facilities whose function is to maintain and improve social and health standards. Studies have shown that there are approximately 50-70% of the urban population living in urban centres where basic waste disposal facilities are seldom available (Akinmoladun & Adejumo, 2011). Urbanization occurs as a result of urban migrations, natural population increase, and engulfment of peripheral rural settlements by urban expansion (Yiougo, Oyedotun, Some & Evariste, 2013).

In many developing countries, unprecedented urban challenges are increasing, with waste management recognized as the major challenge (Achankeng, 2003). In particular, African countries are faced with challenges of waste management owing to increase in waste generation and lack of effective legislative and legal Act to prevent this offending behaviour (Troschinetz & Mihelcic, 2009). According to Yiougo et al. (2013), most households in African cities dispose of waste on the street and drainages, resulting in environmental degradation and induced human health issues. A number of authors attribute the prevalence of most diseases in Africa to unsanitary conditions of the environment which was caused by waste discharge (Medina, 1999; Dongo, Kouame & Kone, 2008; Garfi, Tondelli & Bonoli, 2009; Abul, 2010).

The production and disposal of solid waste in developing countries has been a major challenge. It is due to the high production rate of goods produced, sold and purchased, resulting in the surplus products being produced (Yiougo et al., 2011). The factors affecting this incremental change include: population increase, lifestyle change and increased use of disposable products, unnecessary packaging of articles and consumer habits (Poletto, deMori, Schneider & Zattera, 2016). Furthermore, human population growth coupled with increased economic activity resulted in a high rate of solid waste generation (Agamuthu, 2010). The day-to-day activities of man generally draw inputs from the natural base in his environment. This may be through raw materials for industrial production, or through the direct use of the reserve capital of land, water and air. However, the use of these resources contributes to the creation of various types of undesirable, degraded and discarded materials called waste, which mostly occur in cities and is referred to in many studies as Municipal Solid Waste (MSW) (Pradhan, Mohanty, Swar & Mohapatra et al., 2012). MSW is therefore an unavoidable resource arising from agricultural, household and or commercial activity in the cities for which the owner does not have an economic demand and which must be disposed (Poletto et al., 2016).

Generation of MSW is a worldwide environmental problem prevalent in many countries, particularly in developing nations (Zand, Heir & Tabrizi, 2020). It is a "natural product of urbanization, economic development, and population growth" (Kaza, Yao, Bhada-Tata & Van Woerden, 2018: p.18). According to a 2012 information, about 1.3 billion tons of garbage was produced across the globe (Hoornweg & Bhada-Tata, 2012). Recent estimation which was consistent with initial projection has shown an increase in waste generation of 2.01 billion tonnes in 2016, with a projection of 2.59bn tonnes by 2030 and 3.4bn tonnes by 2050 (Kaza et al., 2018). Regional distribution of the report indicates that the East Asia and Pacific (468m tonnes) and the Europe and Central Asia regions (392m tonnes) account for 43% of the world's waste generation. Furthermore, the Middle East and North Africa (129m tonnes) and Sub-Saharan Africa (174m tonnes) regions generate the least amount of waste, accounting for 15% of the world's waste production (see Fig. 1; Kaza et al., 2018).

Despite accounting for only 16% of the world's population, high-income countries generate 683 million (34%) tonnes; while low-income countries generate 93 million (9%) tonnes. Among the high-income nations, Bermuda, Canada and the United States from the North America region produced the highest average amount of waste per capita at 2.21 Kg per day. On the other indicator, moderate - and low-earnings nations generated the lowest amount of waste per capita in the following category: Sub-Saharan Africa (0.46 Kg per day). South Asia (0.52 Kg per day), and East Asia and Pacific (0.56 Kg per day). In total, the estimated global average of waste per capita per day in 2016 is 0.74 Kg (see Fig. 2: Kaza et al., 2018).

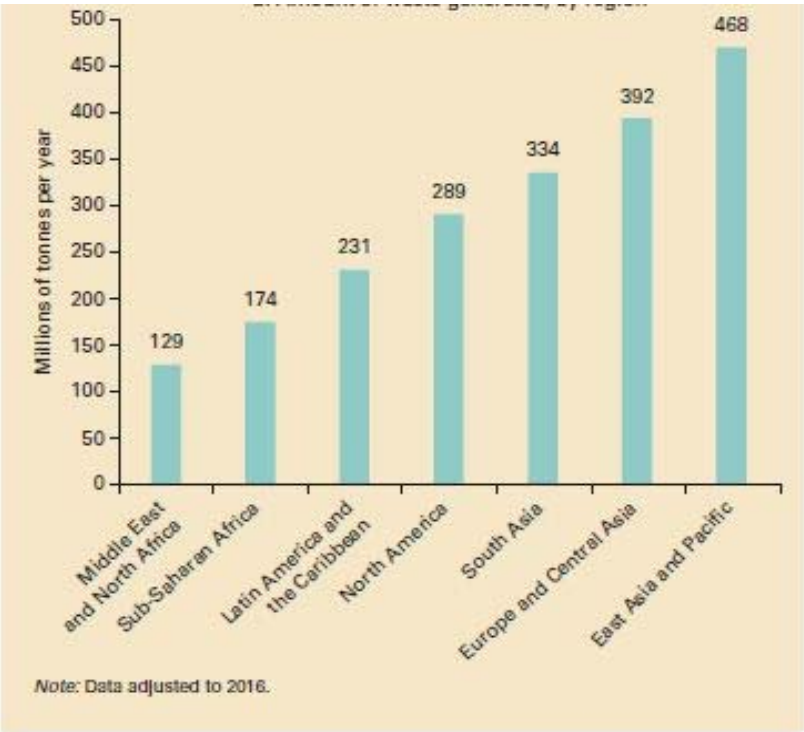


Figure 1.1 Regional distribution of waste generation in 2016; Source: Kaza et al., 2018

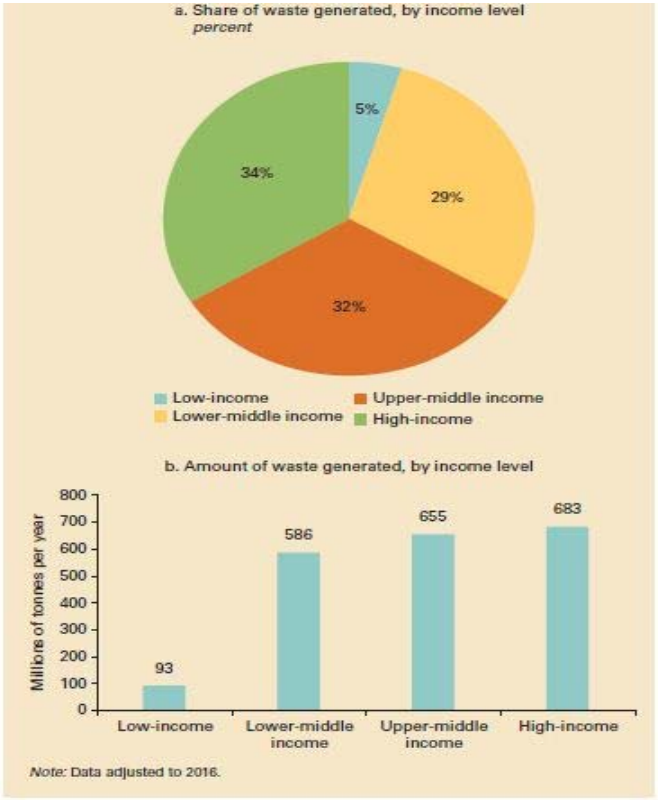


Figure 1.2 Distribution of waste generation by income country; Source: Kaza et al., 2018

Despite generating significant quantities of waste, proper management still remains an issue for urban areas particularly as estimates reveal that waste management accounted for 5% of global gas emissions in 2016, with an output of 1.6 billion metric tons of carbon-dioxide-equivalent (Ellis, 2018). This number is projected to grow to 2.6 billion metric tons by 2050 (Kaza et al., 2018). Illegal waste management is also estimated to become a growing sign of global inequality. For example, it was reported that open dumpsites in developing and underdeveloped nations can pose multiple hazards in the form of deadly landslides, environmental pollution, and induced health diseases (Oyekale & Oyekale, 2017). Waste management is an important urban service that needs thorough planning, management, and coordination across all levels of government and stakeholders. According to Kaza et al. (2018), waste management services include collection of waste from households and commercial establishments and then transferred to a treatment or disposal site. Several administrative and operational models have been proposed for proper waste management. About 13.5% of world's waste is recycled, 5.5% composited, and 40% dumped and openly burned (Kaza et al., 2018).

Waste management strategies largely depend on countries' laws. For example, in high income countries like the US, the national government develops laws to mitigate against waste disposal. In rare cases, national governments may operate waste services, but solid waste management is usually at the confinement of local agencies, including gathering and throwing away of waste and decision of how physical and financial resources should be allocated for waste management. It is at this level that innovative waste programs are developed, including introduction of waste bins for households and collection of the waste for possible treatment (Hoornweg & Bhada-Tata, 2012). Unlike the high-income countries, regulations on waste disposal in low- and middle-income countries are not effective. World Bank have increasingly identified challenges of waste management in developing countries which include:

1. Shortage of financial resources to operate waste management facilities

2. Complexity of planning and overseeing decentralized, privately based waste assortment
3. Lack of land and struggle from local citizens for improvement of waste management amenities
4. Weak established capacity for projection, monitoring and accomplishment
5. Elusiveness concerning administrative structure and obligation, and management both with and between levels of government (Kaza et al., 2018)

According to Kaza et al. (2018), low-income nations are less likely to have unambiguous laws on waste administration. However, waste management in these countries is often addressed by municipalities and communities. There is a significant increase in the average - earnings nations that have specific solid garbage administration regulations, although these regulations are seldom abided by citizens particularly those living in slums (Wee, Abas, Mohamed, Cheng & Zainal, 2017). For example, in Peru, there are general laws (Ley General de Residuos Solidos, 27314) guiding waste management, from general (temporary landfill) to final disposal. In Malaysia, there is a Nationwide Solid Waste Controlling Policy created to regulate and develop management across the country (Wee et al., 2017). In any case, this strategy was tested by restricted financing, low staff limit, and vagueness in the arrangement's

rules. A public plastic sack boycott was authorized in Rwanda utilizing line watch gatekeepers to forestall unlawful import of plastic packs This policy came with stiff penalties such as fines, jail time, and community service (de Freytas-Tamura, 2017).

In South Africa, the National Environmental Management Act (Waste Act) was established in 2008 to mandate dealing with lingering issues of illegal waste disposal. The city of Johannesburg was the first to respond by creating a plan to prevent waste generation. In Nigeria, several laws have been enacted such as the Federal Environmental Protection Agency (FEPA) Act of 1998 and National Environmental Standards Regulations Enforcement Agency (NESREA) Act of 2007, with little or no impact as waste are found on the streets of major cities in Nigeria (Onu, Price, Suredran & Ebje, 2012). Currently, there is no specific policy measure that deals with unabated waste streams. Waste management and disposal is handled by a decentralized policy, with each state detecting to citizens how wastes should be disposed through a combination of Task Force on waste management.

According to World Bank study, out of 368 cities observed, 223 cities recounted the existence of official solid waste administration programmes. Of the 223 cities, Europe and Central Asia reported the highest region with official policy while the North America region was observed to be the lowest. However, a significant number of cities (127) lack available information on waste management policy, with Sub-Saharan Africa having the highest cities. Only 18 reported a lack of policies (see Fig.3; Kaza et al., 2018).

Region	Number of cities with defined solid waste management rules and regulations	Number of cities without defined solid waste management rules and regulations	Number of cities without available information
East Asia and Pacific	32	0	8
Europe and Central Asia	51	6	34
Latin America and the Caribbean	20	5	14
Middle East and North Africa	19	0	10
North America	6	0	0
South Asia	74	6	3
Sub-Saharan Africa	21	1	58
All	223	18	127

Figure 1.3 Existence of urban waste management regulation; Source: Kaza et al., 2018

Like other countries, solid waste has become an important issue of concern in Nigeria (Ogwueleka, 2009). According to Abila and Kantola (2013), the indiscriminate waste disposal is increasingly a prevalent habit among urban dwellers in Nigeria; heaps of rubbishes are frequently found on the street side, rivers and many other open places across most urban centres. This has earlier been discovered to cause significant health and environmental problems (Imam, Mohammed, Wilson & Cheeseman, 2008; Ogwueleka, 2009). Solid waste and collection is confined to local governments as enshrined in paragraph (h) of the fourth schedule of the 1999 Constitution of the federal republic of Nigeria which gives the local government the responsibility of provision and looking after of societal ease, and clearance of sewage and refuse. However, in some states, the state government can make specific additional laws or bills that are variant with the constitution (Okoli, Egobueze & Briggs, 2020). These laws either give the responsibility to the state government or create an area of jurisdiction that suppress the powers of the local government (Ajike & Dienye, 2014).

According to Ogwueleka (2009), Nigerian regulations on solid waste management have failed to adequately enforce effective waste management practices among citizens, nor are these regulations well understood by citizens. Afun (2010) reported that more than 80% of Nigerians don't understand the concept of sustainable waste management nor do they know the penalties attached to illegal waste disposal. In this manner, about 89% of Nigerian residents discard their rubbish at local area

dumps, in open spaces, in water bodies, in tempest seepage, and other public spots (Okoli et al., 2020). In another report, an ordinary Nigerian generates about 0.51 kg of solid waste per day nationwide, with domestic and business centres providing approximately 10 per cent of total metropolitan waste burden (Kaza et al., 2016). Due to this illegal behaviour, Nigeria ranks 100 among 180 countries in the 2018 Environmental Performance Index (EPI). This compares and analyses environmental performance of countries, with Switzerland leading the world rank followed by France, Denmark, Malta and Sweden (The Guardian, 2018).

Like other Nigerian cities, Kebbi state has also many refuse dumps in public places, including streets, drainages and market places. Waste management in the state is controlled by both states and the local government. Currently, solid waste management in the state has failed to take into consideration the needs and interest of the citizens. Thus, there is currently no enforcement of existing regulations that govern illegal waste. This has neglected waste initiatives in the town and has attracted numerous refuse dumps. A recent study has ranked the state low in waste management practices, with 77.03% of the study participants reported "no waste management guidelines" and 79.43% reported "no waste management training" (Oyekale & Oyekale, 2017). A major city in the state where poor waste management is experienced is Zuru Town. The town is in the extreme southern part of the state. Recent study has shown that about two-thirds of wastes in Zuru Town are dumped on the streets indiscriminately and presents serious environmental health hazards in the drains, with 80% of these wastes reported to be non-biodegradable (Lami, Adamu & Sanda, 2019). The study further indicates that about 42.3% of the households burn their wastes (see Fig. 4 below). This waste management technique is perceived to be exacerbated by a sequence of destitution, people growth, lowered living benchmarks, poor authority and low level of conservational awareness (Nwachukwu, 2010).

With the lingering refuse dumps in the town, it is sufficient to question and inquire participation of community stakeholders in waste management in Zuru Town. This inquiry is essential due to anticipations that government efforts should be supplemented by the efforts of the communities to foster sustainable development. Environmental researchers have acknowledged the community as an essential

component of sustainable development. For example, it has been conceived that community-based waste management organizations may be involved in the creation of interest groups that will be charged with the responsibility of sensitizing members on the ill effect of indiscriminate refuse disposal, alongside setting helping the government in proper waste management techniques. This study therefore assesses community participation in urban waste management in Zuru Town, Kebbi state.

Figure 1.4 Refuse burning and dumping site in Rikoto area; Source: Lami et al., 2019

1.2 Problem Statement

Over the years, solid waste management has become a major challenge across the world particularly in unindustrialized and under- industrialized states, where consistent growth in the amount of community solid remains is prevalent (Hoornweg & Bhada-Tata, 2012). This has been attributed to increase in population growth, industrialization, and urban lifestyle (Butu, 2013; Ike, Ezeibe, Anijiofor & Daud, 2018). In most developing countries, a huge amount has been spent on solid waste management but failed to enhance improvement in legal waste disposal.

Various online surveys conducted in 2010 have ranked Nigerian cities as the dirtiest and worst liveable commercial cities in the world, with cities like Ibadan, Lagos ranked the dirtiest in 2010 and Onitsha and Aba the dirtiest in 2015 (Ike et al., 2018). This unpleasant story continued to emerge as Nigeria ranks 100 among 180 countries in the 2018 Environmental Performance Index (EPI) (Kaza et al., 2018). According to Ike et al. (2018), almost all the foremost cities in Nigeria are littered with solid wastes sideways the roads, on drainage outlines, and on most unused lands. Although various legal waste management were being enforced in many states, dumping sites, incineration and composting have been the prevalent waste disposal technique adopted by many urban dwellers in major cities in Nigeria (Babayemi & Dauda, 2009). This is also the case of Kebbi state and Zuru Town where indiscriminate waste disposal has been observed over the last few years. For example, in a recent study, 77.03% of the study participants reported “no waste management guidelines” and 79.43% reported “no waste management training” in Kebbi state (Oyekale & Oyekale, 2017).

As such, urban areas as focus of financial exercises need food and other consumables for the overflowing populace, however these are related with squander age illuminate regarding bundles, food ruminants, utilized jars and holders. Besides, pervasiveness of toxins which are '… substances that straightforwardly or in another way hurt human wellbeing or the climate is expanding steadily. Inappropriately discarded harmful substances can develop in living organic entities from dirtied air or water, or through tainted food. Contamination likewise causes corrosive downpour, brown haze and air contamination which are perceived as huge wellbeing risks'. It has been set up that there is immediate connection between level of development and volume of waste created.

In addition, recent study has shown that about two-thirds of wastes in Zuru Town are dumped on the streets indiscriminately and presents serious environmental health hazards in the drains, with 80% of these wastes reported to be non-biodegradable (Lami, Adamu & Sanda, 2019). The study further indicates that about 42.3% of the households in Zuru Town burn their wastes. This waste management technique is perceived to be exacerbated by a cycle of paucity, population

development, lowered living benchmarks, poor authority and low level of environmental consciousness (Nwachukwu, 2010). Negative consequences of this act has been buttressed by researchers, including the fact that it leads to generation of leachates which could be washed into water bodies resulting in pollution and other environmental risks (Mangisvo, 2010; Pukkalanun et al., 2013).

Although state and local governments have the sole mandate to ensure a clean environment, the community should also supplement the effort of the government through various waste management initiatives. According to Yakubu and Mado (2018), communities also have the responsibility of ensuring a safe environment in addition to the effort of the state and local government. One of the roles of the community is to help the government in citizen awareness of effective refuse disposal technique, clearing of refuse from streets, and ensuring that cities and residential areas are clean (Yakubu & Mado, 2018). Preliminary studies have shown that communities can effectively manage solid given the presence of a well-organized and planned structure in place (Tam & Tam, 2008). However, arising from Lami's et al. (2019) findings concerning waste management in Zuru Town, it becomes imperative to assess community participation towards waste management. Although several investigations have been carry out on waste administration in Zuru Town, the role of the community still receives less academic attention. To the best of the researcher's knowledge, there was no published article that assessed community participation in waste management in Zuru Town. This is the major gap which the study addressed given the existence of various community-based organizations in Zuru local authority.

1.3 Purpose of the study

Given the findings of recent findings by Lami et al. (2019) and from researcher's personal observation, the purpose of this study is to assess community participation level in urban waste management.

1.4 Objectives of the study

Specifically, the study focused on the following objectives:

1. To identify the activities of community-based organizations in relation to urban waste management in Zuru Town
2. To assess the community participation level of urban waste management program conducted by community-based organizations in Zuru Town.
3. To evaluate the effectiveness of waste management technique employed by community-based organizations in Zuru Town
4. To recommend the best practice of waste management that can be implemented by community-based organizations in Zuru Town.

1.5 Research questions

The study seeks to address the following research questions:

5. What are the activities of community-based organizations in relation to urban waste management in Zuru Town?
6. What is the frequency of urban waste management programs conducted by community-based organizations in Zuru Town?
7. What waste management approaches that are employed by community-based organizations in Zuru Town?
8. What is the effectiveness level of waste management approaches employed by community-based organizations in Zuru Town?

1.6 Scope and Limitations of the study

The focal point of the investigation is limited to Zuru Town, particularly the district of Rafin Zuru and Rikoto with the aim of assessing the extent of community participation in urban waste management in the districts. This will be fully analyzed in a view to examining its impact or otherwise in resolving the issue of waste collected from residence and industries in Zuru Local government area. Among the variables to be assessed are activities of community-based organizations, frequency of their program waste management techniques employed and the effectiveness of these techniques. To a large extent, the records and documents to be used in project writing are limited to the local government of Zuru in Kebbi State. Data collection instruments are also limited to secondary documents from community-based organizations, questionnaires and interview protocol. Respondents are limited to only heads and members of community-based organizations, districts heads, and youth leaders of the two districts.

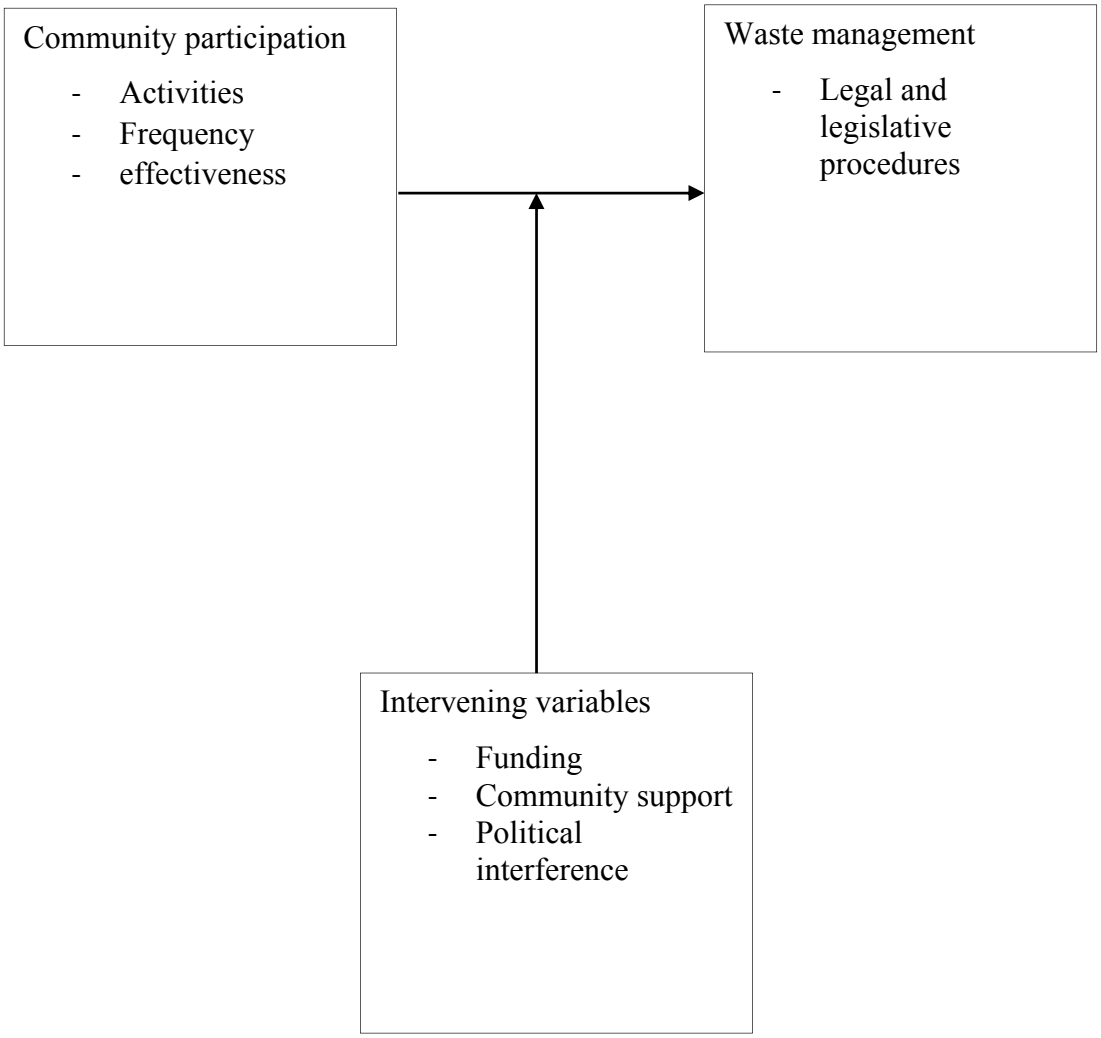
1.7 Significance of the study

The study would provide insight into understanding the activities of community-based organizations in Rafin Zuru and Rikoto in relation to urban waste management. In addition, the study findings would provide information to researchers, state and local government and community stakeholders on the activities of community-based organizations in relation to solid waste management. Furthermore, the study findings would be used as a benchmark for Kebbi state policy makers to enforce policies towards ensuring a healthy environment in Zuru local government and its environs. The methodology used in this study would be useful for other researchers in conducting several scientific studies. Because there is little or no available studies assessing community participation in urban waste management in Zuru Town, the study will fill this gap and build a body of literature in this field of study. Gaps left in the study due to potential limitations would provide a research ground for other researchers.

1.8 Conceptual framework

As per Miles and Huberman (1994), a theoretical system is a composed or visual introduction that: clarifies either graphically, or in account structure, the primary things to be contemplated – the key components, ideas or factors, and the presumed relationship among the variables. They also emphasized that a conceptual framework is not an end to itself but a pathway to enable a researcher to reach an end. In the conceptual framework (Fig. 5), the independent variable (community participation) was assumed to contribute to urban waste management which is the dependent variable. For example, the activities of community-based organization in relation to waste management is assumed to make a significant contribution towards a healthy environment and effective waste disposal in accordance with legal and legislative procedures.

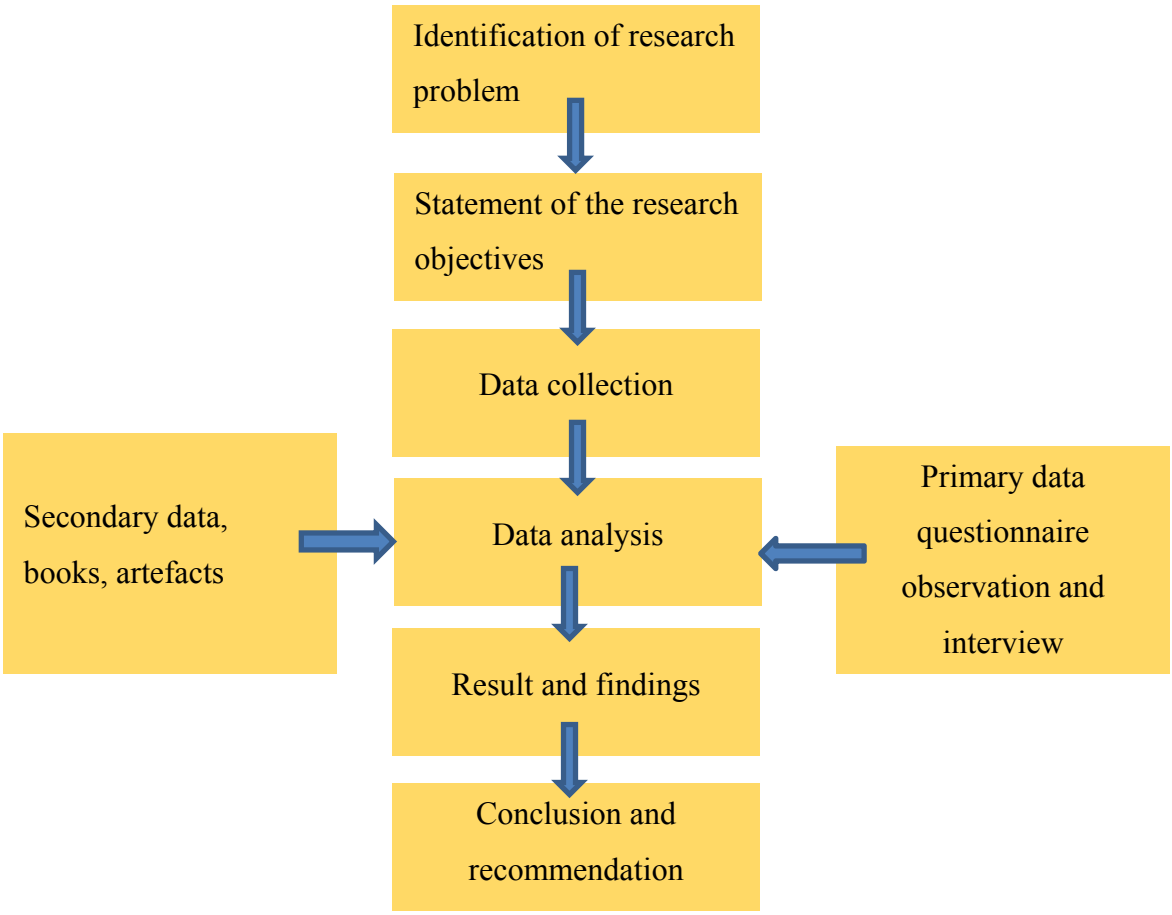
Furthermore, frequency of these activities and their effectiveness are also assumed to contribute to proper waste management. The intervening variables on the other hand are assumed to have significant effect if they are not controlled. For example, funding, community members' support, and political interference are external factors which affect community participation in urban waste management. Lack of funding and support from the community members could affect activities of community-based organization. Furthermore, political interference could stop activities of community-based organization in relation to waste management. For example, waste management activities may be sponsored by the opposition party, thereby causing potential rift with the incumbent government.


Community participation
- Activities
- Frequency
- effectiveness
Waste management
- Legal and legislative procedures
Intervening variables
- Funding
- Community support
- Political interference

1.9 Summary of the research process

The Figure underneath offers a summary of the research cycle, which presents the principal steps taken in each phase of the investigation. The examination started by recognizing the exploration issue, and afterward continued to state goals which were then changed into research questions. Information was then gathered from both important and auxiliary sources.

The information was then breaking down to uncover discoveries. From these discoveries, end and suggestions were made.



1.10 Structure of the Thesis

The entire research is divided into five chapters to create a good flow for the information. The thesis is organised in sequence from chapters one to five. Each chapter provides descriptions of different stages. The outline of the thesis is as the following:

1.10.1 Chapter one: Introduction

The chapter explains the background of the research. It provides the introduction to guide the reader into the research topic. The chapter spells out the purpose of the study, its significance and the questions to be addressed. It illustrates how the research fits into the broader world of urban waste management studies. The problem presentation of the investigation, research aim, objectives, inquiries questions, and research range and limitations are included in this chapter. This chapter provides a momentary explanation of the research area: Zuru local government, Kebbi state.

1.10.2 Chapter two: Literature review

This chapter contains an in-depth literature review by other scholars on the subject area providing the conceptual and theoretical underpinning the study. It explains the origin of the problem to which the research is intended to proffer a solution, and discuss the existing knowledge in the study area. The literature review reveals gaps in the current knowledge of public involvement in urban waste administration, which the research intends to address. It discusses the roles and activities of community-based organization, alongside the frequency, techniques employed and effectiveness of such activities. The chapter will also empirically review various related studies.

1.10.3 Chapter Three: Research methodology

Chapter three presents inquiry methods employed by the study. It identifies study participants, design, instruments for data collection, data collection procedures, and data analytical methods.

1.10.4 Chapter Four: Result and discussion

The results and analysis are discussed in chapter four. After results are analysed, they are presented, discussed and linked with the previous studies in this chapter. This chapter also further focuses on the analysis of the data generated from interviews and how they relate to concepts, ideas and problems noted in the context of the study. Specifically, in this chapter, data are analysed and results are presented in accordance with the research questions. Furthermore, findings are discussed and are related to previous studies

1.10.5 Chapter five: Conclusion and recommendations

Chapter five presents a synthesis of the major findings of the research and proposed improvement framework for community participation in waste management. It also contains the general conclusions drawn from the study. The chapter also presents its contributions to current knowledge, and recommendations for further research.

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