



PREDISPOSING AND ENABLING FACTORS ASSOCIATED WITH WASTE DISPOSAL AMONG RESIDENTS OF AGBOWO LOCAL GOVERNMENT

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ABSTRACT: Waste disposal is generated from different sources, including industrial, agricultural, and other social activities, as well as household waste, which can be detrimental to human health. The study, therefore, explored predisposing and enabling factors associated with waste disposal practices among residents of Agbowo, Ibadan North Local Government. The study employed a cross-sectional descriptive survey which is guided by the PRECEED Model which guided variable categorization. A multi-staged sampling technique was used to select 394 residents of the Agbowo Area in Ibadan North Local Government Area. A self-structured 46-item questionnaire was used in data collection for this research study, with a validated Cronbach's alpha of 0.874. The selected socio-demographic variables were analyzed using descriptive analysis, while the hypotheses were tested using inferential statistics of Pearson Product-Moment Correlation and linear regression analysis. The majority of the respondents, 52.3% of the respondents, are between the ages of 31-35 years with the mean age of 33.5 ± 13.7 . Most of the residents, 40.9%, had a high level of knowledge about waste disposal practice with the mean score of 26.7 ± 2.97 , more than half of the residents 55.7% had fair level of perception towards waste disposal had a mean score of 16.2 ± 2.63 . There was a significant relationship between the knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan ($r = 0.783$, $p < 0.05$). In conclusion, there is a high level of knowledge of waste disposal with a fair level of perception about waste disposal practices. The study suggests the need for an awareness campaign about good waste disposal practices among workers of the residents of the Agbowo community. Also, the need for the provision of waste drums to prevent hazardous waste products in the printing companies in Agbowo under the Ibadan North LGA.

KEYWORDS: Health belief factor, knowledge, practice, perception, and waste disposal.



INTRODUCTION

The generation of waste is unavoidable for humans, but it is a serious challenge in most cities around the world. Waste disposal problems have drawn the attention of civilisation as a result of advancement in the development of new technologies, services, and consumable products; therefore the quantity and quality of the waste disposed of increases every year around the world (Chen, 2019). Waste disposal are several activities or actions put in place to manage waste from the generation stage to final disposal (United Nations Statistics Division, 2017). The process of waste disposal across the world includes collection, transportation of waste, treatment, and final disposal of the waste. This also involves monitoring and regulation of the process of waste disposal (Davidson, 2018). Waste can either be liquid, solid, or gaseous; each of these types has its own methods of collection and disposal. Also, sources of waste products can be industrial, biological, and household; in some cases, it can be a threat to human health (Abila & Kantola, 2017).

Globally, the world generates more than 2.01 billion tonnes of municipal solid waste annually, with at least 33 percent of that extremely conservatively not managed in an environmentally safe manner (United Nations Environment Programme, 2019). Worldwide, waste generated per person per day averages 0.74 kilogram but ranges widely, from 0.11 to 4.54 kilograms. Though they only account for 16 percent of the world's population, high-income countries generate about 34 percent, or 683 million tonnes, of the world's waste. There is a projection that global waste is expected to grow to 3.40 billion tonnes by 2050, more than double population growth over the same period (UNEP, 2019).

Waste disposal is one of the major challenges facing many developing countries. The average quantity of waste generated in Nigeria ranges from 1.5 to 2.2 kg/day/bed, whereas in developed countries it is 5.24 kg/day/bed (Federal Ministry of Health, 2018). It is estimated that the total amount of waste generated in cities is only 1.5% of the total municipal waste. 15% to 20% of the waste is contagious and requires special disposal techniques, but if this 10% mixes with the rest of the waste, then 100% waste becomes contagious (Olowe, 2018). Also, wastes pose a significant impact on health and the environment. The practice of proper waste disposal is also inadequate. Additionally, Uchegbu (2018) remarked that big cities like Port Harcourt, Lagos, Kano, etc., in Nigeria produced on average 21 kg of solid waste per person, per day.

UNEP in 2018 reported that as of 2017 estimated wastes generated in Lagos, Port Harcourt, Ibadan, and Warri are 1.23×10^5 ; 762,143; 996,102 and 174,372 t/ year respectively. Ibadan, with a projected population of 3,154,487, the quantity of waste generated in Ibadan Metropolis in 2012 is estimated at 634,998.43 t/year and 0.55 kg per capita per day, which included provision for street sweeping (Olowe, 2018).

The practice of indiscriminate and improper dumping of wastes is on the increase in Agbowo and Bodija communities areas in particular and Nigeria in general and it is compounded by a cycle of poverty, population explosion, decreasing standard of living, poor governance and low level of environmental awareness, and the end product of it all is the dumping of these waste in any available open space (Rachel, 2019).

Although there are several institutional structures to address waste accumulation and associated health hazards among residents of the Agbowo area of Oyo State. In spite of



existing support systems and regulations on the implication of waste disposal practices among residents, there are still lapses due to some logistical and restrictive administrative bottlenecks that sometimes make them ineffective. In some instances, illegal disposal of solid wastes poses serious environmental problems to society. Given that the sixth target of the eleventh Sustainable Development Goal (SDG) emphasizes that countries should by “2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste disposal” (Adeniran, 2017), enhancement of environmental quality can no longer be left to the whims and wishes of few political clans.

Waste disposal practices are a major problem in most urban and industrialised cities of the world. Several of the industrialised cities in Nigeria still have problems with adequate disposal of waste, illegal roadside dumping of refuse, and poorly controlled open dumps. These uncollected, dumped waste products constitute a major disaster to health and degradation of the environment (UNEP, 2018). Solid waste disposal in cities like Ibadan where there is high concentration of industries, there is lack of waste disposal infrastructure coupled with the population congestion, makes it extremely difficult to manage printing companies in the sprawling city and this is taking a toll on the residents in the state (Ogwueleka, 2018) More importantly poor waste disposal awareness among Ibadan residents of urban cities is a major research in most developing countries where there is no well-structured training on waste disposals from local community councils in Ibadan, hence, they indiscriminately dump waste products into drainage channels, gutters and also on the streets (Oyo Waste Disposal Agency, 2019).

Research Questions

1. What predisposing factors (knowledge and perception) are associated with waste disposal practices among residents of Agbowo LGA?
2. What enabling factors (availability of containers, dump sites) are associated with waste disposal practices among residents of Agbowo LGA?

Objective of the Study

The main objective of this study is to investigate the factors associated with waste disposal practices among residents of Agbowo, Local Government Area

The specific objectives are to;

1. determine the predisposing factors (knowledge and perception) associated with waste disposal practices among residents of Agbowo LGA
2. examine the enabling factors (availability of containers, dump sites) associated with waste disposal practices among residents of Agbowo LGA

Hypothesis

H₀₁: There is no significant relationship between knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan



METHODS AND DESIGNS

Research Design

The design of this study is descriptive cross-sectional. A cross-sectional study design involves the collection of data to answer research questions of interest at one point in time from individuals in an entire population or a subset, and is especially appropriate for describing the status of phenomena or relationships among phenomena at a fixed point in time (Chris & Diana, 2004).

Study Population

The population of this study included all residents of Agbowo Area, which is located under the Ibadan North Local Government Area. Agbowo is the most populated off-campus community around the University of Ibadan.

Inclusion criteria: All consenting residents of Agbowo Area who havein the community for more than 5 years were included in the study.

Exclusion criteria: All non-residents of Agbowo Area and individuals who are less than 18 years and have not resided in the area for 5 years were excluded from the study.

Description of Study Population Area

The study area was conducted at Agbowo Area, which is located under the Ibadan North Local Government Area. Agbowo is the most populated off-campus community around the University of Ibadan. Other communities around UI, as popularly called, include Samonda, Orogun, Ojoo, Bodija, and Ajibode. The main road that leads to Agbowo is directly opposite UI's main gate, and with the cheap transportation to its nook and cranny, students prefer this community to others.

Life in Agbowo is a mixed world of interaction between students and non-students alike. The consensus is that Agbowo is a ghetto. In fact, students who behave in ways not expected of them are often taunted by lecturers with the saying: "You behave like people in Agbowo." However, life in one part of Agbowo is in some instances markedly different from others. The structural architecture, the mud bricks, and rusted roofs are ubiquitous. It is as if many of the houses in this community were built in the same year by the same builders. Generally, however, the houses are not in good condition. Yet, their rents are not commensurate with their bad state.

Sample size and sampling Technique

Sample Size Determination

Sample size is estimated using the Kish & Leslie (1965) formula for quantitative studies. The formula states that:

$$N = \frac{Z\alpha^2 \cdot P(1-P)}{D^2}$$



Where;

N – Sample size

D – The desired degree of accuracy, which is taken to be 0.05

P – The estimate of the satisfaction rate among the target population (which was assumed to be 50% in the absence of prior data) $50\% = 0.5$

Z_{α} - The standard normal deviation of 1.96 corresponding to 95% confidence interval.

Substituting:

$$N = \frac{1.96^2 \times 0.50 (1-0.50)}{0.05^2}$$

$$N = \frac{3.8416 \times 0.50 \times 0.5}{0.0025}$$

$$N = \frac{3.8416 \times 0.25}{0.0025}$$

$$N = \frac{0.9604}{0.0025}$$

$$N = 384$$

The estimated minimum sample size is 384 residents of Agbowo Area in Ibadan North LGA. Therefore, a minimum sample size of 384 was randomly selected among residents in Agbowo Area in Ibadan North Local Government Area. 10% of the population was added to the minimum sample to take care of the non-response rate. The total number of participants, therefore, was 10% of 384 = 38 plus 384 = 422. Approximately 423 participants were employed for the study, and 394 questionnaires were correctly filled without any questions unanswered.

Sampling Technique

The study randomly selected eight (8) units in Agbowo Area of Ibadan North Local Government Area with the use of ballot. Communities selected in this study were used for the study, and the available statistics at each ward were used. To achieve the desired sample size for the study, the number of residents selected from each ward was determined by a proportional allocation ratio method.

The sampling technique used in this study is a Multi-stage sampling technique. Below are the different stages.

Stage 1: For the first stage, cluster sampling was used. different households in Agbowo were viewed as a single cluster within the Agbowo Area

Stage 2: Random sampling using the ballot technique was used among the households in Agbowo Area to determine the household to be used for the study.



Stage 3: Random sampling method was used to determine the number of houses to be selected from each of the selected households that participated in the study.

Instrumentation

A self-structured 46-item questionnaire was used in data collection for this research study. The instrument is structured and designed in accordance with the conceptual framework in order to effectively meet the objectives as well as answering the research questions. The questionnaire was divided into four (4) sections, which include; socio-demographic characteristics, predisposing, enabling factors, Reinforcing factors, and practice of waste disposal.

Section A: Demographic Characteristics: This includes socio-demographic characteristics, which are age, marital status, education level, occupation, religion, and ethnicity.

Section B: predisposing factors associated with waste disposal practices: This includes item questions on predisposing factors measuring their knowledge, attitude, and perception, and will be made up of 16-item questions. This was in the form of multiple-choice, objective style, and yes or no questions (closed-ended).

Section C: Enabling factors associated with waste disposal practices: This section focused on the enabling factors associated with waste disposal practices. This section will consist of 9 multiple-choice questions on the availability of waste containers and the availability of dumpsites, etc. Respondents will be asked to respond to a four (4) point Likert scale format (Strongly agree, Agree, Strongly disagree, Disagree).

Validity and Reliability of Instrument

Validity: Face Validity: Face validity does not guarantee that the survey actually measures phenomena in that domain. Measures may have high validity, but when the survey does not appear to be measuring what it is, it has low face validity. Face validity is an estimate of whether a survey appears to measure a certain criterion. In this study, the supervisor, and other departmental lecturers extensively review the questionnaire and then give a face validity and approval.

Reliability: In this study, reliability of the questionnaire will be determined by pre-testing the questionnaire among population of similar characteristics as the study sample with 40 respondents and the data obtained was analyzed using test statistics of Cronbach's reliability score. The Cronbach's Alpha scores of 0.79, 0.763 and 0.761 were obtained for knowledge, enabling factors and waste disposal practices

Method of Data Collection

Data was collected among residents of the Agbowo Area in Ibadan North Local Government Area. Approval to conduct the study was obtained from the leaders of Agbowo Area in Ibadan North Local Government Area, as well as from the Babcock University Health and Research Ethical Committee BUHREC. The participants were served with the questionnaire constructed in English language. The questionnaire was self-administered with guidance from trained assistants. Correctly filled questionnaires were returned to the researcher immediately which was verified for accuracy. Data entry was done using the SPSS statistical package



version 27, followed by cleaning, coding, and editing. Data was cleaned before being used in order to remove apparent errors. Frequency tables for all questions were used to identify missing information, detect entry errors, and check for inconsistencies such as outliers.

RESULTS

Table 1 Analysis of Characteristics of the Residents

N=394

Demographic Characteristics	Frequency	Percentage
Gender		
Male	155	39.3
Females	239	60.7
Age		
15-20years	61	15.6
21-25years	22	5.2
26-30years	45	11.7
31-35years	206	52.3
36years and above	60	15.1
<i>Mean Age = 33.5 ± S.D= 13.7</i>		
Ethnicity		
Yoruba	274	69.8
Igbo	79	19.8
Hausa	41	10.4
Religion		
Christianity	174	44.2
Islam	220	55.8

The result of Table1 presented above indicated majority of the respondents 60.7% are female, 39.3% are male. 52.3% of the respondents are between the ages of 31-35years, 15.6% are between the ages of 15-20years, 15.1% of the respondents are above 36years. Most of the participants are predominantly from the Yoruba ethnic group, 19.8% are from the Igbo tribe, and 10.4% are from the Hausa tribe. 56% practice the Islamic religion, while 44% practice the Christian religion. The majority of the residents, 42.7%, are traders, 27.1% are civil servants, 15.1% are artisans, 10.4% have other occupation and 4.7% are unemployed.

Table 2 Analysis of Predisposing factors (Knowledge of Waste Disposal among residents, N=394)

Knowledge of Waste Disposal	Categories	Frequency	Percentage
Meaning of Waste	The useless and unwanted products derived from the activities of and discarded by society	160	51.9
	Materials that cannot be used by anybody	193	48.1
	Exist in solid and liquid form	41	10.4
Where can Waste can be stored	Covered metal or plastic bin	114	28.9



	Plastic bags	107	27.3
	Basket	132	33.3
	All of the above	41	10.4
Should be dumped around the house	No	233	58.9
	Yes	161	41.1
Should be stored in refuse bins	No	179	45.6
	Yes	215	54.4
Should be dumped outside the house	No	227	57.6
	Yes	167	42.4
Rodent and flies breeding	No	161	40.6
	Yes	233	59.4
Flooding	No	186	47.2
	Yes	208	52.8
Should be left for the waste collector to collect	No	154	39.1
	Yes	240	60.9
Wastewater is constantly released from homes in the form of backwaters from the toilets and sinks	No	240	60.9
	Yes	154	39.1
Badly handled liquid waste is dangerous, as a spill could pollute water tables, ponds, and rivers	No	161	41.1
	Yes	233	58.9
Polythene bags and plastics are non-degradable waste	No	155	39.3
	Yes	239	60.7

Table 2 presented above indicated that 48.7% of the residents gave meaning to waste as materials that cannot be used by anyone, 40.9% of the participants reported it is the useless and unwanted products derived from the activities of and discarded by society, 10.4% of the respondents reported exist in a solid and liquid form. Most of the respondents 33.3% reported the use of basket, 28.9% reported the use covered metal or plastic bin, 10.4% reported all of the above. Most of the respondents reported that waste should not be dumped around the house. 54.4% reported that waste should be stored in the refuse bins. 42.4% reported that wastes should be dumped outside the house. Most of the respondents 59.4% reported that improper waste disposal can result in rodent and flies breeding, 52.9% of the residents reported that it could lead to flooding. 60.7% of the respondents were correct that polythene bags and plastic are non-degradable waste.



Research question one on the level of knowledge of waste disposal practices among residents of Agbowo

Table 2b: Summary of level of knowledge waste disposal practice N= 394

Criteria	Frequency	Percentage
High (22-32)	161	40.9
Average (12-22)	101	25.0
Poor(1-11)	132	34.1
Mean =26.7, Std. Dev = 2.97		

This study asked 10 questions relating to the level of knowledge of waste disposal practices among residents of Agbowo. The maximum score obtainable is 32. Their level of knowledge of waste disposal practice was categorized as High (22-32), Average (12-22), and Poor (1-11). The majority of the respondents, 40.9%, had a high level of knowledge about waste disposal practice among the residents of Agbowo, 34.1% had a poor level of knowledge, 25% had an average level of knowledge of waste disposal practice.

Table 3: Analysis of Enabling factors (Disposing points) associated with Waste Disposal among residents N=394

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
Most homes in the community have access to waste bin	60(15.1%)	53(13.1%)	173(43.8%)	108(27.6%)
The community has a dedicated dumpsite	113(28.6%)	41(10.4%)	114(28.9%)	126(32%)
The dumpsite is far from the main residential area	60(15.1%)	167(42.4%)	0(0%)	167(42.4%)
There are different segments of different kinds of waste	60(15.1%)	60(15.1%)	113(28.6%)	161(41.1%)
Government provides waste disposal for the benefit of residents	60(15.1%)	0(0%)	107(27.3%)	227(57.6%)

Table 3 of the respondents agreed that most of the homes in the community have access to a waste bin. 32% strongly agreed that community has dedicated dumpsites. 42.4% of the respondents disagreed that dumpsites are far from the residential community. 41.1% of the respondents strongly agreed that residents have access to waste bins which provided weekly sanitation program. 39.3% agreed that each household is mandated to join the weekly sanitation program. Most of the respondents 39.1% disagreed that everyone participated in the monthly environmental sanitation programs that could encourage proper waste disposal. 59.4% of the respondents agreed that waste collection vans come regularly to carry waste from the dumpsite to the final disposal. 41.1% strongly agreed that there are different segment of disposing of different kinds of waste. Most of the participants 57.6% strongly agreed that government provides waste disposal for the benefit of residents.



Research question; Three on the level of Enabling factors (Disposing points) towards Waste Disposal Practice

Table 3b: Summary of level of Enabling factors (Disposing points) towards Waste Disposal N= 394

Category	level of Enabling factor	Frequency	%
25-36	Good	87	21.1
13-24	Fair	176	45.3
1-12	Poor	131	33.6
Mean =23.9 Std. Dev = 7.32			

This study asked 9 questions on each of the levels of enabling factors towards waste disposal. The maximum score obtainable for each of the variables is 36. It has been categorised as: Good (25-36), Fair (13-24), and Poor (1-12). Table 4.1.4b presented above showed that 45.7% of the respondents had a fair level of enabling for waste disposal practice, 33% reported a poor level of enabling factor, while 21.1% reported a good level of enabling factor.

Table 4 Analysis of Practice of Waste Disposal among residents N=394

Practices of waste disposal	Not at all	Not always	Always	Sometimes
I make use of colored bags used to dispose of different types of waste.	94(24%)	0(0%)	114(28.9%)	186(47.1%)
I dispose of sharp or infectious materials collected separately.	101(25.5%)	0(0%)	186(47.1%)	107(27.3%)
The use of waste is common in the community	60(15.1%)	53(13.5%)	240(60.9%)	41(10.4%)
I sometimes use chemical disinfection in my home	95(24.2%)	60(15.1%)	53(13.5%)	186(47.1%)

Table 4 of the respondents indicated that 47.1% of the participants reported that sometimes they make use of coloured bags to dispose of different types of waste. 47.1% always dispose of sharp or infectious materials that are collected separately. reported to no always use equipment are disposed of appropriately. 60.9% of the participants reported use inclination of wastes is common in the community. 47.1% of the participants reported that they sometimes use chemical disinfection in their homes.

Research question five on the level of Waste Disposal Practice

Table 4b: Summary of level of Waste Disposal Practice N= 394

Category	Waste Disposal Practice	Frequency	%
22-32	High	88	22.4
12-22	Average	222	56.0
1-11	Low	84	21.6
Mean =22.4 Std. Dev = 3.86			

This study asked 8 questions on each of the levels of waste disposal practice among the residents. The maximum score obtainable for each of the variables is 36. It has been



categorised as: High (22-32), Average (12-22), and Low (1-11). Table 4.1.6b presented above showed that 56% of the residents had average waste disposal practice, 22.4% of the respondents had a high level of waste disposal practice, while 21.6% had a low level of waste disposal practice.

Research Hypotheses

Hypothesis One: There is no relationship between the knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan

Table 4.2.1: Correlation between knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan

Knowledge waste disposal	Practice waste disposal practice			Total	R p-value
	High	Average	Low		
Good	101(47%)	32(34.9%)	28(31.3%)	161(40.9%)	0.783 0.002
Fair	52(23.3%)	23(25.6%)	24(28.9%)	101(25%)	
Poor	65(29.8%)	34(39.5%)	33(39.8%)	132(34.1%)	

The result of hypothesis one showed that there is a relationship between the knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan. The null hypothesis was rejected because the p-value was less than 0.05 ($r=0.783$, $p<0.05$). Therefore, there was a significant relationship between the knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan.

DISCUSSION OF FINDINGS

Waste disposal practice is still a major problem in low and middle-income countries like Nigeria, and Agbowo community is left out in the struggle for a clean and neat environment. The majority of the respondents 60.7% are female, 52.3% of the respondents are between the ages of 31-35years, 15.6% are between the ages of 15-60years. Most of the participants are predominantly from the Yoruba ethnic group. The majority of the residents, 42.7% are traders. findings of Adesola (2018) that most residents in Nigeria during the National Demographic Health survey are above the age of 18years with an average of over 36years. Furthermore, Tinuoye- (2019) reported average income from a household in a community-based study of waste management is less than 100,000. The result is also in tandem with the findings of Ademinkanra (2019), who reported that most households presented in the primary health care centre are predominantly from the Yoruba tribe.

Knowledge of Waste Disposal Practice

The result of research question one indicated that the majority of the respondents, 40.9%, had a high level of knowledge about waste disposal practice among the residents of Agbowo, 34.1% had a poor level of knowledge, 25% had an average level of knowledge of waste disposal practice. The result corroborate with the findings of Chen (2019), appropriate waste disposal practice is still in its infancy in most developing countries; however, the impact of



laws and policies has improved the increasing practice level of waste disposal among the residents in the region. The result is also supported by Botteril (2018) in sub-saharan Africa countries, a paucity of resources to enable the implementation of waste disposal for the benefit of the citizens. Additionally, Madinah, Boerhannoeddin & Rriffin (2018) found that there is a high level of waste disposal in developing countries like Northern Nigeria, where there is strong monitoring of waste practices.

Enabling waste disposal practice

The result of research question three indicated that 45.7% of the respondents had a fair level of enabling for waste disposal practice, 33% reported a poor level of enabling factor, while 21.1% reported a fair level of enabling factor. This corroborates the findings of Coker et al. (2018) in their work on the disposal of pollution from hospital incineration in Nigeria. On the other hand, Coker et al. (2016) examined engineering applications in problems of community from General and specialist rural communities in Ibadan. Oke (2018) looked at the disposal of solid waste in Kano while the work of Sridhar and Ayeni (2016) focused on treatment and disposal of local waste where students are located. This is consistent with the findings of Sridhar & Coker (2018), who recommended that while selecting the disposal method, the technical, human, and financial resources of each facility should be kept in mind.

Reinforcing Factor of Waste Disposal Practice

The result of research four indicated 42.7% of the respondents reported a high level of reinforcing factor, 24.2% reported an average level of reinforcing factors, while 33.1% reported a low level of reinforcing factor for waste disposal practice in Agbowo. The result is consistent with the findings of Ogbonna (2018) that a lot of the reinforcing factor provision of policies and law enforcement for residents in urban communities towards protecting the urban areas. The result, in tandem with the findings of Imam (2017), is that the provision of laws and policies is very important for ensuring compliance with waste management laws and policies. Additionally, Roche (2017) pointed out that the frequency of landfill failure in most developed countries was quite high, resulting in surface and groundwater pollution, despite the fact that about one-third of 4000 sites surveyed had a clay liner. Ajadike (2015) discovered inadequacies in equipment, skills, personnel, funding, and general institutional failure in supervision and enforcement of compliance, and a lack of proper legislation and institutional framework for this sort of hazardous waste disposal.

Waste Disposal Practice

The result of the level of waste disposal practice showed 56% of the residents had average waste disposal practice, 22.4% of the respondents had a high level of waste disposal practice, while 21.6% had a low level of waste disposal practice. This corroborates the findings of Ngwuluka (2019) that there is a generally average level of compliance with waste disposal practices in low and middle-income countries indeed the handlers were being trained, then the training was inappropriate and had not been implemented on their skills and knowledge of the personnel. The study recommended that all workers should be trained and retrained without exception in the hospitals, in order to create awareness of waste, its effects, the importance of guidelines, and implementation of the waste disposal options for the different categories of waste. Mokuola (2019) conducted a cross-sectional study in Abuja and revealed



that there was no segregation of healthcare waste at source, no colour coding, but hospital use locally built brick incineration, and others.

Hypothesis one: The result of hypothesis one showed that there was a significant relationship between the knowledge and practice of waste disposal among residents of Agbowo in Ibadan North Local Government Area, Ibadan. The result of the analysis is consistent with the findings of Smith (2016); there is an association between knowledge and practice of waste disposal among suburban residents in India. This was also similar to the findings of Huisman (2017) that knowledge is key for strict compliance with waste disposal practice among rural residents in the Alakia area of Ibadan. This, in tandem with the intervention study conducted by Ajayi (2018), suggests that training community residents on waste management practices prevents the increasing prevalence of waste-related illness in rural communities.

CONCLUSION

Poor waste disposal practice has negative health implications for every individual in society, especially in countries where there is an effective policy directive and a structured method enforcing good waste disposal practice. Although there are several institutional structures to address waste accumulation and associated health hazards, peculiar implementation lapses due to some logistic and restrictive administrative bottlenecks sometimes make them ineffective. The study recommends that there is a need for an awareness campaign about good waste disposal practices among the workers and residents of the Agbowo community. There is a need for the provision of waste drums to prevent hazardous waste products in the printing companies in Agbowo under the Ibadan North LGA. Residents of suburban communities like Agbowo motivate them to practice and promote good sanitation practices.

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