

IMPLICATIONS AND CAUSES OF ILLEGAL REFUSE DUMPS IN ILORIN SOUTH LOCAL GOVERNMENT AREA, KWARA STATE

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Abstract

This study examined the implications and causes of illegal refuse dumps in Ilorin South Local Government Area, Kwara State. A descriptive survey method was adopted for the study. The population of the study were all the people in Ilorin South Local Government Area. A sample of 500 respondents was randomly selected from the various wards in the local government area. Questionnaire was the instrument utilized for the study; the questionnaire was validated by 3 experts in Medical field, Health Education and in Environmental Health Education. Its reliability was also tested using the Pearson Product Moment Correlation Co-efficiency and yielded a reliability coefficient of 0.05. The Questionnaire was administered on the subject and data elicited from the respondents were analyzed through non-parametric method of Chi-square. Four hypotheses were formulated for the study which were all rejected, proving the point that illegal dumping of refuse had significant effects on Health, Environment, Economic and Social Status of the society. It was also discovered that illegal dumping of refuse are caused by bad attitudes and practices of people towards refuse disposal. Based on these findings the researcher recommended that effective and adequate enlightenment on the implications and causes of illegal refuse dumps. Bills of waste management should be made affordable for all classes of people. Sanctions on illegal refuse dumping should be implemented always whenever there are violations. Abandoned properties and land should be developed and waste management agencies should work effectively in all areas.

Key words: *Health, Environment, Economic and Social Status, Attitudes and Practices Refuse Disposal, Illegal Refuse Dump,*

Introduction

Illegal refuse dumping refers to the dumping of large items of rubbish in public areas such as roadsides or illegal landfills-private land where waste is dumped without councils or Environmental Protection Authority approval. Illegal dumping of waste is an environmental crime that is ongoing and highly visible problem in most developing countries (Environmental Protection Agency 2012). Illegal refuse dumping includes waste materials that have been dumped, tipped or otherwise deposited onto land where no license or approval exists to accept such waste. Illegal dumping varies from small bags or rubbish in an urban environment to larger scale dumping of waste materials in isolated areas such as bush land. When it rains, illegally dumped rubbish can impact proper drainage of run-off, making areas more susceptible to flooding when waste block ravines, creeks, culverts and drainage basins (NSW Department of Environment and Conservation www.nsw.gov.au)

It is estimated that there is currently approximately 98, 996, 672 tons of illegally dumped waste world-wide, Elizabeth (2012). The United States produces more solid waste than any other country. The Environmental Protection Authority (EPA) estimates that the average human has doubled how much garbage they produce per day since 1960 (Rea, 2005). In Nigeria, Illegal dumping of refuse is mostly found among the people living in the slums. These are the poor and ignorant group of people; they do not know the relevance of waste management and as a result engage in illegal dumping of refuse.

Illegal dumping “hot-spot” often include roadways, bus lands, and multi-unit premises. Unsecured properties including undeveloped lots, abandoned structures and unused industrial facilities may also be converted into dump sites. Illegal dumping generally occurs on vacant or private properties including abandoned industrial, commercial or residential buildings. It frequently occurs at night or in early morning. Illegal dumping also occurs when exposed to industrial activity is released into the storm drainage system. Illegal dumping is generally more common in areas with more renters who have fewer stakes in the community and in areas with absentee property areas. An example is a huge dump site in Tanke, located in Ilorin South Local Government Area. It was discovered that the owner of the plot of land do not have the money to develop the land and the money to develop the land and he also lives far away from the land which was why people living around and even far started to dump refuse there Douglas (1992).

Landfills are one of the common reasons for refuse dumping. Some materials are banned from landfills such as tires, appliances that contain Fire on and car batteries are also commonly dumped illegally other items include abandoned vehicle, construction and demolition waste, auto parts, furniture, yard waste, household trash and medical waste. Dumpers dispose refuse illegally when they want to avoid fee or find a waste depot that is enclosed or refuse to accept waste. The presence of illegal refuse attracts additional refuse. Osuntokun (1999).

Illegal waste dumping can affect human health in multiple ways. When the site are easily accessible to people they can be at risk of injury from nails and sharp edges. Children can possibly become trapped inside of appliances. There is risk of being exposed to hazardous chemicals from toxic fluids or dust. Appliances built before 1979 can leak polychlorinated biphenyls (PBCBs). Which are linked to cancer, reproductive failure and hormone imbalances in animals and humans. Dump sites attract rodents, other animals and insects, infectious diseases can be spread this way especially through mosquitoes. Tires which are common items found at illegal waste sites, are ideal breeding grounds for mosquitoes since they can multiply 100 times faster than normal in the warm, stagnant water that collects inside them. Diseases such as encephalitis, dengue fever and yellow fever have been spread by mosquitoes breeding in waste tires. Mathew (1994).

The environmental impacts on illegal dumping are significant in every society. Dumped rubbish can leach contaminants into our bush land, harming our plants and animals and blighting our landscape. When it rains illegally dumped rubbish can impact proper drainage of run-off, making area more susceptible to flooding when wastes block ravines, creeks, culverts and drainage basins. Illegal dumping of wastes contaminates surface water and leach hazardous chemicals including chlorofluorocarbons (CFCs) into the air which can harm the ozone layer. Chemicals from households, commercial and industrial sources can contaminate wells and surface water which can affect lakes, streams and drinking water supplies. The waste impact proper drainage and make areas more susceptible to flooding. FEBA (1992).

When illegal dumping takes place, the aesthetic value of local community is diminished, often resulting in reduced property price and loss of community pride. Illegal waste dumping incurs costs to individual, communities and government. The costs of cleaning up after waste dumping can be devastating for land owner or occupiers. Fotelink (2001).

Statement of Problem

Illegal refuse dumping in the world at large has become a huge problem and a menace in the society today. International, National and Local waste management agencies have invested great effort in combating illegal refuse dumping in the society, but very little or no result have been achieved. Illegal dumping of refuse is found among all kind of environment, both in urban and rural areas. Its consequences cannot be over emphasized. Land, abandoned buildings and gullies have been converted into refuse dumps sites by dwellers. These activities have lead to environmental degradation, air pollution, land pollution and poor economic and social environment. People living close to illegal dump sites suffer as a result of these problems. With regards to all the above mentioned, the researcher was inspired to carry out an investigation on the causes and implications of illegal refuse dumping in Ilorin South Local Government Area, Kwara State.

Purpose of the Study

The purpose of this study of this is to investigate the possible causes and implications of illegal dumping of refuse in Ilorin South Local Government Area, Kwara Sate.

Research Hypotheses

The following Hypotheses were formulated to guide this study

1. Illegal dumping of refuse in the society has no significant effect on Health of the individuals
2. Illegal dumping of refuse in the society has no significant effect on the Environment.
3. Illegal dumping of refuse in the society has no significant effect on the Economic status of the society.
4. There is no significant relationship between people's attitude and practice and illegal dumping of refuse.

Methodology for the Study

Descriptive survey method was adopted for the study. The population for this study were all the people living in Ilorin South Local Government Area of Kwara State. According to 2006 National Population Census, there are 208,691 people living in Ilorin South Local Area. Simple random sampling technique was used in selecting 500 samples from the various wards of the Local Government Area. The instrument used in this study was questionnaire, which contains variables to elicit response on the effects of illegal dumping of refuse on Health, Environment, Economic and Social status of the society and the relationship between people's attitude and practices and illegal dumping of refuse. The questionnaire was developed by the researcher using the likert scale of Strongly Agreed (SD), Agreed (A), Strongly Disagreed (SD), and Disagreed (D). The research instrument was validated through the assistance of some professionals in the medical field and Health

Educators from the Department of Health Promotion and Environmental Health Education. The Pearson Product Moment correlation co-efficient was used in testing for the reliability of the questionnaire. The procedures adopted are as follows; the researcher administered ten of the validated questionnaire people in a mini market in Ikpoba Okha Local Government Area of Edo State and also collected the questionnaire that same day. The calculated reliability co-efficient was 0.05. The instrument was administered by the researcher with the aid of 10 research assistants who are final year students of the Department of Health Promotion and Environmental Health Education, University of Ilorin after a thorough training section on how to administer and collect questionnaire.

Data Analysis

Data analysis was done by non-parametric method of chi-square (χ^2).

Hypothesis 1: Illegal dumping of refuse in the society has no significant effect on the health of people

Table 1: Chi-square analysis showing effect of illegal dumping of refuse on health

S/N	Items	SA	A	SD	D	Row Total	Cal. Value	Df	Crit. Value	Remark
1.	Illegal dumping of refuse causes infectious diseases among people	350 (70%)	100 (20%)	20 (4%)	30 (6%)	500	162.03	9	16.92	HO ₁ Rejected
2.	Illegal dumping of refuse pollutes the atmosphere which causes air-borne diseases	250 (50%)	120 (24%)	70 (14%)	60 (12%)	500				
3.	Dump sites are breeding place for disease vectors which transmits diseases	300 (60%)	100 (20%)	30 (6%)	70 (14%)	500				
4	Illegal dumping of refuse results to contamination of food and water	300 (60%)	150 (30%)	20 (4%)	30 (6%)	500				
	Column Total	1200	470	140	190	2000				

Table 1 which indicates a degree of freedom of 9, and calculated chi-square (χ^2) value of 162.03 is greater than the critical value of 16.92. Since the calculated χ^2 value of 162.03 was greater than the table value of 16.92 thus, the null hypothesis was rejected. The implies that illegal dumping of refuse had significant effect on the health of people in Ilorin South Local Government Area

Hypothesis 2: Illegal dumping of refuse has no significant effect on the environment

Table 2: Chi-square analysis showing effects of illegal dumping of refuse on the environment

S/N	Variables for the study	SA	A	SD	D	Row Total	Cal. Value	Df	Crit. Value	Remark
1.	Illegal dumping of refuse is a huge mess to the environment	300 (60%)	150 (30%)	20 (4%)	30 (6%)	500	165.10	9	16.92	HO ₂ Rejected
2.	Illegal dumping of refuse blocks drainages which can lead to flood in the environment	250 (50%)	150 (30%)	50 (10%)	50 (10%)	500				
3.	Illegal dumping of refuse reduces environmental values	200 (40%)	150 (30%)	50 (10%)	100 (20%)	500				

4	Illegal dumping of refuse causes damage to the soil through deposits of harmful chemicals and materials	200 (40%)	250 (50%)	30 (6%)	20 (4%)	500				
	Column Total	950	700	150	200	2000				

Table 2 which indicates a degree of freedom of 9, and calculated chi-square (χ^2) value of 165.10 is greater than the critical value of 16.92. Since the calculated χ^2 value of 165.10 was greater than the table value of 16.92 thus, the null hypothesis 2 was rejected. This implies that illegal dumping of refuse had significant effect on the environment in Ilorin South Local Government Area.

Hypothesis 3: Illegal dumping of refuse in the society has no significant effect on the economic status of the society.

Table 3: Chi-square analysis showing effects of illegal dumping of refuse on economic

S/N	Items	SA	A	SD	D	Row Total	Cal. Value	Df	Crit. Value	Remark
1.	Government spends huge amount of money to curb illegal dumping of refuse in the society	150 (30%)	250 (50%)	50 (10%)	50 (10%)	500	136.10	9	16.92	HO ₃ Rejected
2.	Areas of illegal refuse dumps has lesser business opportunities	200 (40%)	150 (30%)	50 (10%)	100 (20%)	500				
3.	Illegal refuse dumps reduces government possible means of revenue generation	200 (40%)	200 (40%)	70 (14%)	30 (6%)	500				
4	There are low rate of recycling of refuse in the society	150 (30%)	200 (40%)	100 (20%)	50 (10%)	500				
	Column Total	700	800	270	230	2000				

Table 3 which indicates a degree of freedom of 9, and calculated chi-square (χ^2) value of 136.10 is greater than critical value of 16.92. Since the calculated χ^2 value of 136.10 is greater than the table value of 16.92 thus, the null hypothesis 3 was rejected. This implies that illegal dumping of refuse had significant effect on the economic status of Ilorin South Local Government Area.

Hypothesis 4: There are no significant relationship between people's attitude and practice and illegal dumping of refuse.

Table 4: Chi-square analysis showing the relationship between people's attitude and practice and illegal dumping of refuse

S/N	Items	SA	A	SD	D	Row Total	Cal. Value	Df	Crit. Value	Remark
1.	People dump refuse illegally because they cannot pay for waste	300 (60%)	150 (30%)	30 (6%)	20 (4%)	500				

	management service						278.70	9	16.92	HO4 Rejected
2.	Most people dump refuse illegally out of laziness	200 (40%)	150 (30%)	100 (20%)	50 (10%)	500				
3.	People are likely to dump refuse in abandoned lands and properties	350 (70%)	100 (20%)	30 (6%)	20 (4%)	500				
4	People dump refuse illegally because the sanctions for violators are hardly implemented	150 (30%)	150 (30%)	100 (20%)	100 (20%)	500				
	Column Total	1000	550	260	190	2000				

Table 4 which indicate a degree of freedom of 9 shows that the calculated Chi-square (χ^2) value of 278.70 is greater than the critical value of 16.92. Since the calculated χ^2 value of 278.70 is greater than the table value of 16.92 thus the null hypothesis 4. This implies that there are significant relationship between people's attitude and practice and illegal dumping of refuse in Ilorin South Local Government Area.

Discussion of Findings

In this study, the null hypothesis 1 which was rejected reveal that illegal dumping of refuse in the society causes infectious diseases among people in Ilorin South Local Government Area. It pollutes the atmosphere causing air-borne diseases, breeding sites for disease vectors like mosquitoes, rodents and flies. Illegal dumping of refuse brings about contamination of foods and water either through direct or indirect contact. All these indicated that illegal dumping of refuse has significant effect on the health of individuals living in Ilorin South Local Government Area. These findings are in line with the findings of Rea (2005) who concluded that illegal dumping of refuse can affect health in multiple ways which includes; dumping attracts rodents other animals and insects which are disease vectors that spreads diseases such as encephalitis, dengue fever and yellow fever have been spread by mosquitoes breeding in tyres.

Table 2 reveals that illegal dumping of refuse causes a huge mess in Ilorin South Local Government Area. Illegal dumping of refuse causes blockage in drainages and leads to flood in the environment. This study reveals that illegal dumping of refuse environmental value (natural environment). Harmful chemicals and other harmful materials cause damages to the soil. These findings support the work of Black Town City Council, United States. It was discovered that rubbish can hinder proper drainage of run-off, making areas more susceptible to flooding.

Table 3 reveals from this study that government spend a huge amount of money on waste/refuse management in the society, it reveals also that there is low rate or level of waste recycling in the society. These findings supports the findings of Elizabeth (2012), who asserted that illegal dumping sites can cause neighborhood property value to decrease, thus reducing economical growth in the society.

Table 4 whose hypotheses were also rejected indicates that people's attitude and practices towards refuse dumping is significantly poor. People illegally dump refuse trying to avoid payment of waste management fees. Some may dispose waste illegally out of laziness and their unhygienic

attitude. It was also discovered that abandoned sites and properties are most susceptible sites for refuse dumps. This also supported the findings of NSW Department of Environment and conservation.

Conclusion

From the findings of this study, it was discovered that illegal dumping of refuse in the society has several implications on individuals and the society. These implications range from its negative effects on individuals health, environment and also on economical status of the society. Illegal dumping of refuse causes infectious disease among people, contamination of food and water, air pollution, sharp objects and chemicals illegal disposed thus causing harm to people. It also serves as breeding sights for disease vectors. Illegal dumping of refuse causes environmental degradation, soil pollution, creates harmful soil that is bad for crops production, environmental mess and poor environmental hygiene. Economically, illegal dumping of refuse leads to waste of government funds in fighting illegal dumping of refuse, waste of land and properties, poor development in the society and creating poor business and social environment. People's attitude such as refusal to pay waste management bills, laziness, violation of rules on refuse disposal and also some people may not be able to pay for waste management bills. All these could be described as the effects and causes of illegal refuse dumps in Ilorin South Local Government Area.

Conclusively, the implications and causes of illegal refuse dumps can be grouped into the following areas;

- Health Implications; spread of infectious diseases, contamination of food and water, air pollution and creating environment for breeding of disease vectors
- Environmental implications; environmental degradation, soil pollution, creating harmful soil that is bad for crops production, environmental mess, poor environmental hygiene
- Economic Implications; waste of government funds in fighting illegal dumping of refuse, waste of land and properties, poor development in the society and creating poor business and social environment.
- And people's poor attitude and practice towards illegal refuse dumps, such as laziness, deliberate illegal disposal and unhygienic nature of people

Recommendations

In line with the above discoveries of this study, the researcher therefore recommends the following actions that could be adopted so as to curb illegal dumping of refuse in the society.

1. Adequate and very effective means of enlightenment on the implications of illegal refuse dumping on health, environment and economic status of the society. This would make people away of the negative effects of illegal dumping of refuse.
2. Environmental sanitation/hygiene should be practiced in the society. Waste management agencies should work effectively in all communities.
3. Waste management bills should be made affordable to all classes of people. Abandoned lands and properties should be developed by owners, for those who cannot afford to develop their property, they should sell it off to people that can develop it and government should also intervene in such cases.
4. Government should ensure that all the sanctions for violation of rules of waste management are executed when need be, so as to teach others a lesson. This will reduce the attitude and practice of laziness and deliberate illegal dumping of refuse.

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