



Research Article

## CREATING AWARENESS ABOUT THE HEALTH IMPLICATION OF POOR URBAN WASTE MANAGEMENT

Submission Date: July 15, 2022, Accepted Date: July 25, 2022,

Published Date: July 30, 2022

Crossref doi: <https://doi.org/10.37547/marketing-fmmej-02-07-02>

Journal Website:  
<https://frontlinejournal.s.org/journals/index.php/fmmej>

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

**Mohammed Yusuf**

Msc student of City university, Cambodia

### ABSTRACT

The research is focus on creating awareness about the health implication of poor urban waste management. This study aims to outline a comprehensive and feasible policy to address the awareness about the health implication , which would subsequently improve health indicators for urban households. In this study, we carry out an objective assessment of the health damages , The results derived on the cost of illness will contribute to policy implications for the waste management sector. The spreading of uncollected heaps of waste is visible almost everywhere, posing a major threat to public health and the quality of the local environment. There is a fundamental difference between the processes of waste collection and disposal adopted by most of the public and private agencies in the Maiduguri and the operationally available best practices accounting for sustainability and circular economy. It is alarming that waste is typically discarded in an unauthorized way and that many residents of the metropolis do not dump their waste at the designated sites. Even the planned urban areas lack appropriate waste collection. Private Service providers in the waste management sector operate either on a commercial basis where services are provided to those who demand it or as private operators who serve all residents of a locality and receive a subsidy from local municipal governments. In addition, source-segregation of waste materials among households prior to collection is unusual in the sample compared to in advanced countries, where waste is typically segregated and collected separately.

Household participation can help in resource conservation and providing economic value through appropriate waste handling, which reduces environmental pollution and minimizes the financial costs of waste disposal. However, the participation rates of the community in waste management remain low in developing countries, perhaps due to a lack of understanding of segregation, individual behavior, or issues regarding aware

## KEYWORDS

Awareness, Implication, Creating, Waste, Management, Urban, Poor, Health.

## INTRODUCTION

Indiscriminate waste are regarded as discarded materials arising from operational activities taken place in different land use such as residential, commercial and industrial. Domestic or residential wastes are those that are collected from dwelling places on a regular basis, such waste include organic matter resulting from preparation and consummation of food, rags, nylon and ashes are the remains after various cooking and heating processes. The commercial wastes are those that arise from shops, supermarkets, market and others; they include paper carton, polythene bags and nylons. The industrial wastes are those waste materials that arise from industries; these could be solid, liquid, sludge or emotive title attached to them like toxic, hazardous and special waste. The industrial waste include metals, scraps, chips and grits from machine, shops, sawdust, paper pieces and glass (Omole and Alakinde 2013). Kenneth and Huie

(1983) also classified solid waste into three categories, namely; garbage, ashes and rubbish. The garbage includes organic matter resulting from preparation and consumption of food. Ashes include remains from cooking and heating process and the rubbish may either take the form of combustible such as paper, rags, wood, leaves and weeds or non-combustible such as glass, plastic, polythene and metal materials.

Indiscriminate refers to unlawful disposal of waste in undesignated spaces such as open or vacant land, sources of water and other areas (Achi et'al. 2012; Okechukwu et'al. 2012; Machete and Shale 2015). Indiscriminate is a common and prevalent though risky practice, especially among developed and developing communities. Two separate studies conducted in Nigeria and Ghana came to the same conclusions: that approximately 80% of solid waste in African countries was disposed of through indiscriminate dumping

(Ogwueleka 2009; Aziale and Asafo-Adjei 2013). The prevalence of indiscriminate dumping and its spread across African communities is therefore clear. However, although indiscriminate dumping is more prevalent in developing countries, developed countries are not an exception. Currently, most developing countries appear to be failing to find their way around solid waste handling and management. Consequent upon the high prevalence of indiscriminate dumping, people from developing economies are at risk of myriad environmental and health hazards, such as air pollution, water pollution and biochemical poisoning of food supplies, resulting from indiscriminately dumped municipal and hazardous waste materials (Rahman et al. 2013).

### **The Inhabitants of Peoples Aware of the Implications of Indiscriminate Waste Disposal in their Environment**

Waste is a useless and unwanted products of human domestic and industrial activities released into the environment Ezechi EH, et al (2017). It can be a solid material, liquid, semi-solid or container of gaseous material. Therefore, the unlawful manner of dumping these refuse such as garbage, sludge from water supply or manufacturing waste, air pollution control facilities and other unuseable materials without considering the adverse effect on human health is called indiscriminate Solid waste disposal. Most solid wastes are also gotten from industrial chemicals, radioactive substances and many household make use of open areas, highways,

uncompleted buildings and bushes as their dumping sites.

In Nigeria today, illegal dumping of refuse mostly in industrial and municipal areas has become a major issue of concern to human and its environment. The present environmental pollution derived from solid waste littering has create a lot of health challenge to household residents around the dumping sites. It is evident that most of the people living around the dumping location are not aware of the harmful effects of refuse dumping other than the offensive odors spreading around the untidy environment and also when the wastes becomes wet and start to decay. Urbanization, overpopulation, industrial revolution has become major cause of waste generation and inappropriate disposal method especially in urban areas of Nigeria. Human exposure to this unlawful act has triggered more health risks to the populace which advertently affects the entire livelihood and their major landscape. Lack of appropriate storage facilities, inadequate waste management and planning, wrong perceptions by residents and non-challant attitudes towards environmental cleaning and sanitation might be a cause of this problem. When an environment is not hygienic and clean it poses a lot of harms and negative impacts on human especially outdoor workers, workers producing infectious materials while young children get easily contacted and are most vulnerable to this act of ignorance and dirtiness Yan X et al (2013).

### **The Level of Efficiency of Urban Waste Control and Management**

The modern waste treatment technologies such as composting, incineration, landfills, recycling, and window composting should be used for solid waste management Bakare W (2016). Modern solid waste management techniques such as landfills, incineration, recycling, biological processing, energy recovery, radio frequency identification tags, global positioning system tracking integrated software packages, rear vision cameras, and the like are used in cities such as Geneva and Stockholm Finn Orfano (2018). Examples of advanced solid waste treatment technologies that are suitable for the city are anaerobic digestion, ethanol production, biodrying, gasification, in-vessel composting, mechanical biological treatment, mechanical heat treatment, plasma arc waste disposal, pyrolysis, sewage treatment, and tunnel composting are also highly appropriate technologies for

### **Creating Awareness about the Health Implication of Poor Urban Waste Management**

Serge Kubanza, et'al (2020) opined that: Rapid urbanization in developing countries leads to a dramatic increase in solid waste production, with serious socio-economic and ecological impacts. Poor infrastructure and land use regulations have resulted in inadequate cover of waste collection services and inappropriate disposal. Moreover, poorly managed municipal waste creates many environmental and health-related issues, especially in the neighborhoods of dump sites. Poor urban slum dwellers are particularly vulnerable and are acutely affected by waste dumping. Waste collection is an essential first part of the process of waste management. Ever-

growing volumes of solid waste create serious issues in handling and disposing it of aptly in the face of resource constraints in less-developed countries.

A weak institutional setup and difficulties in recovering the cost of the service make it difficult for municipal authorities in these countries to collect and segregate the waste from all potential waste producers. In most developed countries, a door-to-door collection system is commonly used, but municipalities in developing countries can provide this service to only a limited proportion of the population due to financial and administrative incapacity. As a result, waste is thrown into open landfill sites and dumpsites, which evolve into sources of health and environmental threats for people living in the neighborhood. Because of poorly designed municipal waste management systems, many urban areas in developing countries experience significant environmental deterioration and health threats. Various studies have investigated the health and environmental impacts of waste dumping and have shown that waste and health variables are closely linked Kumar, et'al (2019).

Mohammed yusuf (2019) this study has led researchers to become deeply involved in the study of environmental pollution and its effects on microorganisms. However, very few studies have explored the environmental and health effects of solid waste for people living near waste dumpsites. The increasing rates of the consumption and production of goods result in the generation of a tremendous amount of waste that needs to be absorbed by the environment,

posing a serious risk to human health. In many developing countries, waste disposal sites are located in the vicinity of urban areas, and these mini-dumpsites are a source of infection for children due to the incubation and reproduction of mosquitoes, flies, and rodents. They turn, produce gastrointestinal, dermatological, respiratory, genetic, and several other types of contagious infections. Moreover, residents living near dumpsites present increasing rates of stomach and cervical/uterine cancers in women and, likewise, stomach, liver, lung, and prostate cancers in men.

### **Ways could the environmentalist/policy maker's help in changing human behavior**

Environmental degradation has resulted in the deterioration of Nigeria's urban and rural environmental quality, which is characterized by water shortages and floods that play a major role in the transmission of communicable diseases. These worsen the condition of the poor. Also, drought and desertification threaten food security and nation's ecological integrity, and are drivers of population displacements (Nwafor, 2006).

### **Waste Disposal Method**

The study identified six methods of waste collection. They are:

House to house

Communal depot;

Block system of collection

Commercial and industrial waste collection and Bulk loading

House to house collection and the communal depot are usually adopted in an area where skip bins are deposited for people to dispose their refuse therein. Unfortunately members of the public abused this method by turning the bins into means of disposing human foetus arising from illegal abortion and human faeces. On most occasions these bins are set on fire which gives rise to carbon monoxide, a dangerous gas to human lives. The block system is adopted in the core areas of the city where refuse truck has no access. Wastes are being collected on regular basis by "Block system" i.e bring and dump. This system is effective because it is not labour intensive and allows community participation in keeping the environment clean. However, the inhabitants of the area may wait for days without having access to the service of the trucks.

The bulk loading forms the illegal refuse depots. This method arises from the fact the very poor who could not afford fees, charged for disposal of their refuse, reside mostly

The resultant effect of this is that these poverty stricken people resorted to sporadic and indiscriminate dumping of waste in any available vacant land, sidewalks, roadway, streams (especially in the river), channels and drainages.

This is street sweeping which was innovated to safeguard public health and to beautify the city's

environments is done by the Kerbsides. They sweep the major streets and Government Reservation Areas that are being covered by the contractor's start who were equipped with long broom and basket to collect the Wastes which are deposited in the strand by truck for disposal. The contractors were to collect refuse in drums in front of each house under their jurisdiction. They collected the refuse and disposed same at the approved disposal sites. Another noticeable environmental pollution in the city arises from waste products from factories, hotels, hospitals and commercial centres. In Industrial waste Collection the wastes are usually burnt and constitute atmospheric pollution, where as in Europe and America, such Waste products are recycled and become useful for further consumption.

Perhaps, one may assert that, at present, the training of wastes generators in the area of recovery is 'non-existent in Nigeria, For instance, about 20% of the municipal solid waste comes from plastic waste with only 2% being re-cycled. My enquiry with the scavengers and officials of the Ministry of Environment and water Resource, Borno State confirmed that there is low market for recycled products.

### **The Role of Communication in Promoting Responsible Environmental Behaviour**

The study of the role of communication in influencing the adoption of responsible environmental behaviour dates back to early 1990s, when in Mexico, the need to manage the

problem of water shortage arose (Kurtycz, 2005). It was clear then, that in order to develop methodologies to deal with water environmental problem, it was necessary to carry along the populace using the communication perspective. Communication can help individuals to understand the interaction between resources (natural) and the environment.

Communication in this study through Public health awareness, public health education or promotion, and environmental health education are synonymous terms, which are often used interchangeably. Public health awareness is an intervention, which may be directed towards helping individuals, or groups realize and maintain healthful behaviours that are currently practiced. It involves knowledge of the need for personal hygiene, community hygiene, and environmental sanitation. Ross and Mico cited by Akpan (1995) see public health education (awareness) as a process with intellectual, psychological, and social dimensions relating to activities which increase the abilities of people to make informed decisions affecting their personal, family and community well-being. This process based on scientific principles facilitates learning and behavioural change in people.

Public health awareness promotes change in knowledge, attitude and behaviour. The function of public health awareness therefore is to foster the integrity of the individuals and involves only strategies that promote voluntary change. The focus of public health education (awareness) is on people and on action. World Health Organization cited by Akpan (1995) states that its aims are to

use judiciously and wisely the health services available to them and to make their own decision, both individually and collectively, to improve their health status and environment. Public health awareness is all about making people to know things that can affect their health and how these things can be avoided or prevented.

Awareness is a somewhat broad and vague term yet one that is intuitively widely stood. All awareness-campaigns aim to influence behaviour and hence, they are useful to understand how communication influences behavior. In awareness campaigns, policy makers and other interested changes based on new social norms and attitude towards particular course. Awareness influences people's attitude. A person's attitude describes the way he or she thinks about the proposed behaviour and its usefulness. The essence of public awareness about the health implication of indiscriminate refuse dump is to change people's attitudes and behaviour to prevent indiscriminate waste disposal.

Public awareness can be seen as a process by which a community strives to acknowledge the existence of an issue. It constitutes the preliminary phase of political or social change. It is the first step in facing public issue. Changing which results from public awareness could be significant or minor, with general or specific impact. Raising public awareness level about health implication of indiscriminate waste disposal 'is a way of educating the public. This will make people to see the need for safe disposal of refuse. Public awareness is all about the demand

for change. Awareness and being motivated to to change are essential in participatory interventions. Participation is based on the idea that people have the right to be involved in issues concerning them ,awareness raising and education can help stimulate active and informed involvement.

## CONCLUSION

It is glaring that people are not ignorant of the effects of indiscriminate waste disposal or general poor sanitation. But for the location of refuse receptacles are sometimes too far to the people for easy dumping of waste, inhabitants considered dumping their refuse indiscriminate. However, based on situational factors people are sometimes forced to do what they knew to be wrong.

Public environmental education can go a long way in changing people attitude and behaviours towards the environment. Government and non-governmental organization have role to play in enlightening the populace on the need to the need to treat environment with respect and stop indiscriminate waste disposal. Awareness creation through mass media on the implications of indiscriminate waste disposal is a necessary. This should however be done in a clear and simple languages.

People should be thought how to convert waste to wealth. This will help in minimizing the volume of waste that are regularly thrown away. Both children and adult are involve in waste generation and waste disposal but children end to

dump refuse at undersigned places than adult. Hence environment education is not only needed for people at home, but in schools for children (the future generation) as well. Places of worship can also assist in educating their adherents on the interrelationship between humans and the environment and the need to be environment-friendly. Adequate public enlightenment is needed in Dikwa Local Government Area to prevent indiscriminate waste disposal.

## REFERENCES

1. Abdulsalami, A.S. (2005) Research Methods in education Lagos Sterling Horden Publishers Nigeria Limited
2. Achi, H. A., Adeofun, C. O. Ufoegbune, G. C. Gbadebo, A. M. and Oyedepo. J. A., (2012). "Disposal Sites and Transport Route Selection Using Geographic Information System and Remote Sensing in Abeokuta, Nigeria." *Global Journal of Human Social Science Geography & Environmental Geosciences* 12 (12): 14–24.
3. Achnkang E., 2003. Globalisation, Urbanization and Municipal solid waste management in Africa. University of Adelaide. African studies Association of Australasia and the pacific 2003 conference proceedings-African on a Global Stage, pp: 8-12
4. Aliu AO (2017) The Guardian Nigeria Newspaper; Challenges of Managing Waste Disposal in Nigeria.
5. Akpan E.A (1995) Environmental health education. In N.S Olaniran, E Akpan, E.E, Ikpeme, G.A. Udofia, (eds) Environmental and health Lagos Macmillan Nigeria Publishers.
6. Akuezuila, E.O and Agu, N. (2003) Research and statistics in education and social science, Awka: Nuecent Publishers and Academic press.
7. Aribisal, J.O. Omotoso, T. and Folorunso, P (2004) "Waste Management Systems" proceeding of national civil engineering conference, Port Harcourt pp. 17-20.
8. Aziale, L. K., and. Asafo-Adjei. E (2013). "Logistic Challenges in Urban Waste Management in Ghana (A Case of Tema Metropolitan Assembly)." *European Journal of Business and Management*. 5 (32): 116–128.
9. Aziegbe, F. (2007). "Seasonality and Environmental Impact Status of Polyethylene (Cellphane) Generation and Disposal in Benin City, Nigeria." *Journal of Human Ecology* 22 (2): 141–147.
10. Bakare W (2016) Solid Waste Management in Nigeria. *Bio-Energy Newsletter* 5: 68-72.
11. Borno State Environmental Sanitation Authority (RSESA) (2022), Environmental and you. A publication of Borno State Government.
12. Chakrabarti, S. and Sarkhel, P. (2003). *Economics of Solid Waste Management: A Survey of Existing Literature*. Economic Research Unit, India Statistical Institute, pp. 1-58
13. Demirbas, A. (2011). "Waste Management, Waste Resource Facilities and Waste Conversion Processes." *Energy Conversion and Management* 52 (2): 1280–1287.
14. Ezechi EH, Nwabuko CG, Enyinnaya OC, Babington CJ (2017) Municipal Solid waste



- Management in Aba, Nigeria: Challenge and Prospects. *Environ Eng Res* 22: 231-236.
15. Faniran, A. and Adebayejo, A. T. (1999) "Environmental Education and awareness for effective environmental protection and management in Nigeria" *Journal of the NITP*, October, 1999.
  16. Finn Orfano (2018) *Bright Hub Engineering; Basic Methods of Waste Management: Incineration, landfills, Recycling; Civil Engineering*.
  17. Habib, M.S.; Sarkar, B. An Integrated Location-Allocation Model for Temporary Disaster Debris Management under an Uncertain Environment. *Sustainability* 2017, 9, 716.
  18. Haruna, A.S. (2010) *Research method: a simple guide to educational inquiry* Kano S.K. Amoda Printing and Publishing House. P1-73.
  19. Kamba, M.A. (2011) Implication of ICT in libraries of higher education institution. A panacea catapulting library development in Africa. *DESICOC. Journal of library and information technology* 31 (1) available at <http://publicationdrdo.gove.info/index.php/article/756/344/htm>. accessed on 22/10/2012.
  20. Kenneth, C. and Huie J.M. (1983). *Solid Waste Management. The Regional Approach*. Cambridge, Ballinger Publishing Company: 78.
  21. Kurtyez, A. (2005) understanding environmental behavior change. Through communication A new perspective of environmental education *Int. J. Environmental and sustainable development* 4 (1): 35-46.
  22. Kumar, S.; Pandey, A. Current developments in biotechnology and bioengineering and waste treatment processes for energy generation: An introduction. In *Current Developments in Biotechnology and Bioengineering*; Elsevier: Amsterdam, The Netherlands, 2019; pp. 1–9.
  23. Machete, F., and Shale. K. (2015). "Classification of Unregulated Landfills by Waste Stream Analysis Method: A Case of Chief Albert Luthuli Local Municipality, Republic of South Africa." *African Journal of Science, Technology, Innovation and Development* 7 (6): 446–452.
  24. Mukheed, M.; Alisha, K. (2020) Plastic Pollution in Pakistan: Environmental and Health Implications. *J. Pollut. Effects Control*, 4, 251–258.