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**ENVIRONMENTAL POLLUTION AND THE
CHALLENGES OF OPEN DEFECATION:
IMPLICATIONS FOR HEALTH AND
INTERNATIONAL IMAGE OF NIGERIA**

BY

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Abstract

Environmental pollution is not merely an issue of national economies but a global challenge that has affected nations negatively. Pollution is not only about oil pollution either on land or international waters, nor gas flaring; nor deposition of toxic or nuclear wastes on developing nations or dumping untreated water from industries into rivers or on land. However, defecation is an aspect of pollution that has captured international attention recently than before. It has come to be realized that defecation as an aspect of poor sanitation has affected the lives of many people the World over cause the death of thousands of children in Nigeria through environmental related diseases such as cholera, diarrhea, it is also responsible for stunted growth in children. The paper concludes that poor sanitation and defecation has impacted negatively on Nigerians lost of human dignity and well-being; young girls and women are vulnerable to rapes. People who defecate in bushes often times are beaten by scorpions and snakes which may

result in deaths or heavy expenditures on hospital treatment. The paper recommends that Nigeria should prioritise investments in sanitation and develop appropriate interventions to end the menace. Nigeria has a road map thus to follow National Environmental Sanitation Policy, we need more environmental health officers to work at local government level as is the international practice. They are the foot soldiers to help pass the message and materials of sanitation down to the very grassroots who are most vulnerable.

Keywords: Environment, Sanitation, Pollution, Defecation, Toilet, Disease, Sickness.

Introduction

Environmental pollution and indeed open defecation have become one of the vexed issues capturing international attention of recent than before. They have become issues because of the negative colouration they hold for people and by extension local, national and global economies. Environment plays an important role in the lives of all people and indeed everyone depends on environment for food, air, food, water, clothing, shelter, economic production and investment, aesthetic values, among others. Environmental pollution and by extension defecation is, therefore, counter productive to human growth and development and national economies. Defecation, perhaps was never taken seriously in some climes but it has been realized that it has punctured the health of many people in areas where this poor attitude to sanitation is still esoteric being practised especially in some parts of Nigeria and elsewhere.

Meanwhile, the road to awareness creation and call to action started in 2001 when a Singaporean business guru, Jack Sim left his lucrative investment in the construction industry to establish the Restroom Association of Singapore and World Toilet Organization. For that exceptional action, in that same year Sim received the

Schwab Foundation award for Social Entrepreneur of the year for “creating goodwill and bringing the subject to open” and mobilizing national support in providing on the ground expertise”. Again for this singular act Sim was named one of the Heroes of the Environment for 2008 by the Time Magazine. With this act, Sim broke what looked like the global taboo of toilet and Sanitation by making it a global event that is marked November 19 every year. Today, the World Toilet Organization is a growing network of about 235 organizations in 58 countries including Nigeria where a 'World Toilet Day' is celebrated to create awareness towards improving the state of toilets and sanitation globally (Agbo, 2014: 32).

Before Sim's action in 2001, the issue of sanitation and lack of access to toilet had been severely neglected on the global development agenda, this is why the United Nations is getting actively involved. Closely following when it became apparent that the sanitation target is the most off-target of the Millennium Development Goals, the United Nations Deputy Secretary General, Jan Eliasson, on behalf of the Secretary-General of the United Nation organization Kim Kimon launched a campaign in 2014 to break the silence on open defecation and spur the dialogue as part of the UN call to action on sanitation (Agbo, 2014:32). The initiative builds on the strong commitment already made by the UN member states. This call to action led to the “Sanitation for All” Resolution (A/RES/67/291) which UN was adopted by the General Assembly in July 2013, designating November 19 as the World Toilet Day. The Day is coordinated by the UN Water in collaboration with governments and relevant stakeholders (Agbo, 2014).

Concept of Pollution and Environmental Pollution

There are concepts on pollution as there are specialists. It is necessary to see a few. Pollution is the undesirable change in the physical, chemical or biological characteristics of our air, land, water, that may or will harmfully affect human life, or that of other desirable species of plants and animals we share the planet with as well as the industrial processes, living conditions, or cultural assets.

Pollution may or will waste, or deteriorate our raw material, life support and other vital resources (Adejemilua, 2007:63). Pollution is any unreasonable contamination of the environment that lessens its value to man and nature (Obafemi, 2004). Economic activities including street trading which is common in underdeveloped and developing economies, industrial processes, mining, oil and gas exploration as well as other accompanying operations give rise to environmental pollution and the emission of air pollutants and greenhouse gases (GHG), mainly carbon dioxide (Co₂), which contribute to environmental problems globally. Thus, environmental pollution is any action that makes the environment unhealthy and hazardously impure. In this connection, the global environmental problems of some operations are difficult to measure, but the local environmental problems of most industrial processes like fertilizer and similar industries include acid rain, water acidification, eutrophication and chemical mist, which can directly affect people, animals, vegetation and property in the vicinity of the plant (Adejemilua, 2007: 64).

Environmental pollution is the contamination of the environment through the introduction of unhealthy materials that degrade the environment through deduction of its value from the original state. Processes of contamination may be through dropping of chemicals ranging from fertilizer to slug from the oxy acetylene shops among others.

Concept of Open Defecation

Open defecation means a habit that sees people going to open fields, roads, gutters, rail tracks, the dump just anywhere, except the toilet or latrine to defecate. These faecal deposits, some of which may have been contaminated by pathogens, find their way into sources of drinking water when it rains. Some percolate into the soil and then contaminate food crops or vegetables, which then become harmful when ingested (Punch, Editorial, 2014). Open defecation is associated with very low levels of sanitation and hygiene in primitive cultures. It is a habit of passing human waste carelessly and

indiscriminately on available lands, gutters, roads, streams, lakes or rivers (Akpan, 2014).

According to Wikipedia encyclopedia, open defecation is the practice of defecating outside and in public, in and around the local community, as a result of ingrained cultural patterns or having no access to toilets, latrines or any kind of improved sanitation. It is of note that a single gram of human faeces contains as much as 10 million viruses, 1,000,000 bacteria, 1,000 parasite cysts and 100 parasite eggs. When ingested, it can therefore lead to typhoid, cholera, hepatitis, polio, pneumonia, fatal worm infestation, trachoma, stunted physical development and impaired cognitive function. This really makes open defecation a leading cause of diarrhea death. Going by statistics, 2,000 children under age of five die every day, one every 40 seconds, from diarrhoea (Odogwu, 2014)

Conceptualizing Health

The World Health Organization as far back as 1948 defined health as the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (Afolabi & Olakunle, 2014:29).

History of Defecation

Open defecation has a long history dated back to the period man appeared on this planet very many centuries or light years ago. There is a suppose evidence that when man was a wanderer, moving from place to place in search of food and place of rest, man had no central place to defecate. Since man used to search for food and place to rest, it is believed in the process the practice of open defecation was common. We can therefore titrate that in the primitive society of that time, it was common to pass excreta anywhere or at any place. However, that was the scenario until man came to his senses and planned his first settlement at Marjurk probably in the present modern Iraq. Every society from then practised open defecation until man began to manage his environment in about 3,000 BC (Clement, 1936, Guest, 1977). Conversely, it would appear that, there is no

recorded history on the beginning of human open defecation or waste disposal as far as literature on defecation is concerned.

However, as man progressed in his quest for a better living, there was a breakthrough in non-open defecation as a starting point in planning on how to cope with environmental pollution. This is to say that the earliest known attempts at human sanitation including control of human waste and wastewater are evident in the flush toilets of the Mohenjo Daro ruins of Indus civilization, in India about 3,000 BC, the Sewerage System of the Old Romans, and the Sanitary disposal system of ancient China, about 5,000 BC. The practice was that these ancient civilizations simply transferred the unpleasant effects of human waste from their places of abode to safe distant place, usually a stream or pond where nature could take care of it. Primitive societies then maximized the nature's benevolent and capacity for self purification, which ecologists refer to as natural recycling of materials and energy. It is not surprise, therefore, that these methods are still being applied in many developing countries including ours (Nigeria) up till today.

Closely following this is the experience in the Medieval Europe which produced the modern sewerage and sewage systems, the process that employed oxidation or stabilization ponds built mostly outside the town limits. This evolved as a result of Europeans realization that it was not a good habit, whereby each household would collect human wastes in a container and daily empty the content on the streets, where pigs, chicken and dogs feed on. Other climes such as Germany and Israel applied the Sewerage system into agricultural lands (Adejamilua, 2007).

Indeed, it should be noted that before the adoption of Sewerage system, some primitive societies then in Africa adopted the pit system toilet. Equally, it is difficult to say when the pit system came to be. The pit system toilet is still very common in Nigeria in some rural townships, in rural areas. But it is regarded as a process of changing the behaviour of members of our society towards sanitation in a way. As the society progresses many households have adopted the modern system toilet while the diehearts and by extension poverty

have made the provision of toilet facilities to household members a tall dream.

Reasons for Open Defecation

Open defecation is a bad habit of passing human wastes outside toilets or latrines. It is practised in both urban and rural environments. People who practise open defecation do so because they have no access to toilets. Lack of access to toilets may be permanent or temporary. Permanent for instance, many households in Lagos, have no toilet facilities and tenants are left with no option but to defecate in the open. For people in some parts of Agege, a suburb of Lagos, where there is inadequate toilet facilities in most houses, the rail track offers a convenient place to defecate. The same applies to rail towns such as Enugu, Makurdi among others. It could mean physically going into the open or adopting a method of defecating inside a polythene bag or a container (in the day time) with the hope of getting rid of it under the cover of darkness. Lagos is being used as an example, but it is a prevailing scenario in other Nigerian major cities and towns (Punch Editorial, 2014). People in rural areas go into the bush and defecate without recourse to the effects. It is also common in rural areas because of lack of access to toilets. Only in few rural areas of our country do people not practice open defecation.

Temporary Open Defecation as Experienced in Public Places

People feel the urge to use toilet, they face an embarrassment because there are either very few or no provision for toilet facilities there. In this connection, the waste could be dumped anywhere. In another instance, people who make distant or long trips on roads sometimes face the need to pass their waste, the only alternative usually rests on the open field, dump or gutters. However, most permanent people who live by the bank of rivers do not have toilet facilities and therefore hand in their excreta on water. On those out there for fishing and who develop the urge to pass waste, water becomes the available toilet.

The Top Ten Countries in Global Index in Defecation

The issue of defecation is a serious matter and stands out on the front burner and of great concern to the United Nations which set November 19 every year as the World Toilet Day. This date is to showcase the importance nations should attach to sanitation and work towards making all people aware that the primitive practice should be kicked out. Meanwhile, about ten countries in the World feature prominently in open defecation. The sources countries include Nigeria, Indonesia, Pakistan, Nepal, Niger, China, Mozambique, Sudan, Ethiopia and India. According to the United Nations, about 1.1 billion people in these countries practice open defecation, and out of these number about 600 million people are found in India alone. However, what appears to characterize these countries are that, these countries are found in Asia and Africa. Again, five of these countries have the largest concentration of people in the world China, India, Indonesia, Pakistan and Nigeria.

Apart from China and Indonesia who are countries in transition or newly industrializing nations, others are underdeveloped or developing nations. Basically, China, India, Indonesia, Nigeria, Pakistan fall between low and medium income countries. The reason is this, that these countries in spite of the continued expansion of the boundaries of knowledge, many are yet to embrace the basic hygiene values. The question is has the high population or poverty a factor to open defecation. It may be yes or no, but an area for further research. Indeed, it is shameful that Nigeria is listed or feature prominently among countries that indulge in open defecation. According to Barbara Frost, the Chief Executive of a London based non profit organization, WaterAid, by her observation, Nigeria was not doing enough to combat the problem. "Many African nations are seeing the number of people without basic sanitation drop, but in Nigeria, this is increasing", she concluded (Goldstein & Pevehouse, 2008; Punch Editorial, 2014:26).

Open Defecation and Need for Sanitation

On November 19, 2014, the World Toilet Day, the United Nations Children Fund (UNICEF) raised an alarm that poor hygiene and entrenched culture of open defecation among millions around the World would continue to put children and their communities at risk. It went further, to say that the situation had reached a precarious dimension in Nigeria, and that about 119 million people were not using safe toilets, while 50 million out of this number defecated in the open (Njoku, 2014:18).

Impact of Poor Sanitation and Lack of Access to Toilets on Nigeria

Open defecation and sanitation 'is a factor combination' meaning that they are related through water and land. Sanitation is a personal thing, it starts with individuals; those things one does voluntarily and that become part of the person. Sanitation starts from home or family those personal things are cultivates or imbibes from parents or siblings to improve one's cleanliness.

However, according to the World Toilet Organization (WTO), a clean and safe environment ensures good health, dignity and the well-being for people. Because of lack of toilets, many practise open defecation which often comes with lack of privacy, health hazards and environmental concerns. In some places, women and young girls are vulnerable to attacks like rapes when they go to open spaces to defecate. Equally, toilets generally remain inadequate for populations with special needs, such as the disable and elderly, and women and girls requiring facilities to manage menstrual hygiene.

However, open defecation to a large extent is responsible for many preventable deaths in many parts of Nigeria. Health experts have sufficiently documented evidence implicating the practice in the growing cases of cholera, diarrhea, typhoid and bilharzias, among other communicable diseases that are claiming lives in their thousands in Nigeria. These diseases are no longer found in developed economies where high level of sanitation and hygiene culture has become a way of life. For instance, cholera has been one of

the causes of deaths in Nigeria especially during and after rainy season. According to World Health Organization records, no fewer than 7,654 deaths occurred in Nigeria's worst cholera outbreak in 1991. Collaborating WHO, UNICEFF reported that there has been an upsurge in cholera cases in Nigeria which primarily were due to poor sanitation and hygiene practices. A report quoting from the epidemiology unit of the Federal Ministry of Health recently said that about 34,825 cases of cholera was reported in 2014 as against 2,882 cases in 2013 (Njoku, 2014: 18; Punch Editorial, 2014:26). In the same parameter, diarrhea is also responsible for the high infant mortality for which Nigeria is globally noted. For instance, every year over 15,000 Nigerian children die from diarrhea alone, largely caused by unsafe water, sanitation and hygiene practices. The United Nations revealed that 1,000 children died per day from diarrhoea related diseases due to poor sanitation in 2013, most of these sanitation issues revolve around inadequate toilet facilities mainly in developing countries including Nigeria. These deaths unfortunate as they are are preventable. The lack of toilet in some communities is an endemic problem. However, where there are toilets, the absence of poor management and hygienic maintenance are equally serious issues. A well-kept toilet will encourage proper usage and prevent deadly diseases (Agbo, 2014; Njoku, 2014:18).

In addition, the UN has given statistics that about 34 million Nigerians do not have access to toilets. The figure is scary. This of course is part of the 2.5 billion (40%) global population of people without access to toilets (Agbo, 2014). The Federal Ministry of Water Resources put that no fewer than 33 million people practise open defecation in Nigeria (Ome, 2014). The statistics is not even the issue, even in the 21st century millions of Nigerians do not have access to clean toilet facilities. It is shameful, for the giant of Africa. In economic index, the first nation in Africa, She is struggling to become one of the 20th biggest economies in the World what a value?

Indeed, still following the indices of the number of deaths among children caused either by cholera or diarrhoea and by extension any other preventable disease like malaria, the argument is

not about the number of deaths, about the role of children in a growing economy. The future of any country's development is anchored on the growing children in areas of production, consumption of goods and services and in advancement of civilization, the measurement is inelastic. If the number of deaths among children by UNICEFF and WHO is noted, Nigeria needs to look inwards. When about 10 million Nigerian children are out of school and about 150,000 die yearly from cholera alone, what foundation is the country laying for her future. Aside from the identified health challenges, it has been confirmed that many people die through snake and scorpion bites while doing the business of defecating in the bush. Defecation is one of the factors messing up (polluting) the environment, emitting very offensive odour and devaluing the aesthetic position of the environment.

Apart from defecation that appears on the front burner of this discussion, there is an aspect of environment pollution also cause by man's careless attitude towards environment, indiscriminate urination. One of the major human waste often indiscriminately deposited in many public places such as banks, churches, motor parks, hospitals, markets, local government councils secretariats, educational institutions, police station even dwelling homes especially in the rural areas and so on. The odour usually emitted from these places cannot be quantified, but the common index is that the odour is always offensive and it is believed to be taken in by man (workers) indirectly. No one can control the movement of the wind (air) and thus being blown in all directions for our consumption. Though it is not empirically tested, but it may be accepted as the polluted air being responsible for common cold or fever usually complained by people workers in these polluted environments.

It is also believed that flies, bees, ants, butterflies transmit urine to humans. The transmission may take the form of spread through vegetables, fruits, or some parts drained into springs, rivulets streams and other sources of drinking water. The water-cycle is a process that is being controlled by nature: thus directly or indirectly the urine thought to have been deposited away from man usually returns to man perhaps unnoticed. It would be advisable that those

who are in the habit of depositing urine anywhere especially in the places mentioned above refrain from it for the good of individuals and the larger society.

Summary and Conclusion

Environmental pollution is a serious challenge to mankind. Environmental pollution is not a recent phenomenon, it has been with us for many centuries, but was never considered a threatening issue until recently. Open defecation is an aspect of environmental pollution, but a very primitive and an unholy practice in which the practitioners mess up the environment, emitting very offensive odour with a very serious health implications. Open defecation, as a habit, does not deserve a place in a modern society. The faecal deposits, some of which may have been contaminate by pathogens, find their way into sources of drinking water when it rains. Some percolate into the soil and then contaminated food crops or vegetables, which then become harmful when ingested. Health experts have sufficiently shown that it has a serious implication on human health especially children and that it is responsible for the growing cases of cholera, diarrhea, typhoid and bilharzias, among other communicable diseases that have been claiming lives in their thousands across the country.

The attitude of Nigerians defecating as a habit and being pulled along other nations with such ugly habit is shameful to our image internationally. It is known that countries such as China, India, Nepal, Indonesia, Pakistan among others are in the same poor sanitary condition as Nigeria and this placed us negatively among comity of nations.

Government at all levels need to assist in all perspectives in bringing the sanitary conditions of Nigerians as they were in colonial and post-colonial experiences before 1970. In other words, sanitary inspection units of the state ministry of Health should be restored for house-to-house inspection and enforcement of the relevant sanitary laws on the use of toilets and management of our environment.

In conclusion, environment plays an important role in

advancing the civilization of nations, and by extension every activity of man takes place on the environment hence should be protected by all means. Besides, pollution of the environment should be treated in utmost caution as the effect of such pollution is always playing negatively on the development of man. There is need to train environmental officers and send them to local levels to assist in sanitary conditions of the people. Open defecation is a shame and states should do all they can to reduce if not abolish it totally. There is need to imbibe the “World Toilet College” model started as a social enterprise in some countries mainly Asia in 2005. The “College” believes there is the need for an independent World body to ensure the best practices and standards in toilet design, cleanliness, sanitation technologies are adopted and disseminated through training and capacity building courses in both rural and urban areas. Nigeria as a nation should produce a road map to end open defecation through National Environmental Sanitation Policy. Open defecation is counter productive to the development of economies and a shame to Nigeria.

Recommendations

The phenomenon of open defecation is a shame to Nigeria and a challenge to end it. In this connection therefore, the United Nations has made a call to end the practice it is encouraging countries to prioritise investment in sanitation and develop appropriate interventions to end this menace. Though Nigeria has shown commitment to end defecation by 2005, about seventy-five per cent of Nigerian households use mobile phones, the government should use the phones to mobilize the people to have simple toilets and end open defecation. Besides, Station Sanitary inspection units should be restored for house-to-house inspection and the enforcement of the relevant sanitation laws on the use of toilets and the need for general sanitation. Sanitation, Hygiene and Water in Nigeria (SHAWN) may be a launch pad, both strong media campaign and habit change will be needed to reverse this trend. Though some states in Nigeria such as Bauchi, Benue, Kaduna, Katsina, Zamfara

are beginning to show interest in the campaign, among which have embarked on a programme called Sanitation Hygiene and Water in Nigeria, their goal is to make 28,000 communities open defecation free by 2018. Indeed, bill boards, services and conferences, the use of religious organizations, non-governmental and community based organizations would add flesh to SHAWN in this direction.

There is also the need for more environmental health officers (training) to work at local government level as is the international practice. They are the foot soldiers to help pass the message and materials of sanitation down the grassroots who are most vulnerable. We need to imbibe the “World Toilet College” model that began as a social enterprise in some countries mainly in Asia in 2005. The 'college' believes there is need for an independent world body to ensure the best practices and standards in toilet design, cleanliness, and sanitation technologies are adopted and disseminated through training and capacity building courses, in both rural and urban areas. The ultimate goal of the World Toilet College's (WTC's) programmes is to ensure the dignity of sanitation workers and elevate the otherwise poor image (cum consequent low pay) reserved to this employment category in many places around the world. In this regard, Nigeria has come a long way from the time night soil men carry human faeces on their heads on the streets in some cities.

From Singapore where the WTC started, it gave the issue prestige by partnering prestigious institutions including the Singapore Polytechnic which, according to reports, has trained more than 4,000 people across the various courses. Nigeria can adopt the Singaporean style and experience and add value to our civilization. Truly, without a resolve by the powers that be, and for us to achieve results, we can as well forget about eradicating open defecation and entrench good sanitation, even by 2050.

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