

# CHALLENGES AND STRATEGIES OF MITIGATING OPEN DEFECATION: A REVIEW

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## Abstract

This study reflects on critical issues relating to open defecation such as causes, impacts and remedies. Open defecation which arguably has been quite damaging for Nigeria, has worsened recently due to a number of possible factors including rapid population growth, lack of behavior change, poor toilet/ water facilities, cultural and social norms among others. Attempts to tackle the hazard appear to be limited and largely unsuccessful. In view of this background, the study reviews the widespread open defecation in Nigeria and efforts to tackle it. Despite several efforts, targets for improved sanitation have not been met, which has resulted in 2.5 billion people not having access to improved sanitation facilities (flush latrine and pit latrine) and almost 892 million of the entire world's population still practicing open defecation. It is argued that more robust approaches to open defecation reduction such as: political will, integrated initiatives, sanitation intervention, behavioral change are lacking. This study highlights pivotal strategies critical to the attainment of Open defecation free society.

**Keywords:** Community-Led total Sanitation, Open Defecation Free, latrine, hardware, sanitation, strategies, challenges

## Introduction

Open defecation is regarded the human practice of defecating in the open instead of a toilet. People who practice defecation in the open may choose options including bushes, ditches, streets, canals or other open spaces. Most people do so either because they do not have a toilet readily accessible or due to certain cultural practices. (Clasen *et al*, 2014). According to Boschi-Pinto *et al*, (2009), Open defecation is defined as the practice of defecating in open fields, waterways and open trenches without any proper disposal of human excreta.

Defecating in the open is documented as a very ancient practice. In ancient times, there were more open spaces and it was considered that defecating in the open causes little harm when done in areas with low population. With

development and urbanization, open defecating has evolved into becoming an important public health issue, and an issue of human dignity. (O'Reilly, 2016)

As stated by WHO/UNICEF (2014), Open defecation perpetuates the vicious cycle of disease and poverty and is widely regarded as an affront to personal human dignity. The countries where open defecation is most widely practiced have the highest numbers of deaths of children under the age of five, as well as high levels of undernutrition, high levels of poverty, and large disparities between the rich and poor.

Nigeria is among the nations in the world with the highest number of people practicing open defecation, estimated at over 46 million people. The practice has had a negative effect on the populace, especially children, in the

areas of health and education and had contributed to the country's failure to meet the Millennium Development Goals target. (Federal Ministry of Water Resources/ UNICEF, 2018).

In 2015 alone, 965 million people had no sanitation facilities and were therefore forced to defecate in the open (WHO/ UNICEF, 2015). In 2011 however, infectious diarrhea, resulted in about 700 000 deaths in children under 5 years old (Walker *et al*, 2013). These deaths are attributable to poor sanitation, water management and most importantly, the prevalence of open defecation. As of 2019 an estimated 673 million people practice open defecation. In that year, 76 percent of the people practicing open defecation in the world lived in just seven countries which included Pakistan, India and Nigeria.

A water sanitation and hygiene survey conducted by the UNICEF showed the prevalence of open defecation in Nigeria. The survey ranked Nigeria as the African country with the highest number of populations still practicing open defecation and the second ranking country after India globally. (Akinsuroju, 2019)

### **The health perspective**

The impact of inadequate sanitation on the health of people in general and children in particular is now too well known. Diarrhea is the second largest killer of children below 5 years in Nigeria, only next to Pneumonia. WHO in a 2015 study says that 88% of diarrhea cases are attributable to factors essentially originating from poor management of human excreta (WHO, 2015).

According to a World Bank Report (2012), approximately 121,800 Nigerians, including 87,000 children under 5 die each year from diarrhoea and nearly 90% of it is directly attributed to water, sanitation and hygiene. The adverse impact of open defecation can be

judged from the fact that one gram of faeces of a person can contain 10,000,000 viruses, 1,000,000 bacteria, 1,000 parasite cyst and 100 parasite eggs and pathogens. If left in the open, these are carried by flies, fluid and finger which can infect another person through the faecal-oral route.

Hookworm, that enters the body through unprotected feet, has a direct link with open defecation. A very comprehensive literature review of 21 studies, covering several countries found out a 36% reduction in diarrheal morbidity due to improved sanitation. In another review of lesser dimension carried out in 2004, such reduction was estimated at 32%. In a related practice pertaining to hand washing with soap at critical times (including hand washing after defecation) studies have shown a reduction of the diarrheal morbidity by over 40%. (Federal Ministry of Water Resources/ UNICEF, 2018).

### **Factors that influence open defecation**

The reasons for open defecation are varied. It can be a voluntary, semi-voluntary or involuntary choice. Most of the time, a lack of access to a toilet is the reason. However, in some places even people with toilets in their houses prefer to defecate in the open. (Cavill, 2015). A few broad factors that result in the practice of open defecation are highlighted below. General Lack of toilet infrastructure has been identified as many people often lack toilets in their houses, or in the areas where they live. In the event where toilets are available, Lack of toilets in places away from people's houses, such as in schools or in the farms lead the people to defecate in the open. (Tsinda *et al*, 2013). Sometimes people have access to a toilet, but the toilet might be broken, or of poor quality. Outdoor toilets (pit latrines in particular) typically are devoid of any type of cleaning and reek of odors. Sometimes, toilets are not well lit, especially in areas that lack electricity. Others lack doors or may not have water. Toilets with maggots

or cockroaches are also disliked by people and hence, they go out to defecate. (Kwiringira, *et al*, 2014). Tsinda *et al* (2013) also posited that some toilets are risky to access. There may be a risk to personal safety such as they may be dangerous to access at night due to lack of lights, criminals around them, the presence of animals such as snakes and dogs. Women and children who do not have toilets inside their houses are often found to be scared to access shared or public toilets, especially at night. Accessing toilets that are not located in the house, might be a problem for disabled people.

O'Reilly (2006) further states that the absence of supply of water inside or next to toilets cause people to get water from a distance before using the toilet. This is an additional task which discourages them from using available toilets. Lack of behavior change has been identified as a major influencing factor for open defecation: Some communities have toilets, yet people prefer to defecate in the open. In some cases, these toilets are provided by the government or other organizations and the people do not like them, or do not value them. People continue to defecate in the open. Also, older people are often found to defecate in the open and they are hesitant to change their behavior and go inside a closed toilet. (Kwiringira, *et al*, 2014)

As outlined by Routray *et al* (2015), there may be cultural or habitual preference for defecating "in the open air", beside a local river or stream, or even the bush. Some people tend to walk outside early in the morning and go to defecate in the fields or bushes. They prefer to be in nature and the fresh air; instead of defecating in a closed space. It has been observed to be an ancient practice and is hard to stop practicing. It is a part of a routine or social norm. Some countries have done very well in reducing Open Defecation: for example, in rural Vietnam 43% of the

population practised OD in 1990, but by 2015 this had been reduced to 1%; in Bangladesh the corresponding figures were 40 and 2%; and in Mexico they were 51 and 4% (WHO/UNICEF, 2015). Given that there are 'no solutions without political solutions', the exceptionally good progress in these and some other countries may have been due, at least in part, to their politicians and senior civil servants 'thinking clean', i.e. deciding that OD was not 'clean' and that therefore something had to be done to reduce or eliminate it, and then converting this decision into action (Mara, 2017)

### **Past efforts to promote sanitation**

The Government of Nigeria in its efforts to promote sanitation and hygiene, along with drinking water, have formulated policies and strategies from time to time. The Water-Sanitation Policy 2004 is a draft National Water-Sanitation Policy developed by the Federal Ministry of Water Resources with focus on sanitation and hygiene including disposal of liquid and solid waste. Also, a National Task Group on Sanitation was constituted. This inter-ministerial/agency group included the Federal Ministries of Water Resources, Environment, Housing and Urban Development, Health, Education, Women's Affairs, e.t.c. Similar Task Groups were formed at State level. (Federal Ministry of Water Resources / UNICEF, 2018). As part of intensified efforts, some State Governments also started establishing a full-fledged Rural Water Supply and Sanitation (RUWASSA) Agency for better planning and implementation of the Sanitation Program.

The Federal Government equally came up with a very comprehensive strategy for improving Rural Sanitation and Hygiene in 2007. It was realized more work needed to be done to scale up rural sanitation so as to meet Millennium Development Goals. According to WHO/UNICEF (2015), Nigeria was one of the

first few countries in Africa to have resorted to the Community-Led-Total- Sanitation (CLTS) Approach in 2005-2006. The main objective of the CLTS approach was to empower the community, through a triggering exercise, to realize the extent and magnitude of the problems associated with open defecation and take necessary action towards solving the problems for improved health and well-being of the people.

### **Sanitation technology options**

There are some simple sanitation technology options available to reduce open defecation prevalence if the open defecation behavior is due to not having toilets in the household and shared toilets being too far or too dangerous to reach, e.g., at night. Some of these options include:

#### ***Toilet bags***

A more advanced solution of the plastic toilet bag has been provided by the Swedish company Peepoople who are producing the "Peepoo bag", a "personal, single-use, self-sanitizing, fully biodegradable toilet that prevents feces from contaminating the immediate area as well as the surrounding ecosystem". This bag is now being used in humanitarian responses, schools, and urban slums in developing countries. (Naeem and Berndtsson, 2011).

#### ***Bucket toilets and urine diversion***

Bucket toilets are a simple portable toilet option which can be modified in various ways, one of them being urine-diverting dry toilets. Urine diversion has been proven to significantly reduce odors from dry toilets. Examples of using this type of toilet to reduce open defecation are the "MoSan" (Mijthab *et al*, 2013) toilet used in Kenya or the urine-diverting dry toilet (Russel, 2013) in Haiti which have all been deemed effective.

#### **The Indian example**

In an attempt to stop city residents from defecating in public, a city council in India planned to pay residents to use public toilets.

In the year 2015, a public works Corporation announced it will pay some money per visit in a bid to draw them into its public toilets and away from open areas and public walls, which often reek of open defecation practices. (Russel, 2013). Also, the Government of India has equally taken up an initiative wherein a large-scale drive has been initiated to construct toilets on mass level. A number of industries in India are therefore manufacturing affordable toilet rooms using pre-fabrication techniques to meet high demand of toilets.

#### **Suggested strategies**

In Nigeria, the Federal Ministry of Water Resources and UNICEF launched a National road map in 2018 towards making Nigeria Open defecation free by the year 2025. The policy document aimed to establish a multi-sectoral partnership between government, development partners and the private sector to support the empowerment of rural dwellers in Nigeria through the provision of adequate water supply and sanitation services.

The road map document, suggested among others the following strategies for mitigating open defecation:

Formulating different technology options to suit different geo -physical conditions and Technology options to suit household's preferences.

Other options include Pour-flush toilets using less water as a low-cost option and social marketing of sanitation.

Refocusing the triggering process under CLTS (community led total sanitation) is highlighted as one of the cardinal objectives suggested alongside the need for using appropriate mass media for the propagation of much needed awareness.

Toilets in public places, Training of personnel who shall contribute in the enlightenment and eventual enforcement of these strategies and Certification for open defecation free communities have been documented as veritable strategies that can ensure the proper

mitigation of Open defecation in Nigeria. (Federal Ministry of Water Resources / UNICEF, 2018).

Unfortunately, at the present rate of progress, reaching the goal of open-defecation-free Nigeria by 2025 seems to be an unattainable feat unless there are drastic shifts in the approach and strategy pursued in the past. It is a fact that if Nigeria cannot achieve the open-defecation-free target now set by the UN by 2025, Africa will not be able to achieve the same since Nigeria is the most populous African Country accounting for nearly one-fifth of Africa's population. This is also considering Nigeria's position on the open defecation ranking. According to the UN, 82% of the 1.1 billion people practicing open defecation live in 10 countries and Nigeria is one of them. The others are India, Indonesia, Pakistan, Ethiopia, Nepal, China, Sudan, Niger and Mozambique

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