



Open Defecation, Causes, Consequences and Intervention in Nigeria

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Abstract

Fundamental components of the Sustainable Development Goals are good health and clean water. Open defecation makes this difficult. Defecating in public zones like fields, woods, coastlines, open aquatic bodies, or even in open spaces with solid garbage like polythene bags, is known as open defecation. It is global, with 12% of the world's population, mostly impoverished countries of sub-Saharan Africa and Asia, practicing it. In Nigeria, defecating in public is rampant in rural areas than in urban regions. Motivation, consequences of open defecation, and the approaches of the government to curtail it were discussed. Poverty, restricted availability of sanitary facilities, lack of awareness and education, socio-cultural beliefs, nomadic and itinerant life, emergencies, among others, are connected to open defecation in Nigeria. Furthermore, household proportion, profession, earnings, traditional standards, and possession of a restroom are also put forward as factors that affect the dispositions of Nigerians towards open defecation. Open defecation constitutes a significant public health risk with environmental, health, and social effects. Therefore, the Nigerian government has periodically created programs and policies to eradicate public defecation and to ensure this, several policies and guidelines were implemented. Except for the "Making Nigeria Open-Defecation-Free by 2025" policy, which outlines the anticipated plans to outlaw open defecation in Nigeria, there was little to no structure in place to abolish open defecation in the country. It was recommended, among other things, that there should be continuous national public awareness campaigns, more restrooms should be constructed in public areas, water supply should be given top priority throughout Nigeria, local, inventive, and reasonably priced technologies should be encouraged to build better toilet systems, cultural barriers should be removed to allow for improved sanitation facilities, and state and federal legislatures should pass laws prohibiting public defecation.

Keywords: Open Defecation, Sanitation, behavioural habits, Sustainable development goals, global issue, health risk.

INTRODUCTION

Open defecation (OD) is the act of emptying one's intestine in an open space, like shrubs, drainage systems, landfills, cellophane bags, partially constructed buildings, and the ground as opposed to using latrines or toilets, which are enclosed, purpose-built structures intended to handle human waste. These open areas include water bodies, fields, woods, forests, ditches, gutters, and canals as well as unfinished or abandoned constructions (Gbadegesin and Akintola, 2020, WHO, 2021). Defecating in the open is a global issue. According to the WHO (World Health Organization) (2017), eighty-two million people, or 12% of the world's population, practice open defecation, mostly in developing and impoverished countries in sub-Saharan Africa and Asia (Saleem *et al.*, 2019) with India taking the leading position. Saleem *et al.* (2019) added that 90% of people who continue to practice open defecation reside in rural areas in South Asia, Central Asia, and sub-Saharan Africa. In several developing nations, including Indonesia (Kerstens *et al.*, 2016), India (O'Reilly, 2017) and Nigeria (Abubakar, 2018), there have been reports of more public defecators in rural than metropolitan regions. Nigeria ranked third in the world in terms of OD prevalence in 2015, behind China and India, with 25.1%, or 46 million, of its population practicing OD (Abubakar, 2018). According to Odogwu (2019), Nigeria

has surpassed India as the nation with the highest rate of open defecation globally. This is in contrast to previous findings by Adepoju (2019) and Anjorin (2019), indicating that Nigeria was rated second globally behind India and the highest in Africa. Table 1 displays the global distribution of open defecation (DHS, 2022; World Bank, 2023) in various regions of the world.

Table 1. Distribution of Public Defecation around the Globe

Country	OD rate (%)	Practicing OD	Data Used	Forecast by 2030 under the current situation
Nigeria	26.6	54,833,240	DHS 2018	69,951,882
Ethiopia	37.6	43,226,464	DHS 2016	54,498,944
Niger	64.1	15,516,687	DHS 2012	22,336,286
DR Congo	14.7	13,165,467	DHS 2013	17,646,909
Burkina Faso	55.2	11,538,456	MIS 2014	15,127,008
Chad	69.4	11,399,644	DHS 2015	15,052,860
Angola	32.9	10,812,914	DHS 2016	14,750,715
Madagastar	38.5	10,661,035	MIS 2016	13,714,470
Kenya	18.4	9,893,864	DHS 2014	12,226,800
Cote d'Ivoire	35.4	9,337,812	DHS 2012	11,934,402

Source: (DHS, 2022; World Bank, 2023)

DHS (Demographic and Health Survey Program); MIS (Management Information System)

Among the many challenges that Nigeria faces is the problem of open defecation. According to the 2018 National Outcome Routine Mapping (NORM) Report, forty-seven million Nigerians practice open defecation, indicating that at least one in four Nigerians defecate outside (Olukolu, 2021). Many Nigerians live in appalling conditions; some hold off on defecation until dusk, while others do it within their homes and using the “short put” method, get rid of it at night by forcing waste to spill over shrubs or piles of trash. Human waste is frequently seen in fields, shrubs, rail lines, and even municipal trash sites. However, the local community, due to the lack of restrooms, latrines, or other forms of improved sanitation nearby, is more probably to engage in open defecation. For example, not only do the homeless people in Lagos (the commercial capital of Nigeria) defecate in public, but many others living in populous neighbourhoods designed according to the traditional ‘face-me-I-face-you’ model also do this. These houses may be located in many of the city’s impoverished neighbourhoods, where unsanitary condition is the norm. Therefore, it is not unusual to find homes inhabited by over thirty people without or having just a single toilet. Numerous buildings have overflowing or unusable latrines that have had to be abandoned; in these situations, people resort to open defecation (Diyaolu, 2016). In addition, some landlords who live in “face me-I-face you” homes don’t provide their renters access to the restroom. So, where do you think these tenants would urinate? The solution is clear-cut. If it were convenient for them, they would do it wherever (Ani, 2017). However, from a broad perspective, Ngwu (2017) defined open defecation as the behavioural habit of individuals passing excreta in public areas, shrubs, and river ways, away from any sanctioned latrine or toilet.

In Nigeria, open defecation is more common in rural than in urban regions. Within the North-East and North-West regions, the practice is more common due to factors like limited access to sanitation facilities and cultural beliefs. In the South-East and South-South regions, open defecation rates are relatively lower, but it still occurs in some rural communities. Within the North-Central and South-West regions, efforts have been made to reduce public defecation by implementing awareness programmes and providing sanitary facilities. Overall, the government is working towards ending open defecation in Nigeria by promoting proper sanitation practices and providing access to clean toilets (WHO, 2022). Figure 1 below lists the States that come under each of these regions. While the ratio in Kogi is as high as 65.8%, in Abia it is as low as 1.2% of families with public defecation. States with greater percentages of open defecation than the national average (37%) include the following: Plateau (56.2%), Oyo (54.0%), Ekiti (60.8%),

Oyo (54.0%), Cross River (53.6), Benue (52.9%), Taraba (52.5%), Nasarawa (50.8%), Kwara (50.5%), Enugu (48.6%), Jigawa (48.1%), Ondo (47.6%), Niger (47.5%), Ebonyi (45.5%), Osun (39.2%), and Kebbi (37.6%) (FGN & UNICEF, 2016).



Figure 1: Nigerian map with the six geopolitical zones highlighted
Source: Olu-Adeyemi (2017).

Unfortunately, Nigerian regulations and initiatives to stop open defecation have not been successful; only 14 of the 774 local government units in the nation have been able to do so. People who practice “public defecation” disregard the unsanitary and unhealthy consequences of their actions, relieve themselves in public areas that are not intended for that purpose, and this act is deemed barbarous, uncivilized, and indicative of underdevelopment by WHO/UNICEF (WHO, 2017). It appears that not many people are aware of how serious this issue is, which has the potential to spread throughout society like an epidemic. Open defecation and other such unsanitary practices are linked to numerous dangerous diseases that are currently raging throughout the world, such as cholera, typhoid, intestinal infestation worms, trachoma, and many others (Ogidinta, 2021; WHO, 2022). This write-up, therefore, aimed to identify the causes and the problems of open defecation in Nigeria and the required measures that have been taken by the government to curb/reduce the occurrence of open defecation practice.

REASONS BEHIND NIGERIA’S OPEN DEFECATION

In Nigeria, open defecation is impacted by many variables, such as cultural customs and beliefs, poverty, and inadequate sanitary facilities. Some of the explanations for the predominance of open defecation in Nigeria are listed below.

i. Poverty and limited access to sanitation facilities:

Extreme poverty, illiteracy, inadequate nutrition, infant mortality, and a lack of sanitation are all associated with high rates of open defecation (Ameyaw & Odame, 2017). This demonstrates how deeply and extensively social injustice, income inequality, and corruption have permeated society's social fabric (Nyoni, 2018). Poverty elimination is correlated with ending open defecation. In nations like Tanzania, India, and Ethiopia, 1.8 billion people now have access to improved sanitation systems and facilities; however, in Eastern and Southern Africa, at least 2.5 billion people still lack improved sanitation (UNICEF, 2017), and for millions of people in Nigeria, access to water, which enhances improved sanitation, is still a pipe dream (Drakopoulos, 2020). According to UNICEF/WHO (2015), if open defecation is more common in areas where poverty and income disparity are associated, then at least 2.5 billion people globally live below the poverty line. In places where there is open defecation, poverty, illiteracy, and restricted access to sanitizing facilities, there is red tape and tacit segregation. According to Osunmanu *et al.* (2019), the segregation that prevents these districts from receiving basic social amenities and investment may contribute to a rise in cholera, typhoid, and diarrhoea.

With over 46 million people defecating in the open, open defecation is a serious problem in Nigeria. This is mainly caused by a lack of access to sanitary facilities, particularly in rural and underdeveloped areas lacking adequate toilets and sanitation structures. In the Niger delta, people living in riverine area face so many challenges defecating because there are inadequate sanitary facilities in their area which makes the people result in defecating in the river which may lead to pollution of the water and environment and thus resulting in illnesses including cholera, diarrhoea, and typhoid, which mostly afflict youngsters. According to Ogadinma (2018), people who practice community river-based open defecation use wooden latrines (that resemble shantytowns) on rivers where they empty their waste into the water. Strangely, this activity is occurring as new homes that should or have toilets are being built. Most of the rivers that house these communal latrines also serve as sources of water for home consumption. This kind of cultural resilience presents developmental issues with implications for water, sanitation, and public health (Ogadinma, 2018).

Two main factors contributing to poor facilities are a lack of housing and houses without a toilet. Lackluster, nonexistent, or insufficient hygienic infrastructure is frequently linked to OD. Even

using buckets or personal potties in place of toilets is common among students living in academic dorms (Adefowo, 2014). This is also typical in too-full homes with subpar toilets. Many communities, especially in rural areas, lack proper toilets or sewage systems. People occasionally have access to restrooms; however, they could be in poor condition or damaged. Pit latrines, in particular, are often unclean and smell badly. Toilets are occasionally not always well-lit, particularly in places without electricity. Others might not have water or doors. People also despise cockroaches and maggots in toilets, so they go outside to relieve themselves. This makes it difficult for people to practice safe and hygienic sanitation.

ii. **Fear of public restrooms:** Lack of lights at night, the fear of nearby criminals, or the presence of animals like dogs and snakes could all pose a risk to one's safety. Women and children without indoor toilets are often found to be afraid when it comes to using shared or public restrooms, especially at night. People also prefer to use OD when there are unclean restrooms because they are afraid of getting sick from using unflushed or dirty restrooms. Public restrooms, tap handles, and doorknobs can all spread infectious diseases.

iii. **Lack of awareness and education:** It's possible that some people are unaware of the advantages of using good sanitation facilities or the health dangers connected to open defecation. Campaigns for awareness and education are crucial in changing behaviors. While some communities have restrooms, some residents still choose to relieve themselves outside (Oluwole *et al.*, 2020). Sometimes the government or other organizations provide these restrooms, but the public dislikes or undervalues them and are still urinating in public, for instance, elderly people are known to frequently urinate in public and are reluctant to switch to using a closed restroom. According to Abubakar (2018) and Olu *et al.* (2022), households in Nigeria with higher education levels exhibit lower rates of open defecation. Furthermore, low educational background of the respondents has been related to their ignorance of the part that open defecation plays in the transmission of diseases (Amawulu *et al.*, 2020). Similarly, the likelihood of OD use was 30% lower in households with media exposure than in those without (Belay *et al.*, 2022). One could argue that raising citizens' understanding of the hazards to their well-being and the surroundings posed by open defecation requires education.

iv. **Socio-cultural beliefs:** It is still considered improper in many cultures to share restrooms since open

defecation is still a common habit in such groups. For instance, open defecation is seen as an ancestor's behaviour carried down through the years by the Idoma people of Nigeria. Idoma communities have a cultural practice of encouraging open defecation since it is considered improper to defecate in a building or other superstructure, and many elderly people continue to refuse to defecate in any kind of contained space. Wives and daughters are not permitted to share latrines with their husbands in many Idoma communities, and the husbands usually refuse to pay for the construction of latrines for the use of the female family members. Even in homes with toilets, 40% of homeowners still choose to urinate outside (Pandve, 2008). Pooping outside, next to a river or stream, or in a wilderness, may be a cultural or habitual preference while blending open defecation with other pursuits such as tending to their farms, some people go for early morning walks. Particularly women who enjoy taking time out of their homes, some view it as a social activity. Ngwu (2017) raised serious concerns when he observed that the majority of Nigerians frequently excrete in streams, rivers, and lakes, which are typically their sole sources of drinking water, without taking into account the harm their actions cause to the environment and their health. According to Ngwu, the practice is deeply embedded in the culture and customs of the locals, making it very challenging to alter.

- v. **Emergencies:** This happens when someone is traveling far from home or facilities, or when they have diarrhoea and dysentery.
- vi. **Nomadic and itinerant life:** Individuals who travel frequently, such as homeless vagrants and herdsmen, frequently defecate in public. Mobile latrines are seldom brought with these nomadic people when they travel with their livestock in search of pasture and water. They would rather defecate in the open and thought it was a waste of money to build latrines because they are never going to stay in one place (Busienei *et al.*, 2019). Ndallah (2022) reported that life is tranquil in this camp of twelve nomad families, yet these semi-nomadic people do not build toilets as a habit. They lacked facilities, so to relieve themselves, they had to constantly hide in the grass surrounding their homes and watch to make sure no one was coming.
- vii. Akindayo (2019) listed ignorance and backward lifestyles as other issues, along with a lack of water supply, a lack of technology (particularly in rural regions) for the proper toilet models, inadequate facility maintenance, and the high cost of combating the issue. By 2025, Nigeria is expected to require

NGN 959 billion (US\$2.7 billion) to eradicate open defecation (Adepoju, 2019). Open defecation was positively correlated with six factors (education, home size, occupation, wealth, traditional norms, and possession of a toilet facility), according to a study by Osumanu *et al.* (2019) while Bhatt *et al.* (2019) found several causes that result in the majority of Nigerians practicing OD and these factors include habit, poverty, socialization, and the sphere—that is, a place or area where people congregate and talk about topics of interest while defecating. Thus, indicating that the problem of open defecation extends beyond the absence of secure locations for personal hygiene, such as latrines or toilets, but rather is a way of life that has to change. Therefore, in addition to constructing public health facilities and offering services, communication campaigns are required to alter society and individual behaviours can impede the efficient use of these sanitary facilities.

EFFECTS OF OPEN DEFECTION IN NIGERIA

Studies have revealed that open defecation has several negative consequences for the nation where it is practiced (Guterres *et al.*, 2014). These effects can be environmental, health-related, and social.

Environmental effects

Long-term consequences of open defecation are hazardous and can result in serious issues with human and environmental health (Jubril, 2020). According to Dittmer (2009), open defecation, waste discharge in public areas, trash dumping near homes, and garbage dumping in the vicinity of villages all hurt the village, contaminate groundwater, and worsen the environment as explained below:

- i. **Visual Pollution:** One of the obvious effects of OD is visual pollution. Heaps of human waste (excreta) can be an eyesore and nauseate anybody close by. The pungent odour emanating from excreta is unpleasant and pollutes the environment. Such places are completely an eyesore. According to Abubakar and Dano (2018), in Lagos and other Nigerian coastal communities, open defecation pollutes the beaches, reducing their ability to draw both domestic and foreign tourists.
- ii. **Water pollution:** Open defecation allows faecal matter to infiltrate water sources like rivers, lakes, and streams. This contamination can cause infections that are transmitted by water to spread and endanger aquatic life (Dekkak, 2021). Open defecation allows microbes to cause contamination and introduces toxins and bacteria into the ecosystem.

- iii. **Soil degradation:** Human faeces can enrich the soil if properly treated and used as fertilizer. When treated correctly, it can provide important nutrients for plants to grow. However, if human faeces are not treated properly or contain harmful bacteria such as *Escherichia coli*, *Salmonella*, *Shigella*, and *Clostridium difficile*. These bacteria can contaminate the soil and cause health risks if they come in contact with crops or if the soil is used for gardening or farming. This can affect agricultural productivity and hinder the growth of crops, impacting food security. The worth of the lands in the impacted area could drop as a result of widespread open defecation in some areas, which can cause environmental degradation (Jubril, 2022).
- iv. **Air pollution:** The decomposition of faecal matter releases foul odours and harmful gases into the air. This not only creates an unpleasant environment but also poses respiratory health risks to nearby communities. It can lead to olfactory and visual pollution because the stench from human waste can be offensive and make life difficult for people (Jubril, 2021).
- v. **Ecological imbalance:** Open defecation disrupts the natural balance of ecosystems. The presence of human waste can harm plants, animals, and other organisms, leading to a decline in biodiversity. Open defecation damages the aquatic ecosystem by causing eutrophication, or the growth of algal blooms, which clog waterways, disrupting aquatic life and blocking the absorption of light and oxygen (Dekkak, 2021).

Health effects

Nigeria is not exempted from the issue of open defecation, so the health hazards associated with diseases linked to it know no boundaries. The burden of helminth infection brought on by open defecation affects every region of Nigeria (Taiwo *et al.*, 2016). The startling estimates that 50 million Nigerians defecate in the open reveal a great deal about the country's public health situation and the significant negative effects of this behaviour. As numerous studies have shown, defecating in the open distributes faecal germs, which can cause illnesses like worm infections and diarrhoea (Al-Zoubi *et al.*, 2020). Typhoid, cholera, hepatitis, polio, and trachoma are among the other illnesses linked to the improper disposal of human excreta (Arul & Suresh Babu, 2017). Dittmer (2009) said that open defecation, throwing trash into public places, and depositing waste near homes and in the village's environs harm the ecosystem, contaminate groundwater, and cause a variety of health issues (Figure 2). Ayalew *et al.* (2018) found that the prevalence of diarrhoea was four times higher in OD-practicing populations than in OD-free locations. It has been estimated that diseases related

to open defecation account for over 499,000 fatalities in children under five (Amawulu *et al.*, 2020).

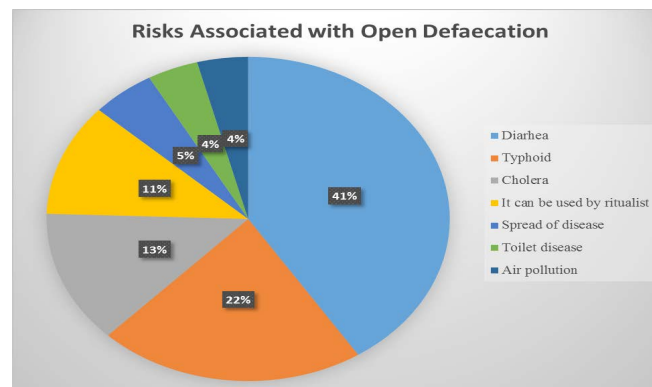


Figure 2: An analysis of trends demonstrates the dangers of open defecation in Saki Town cities.

Source: Modified from Dittmer (2009).

- i. **Waterborne illnesses:** Fecal matter from open defecation contaminates the environment and can spread diseases including cholera, typhoid, and diarrhea. These diseases can cause severe illness, especially in communities with limited access to healthcare. Moreover, human waste has the potential to contaminate water supplies when it gets into bodies of water like lakes, rivers, and groundwater. The health of individuals and communities may be impacted by waterborne infections contracted from drinking or using this tainted water. Poisonous human excrement contains one million bacteria, ten million viruses, and about a thousand stages of parasites (Okwa, *et al.*, 2018).
- ii. **Malnutrition and stunted growth:** Open defecation and other poor sanitation habits propagate infections that can cause malnutrition and stunted growth, especially in youngsters. Diarrhoea, for example, can cause nutrient deficiencies and hinder proper development. Roughly 90% of pharmaceutical drugs and antibiotics that individuals consume are eliminated into the environment through urination. Fecal infections can be absorbed through open defecation, which increases the risk of intestinal worms, diarrhea, and environmental enteric dysfunction. This results in decreased appetite, weakened immunity, impaired food absorption, and ultimately malnourishment. Being part of our ecosystem, plants, aquatic environments, and animals all receive their fair share of diseases and drug residues. Humans eventually come into contact with these diseases and poisons (Water AID, 2017). The accumulation of filth brought on by inappropriate excreta disposal and aquatic ecosystem contamination is unavoidable, negatively impacting aquatic life as a result.

- iii. **Respiratory infections:** Improper disposal of human waste can result in the release of harmful gases and foul odours, which can irritate the respiratory system and increase the risk of respiratory infections (Balogun, 2021).
- iv. **Vector-borne disease:** Insects like flies and vermin are typically drawn to areas where there are faeces. These flies visit nearby buildings, including homes and workplaces. When they eventually make their way into unguarded food and beverages, they perch on them and spread illness (Balogun, 2021). Usually, these result in diarrhoea and stomach aches.
- v. **v. gastrointestinal Diseases:** When someone poops in public, they eat their waste and encourage others to do the same. As part of better sanitation, personal hygiene can help prevent all of these (Sarkingobir *et al.*, 2019). The public health system is under a great deal of stress because of the number of preventable deaths linked to diseases spread by open defecation and the government's inability to effectively end it (Abubakar, 2017). This is because most diseases treated could have been prevented if open defecation had been outlawed. There are major health and environmental risks associated with open defecation, and it is thought to be the direct cause of over 500,000 deaths annually. Since faecal germs are spread from human waste into the open water supply and cause severe waterborne infections. open defecation is one of the main causes of typhoid, which is predicted to kill at least 500,000 people (Arul & Suresh Babu, 2017). Approximately 2000 children under the age of five perished every day due to open defecation worldwide in 2013 (WHO, 2013). Children are more sensitive to the fatal effects of open defecation because they frequently put objects in their mouths without washing their hands and are therefore more likely to directly or indirectly consume the excrement of others. Numerous illnesses arise from defecating in the open, and those who do so are frequently exposed to faecal germs such as *Staphylococcus* and other faecal infections. Additionally, young infants are particularly vulnerable because of their immature immune systems. In general, Nigeria's lack of rules and procedures to end open defecation has been expensive for the taxpayers, has resulted in many preventable deaths, and has burdened our public health system. Not only will an immediate cessation of open defecation enhance our overall quality of life, but it will also extend our life expectancy.

Social effects

In research by Abdul Azeez *et al.* (2019), one respondent claimed that they felt uncomfortable while publicly defecating because people were staring at them and

giving them offensive nonverbal and facial cues. We make our visits either late at night or early in the morning to avoid this. Here's how one respondent articulated her own sentiments: "I'm concerned because I'm afraid someone will see me." Whenever I have to urinate, I get nervous. While I usually make an effort to ensure that nobody is nearby, it still happens from time to time, which gives me anxiety because I think someone may have noticed me nude". The social impact of open defecation include:

- i. **Dignity and privacy:** Open defecation deprives individuals of their dignity and privacy. It can be embarrassing and uncomfortable for Individuals, particularly females, who are compelled to relieve themselves in public spaces. Additionally, there is a chance that the defecating in the open will lead to a rise in sexual exploitation and jeopardize the privacy of several hundred millions of females throughout the world when they are menstruating (United Nations, 2018).
- ii. **Safety and security:** Defecating in the open subjects individuals, especially females and children, to the jeopardy of harassment, assault, or animal attacks when they have to go to secluded areas for privacy. During the night, the majority of open defecators are being used, there is a chance of encountering serpents or other night wild creatures that could lead to bites (Saleem *et al.*, 2019). Furthermore, women are subject to rape and sexual assault while engaging OD operations (Balogun, 2021).
- iii. **Education and productivity:** Inadequate sanitary facilities as a result of open defecation can affect education and productivity. Children may miss school due to illnesses caused by poor sanitation, and adults may face difficulties in carrying out their daily activities. Similarly, going to an open space to defecate reduces the amount of time that could be spent engaging in productive activities, which influences the advancement of society and the economy (Giribabu *et al.* 2019).
- iv. **Community well-being:** Defecating in the open results in the transmission of illnesses within communities, affecting overall well-being. This can result in increased healthcare costs and reduced productivity. Defecating in public is a widespread and systemic social problem in underdeveloped countries.

INTERVENTION IN OPEN DEFECATIONS IN NIGERIA

Putting an end to open defecation is a crucial priority in achieving the Sustainable Development Goal on water, sanitation, and hygiene. Even though the majority

of nations are working feverishly to eradicate OD, nonetheless, the condition is very common in sub-Saharan Africa. Despite the financing and efforts to expand access to clean sanitation facilities have increased dramatically, the results of the European Union, UNICEF, and other international development organizations working to achieve Sustainable Development Goal 6 are still far from quantifiable. It is estimated that over two-thirds of Nigerians are undernourished and lack access to sewerage and sanitation facilities. Moreover, people are compelled to defecate in unsafe and unhygienic public places due to the lack of proper sanitary facilities, putting them at risk for health problems and safety hazards, especially for women and children. To ensure that defecating in the open is eliminated, several rules and regulations have been implemented by the Nigerian government, such as:

- i. National Water Supply and Sanitation Policy, 2000,
- ii. National Environmental Sanitation Policy, 2005,
- iii. National Health Promotion Policy, 2006,
- iv. Strategy for Scaling up Rural Sanitation and Hygiene to meet MDG, 2007,
- v. National Water Resources Policy and Strategy, 2016,
- vi. Partnership for Expanded Water, Sanitation and Hygiene (PEWASH) Programme Strategy (2016-2030), 2016 and
- vii. A National Road Map: Making Nigeria Open-Defecation-Free by 2025, 2016.

However, in the majority of cases, the country's framework for ending open defecation was either non-existent or lacking. The most practical policy to end open defecation nationally is the National Road Map: Making Nigeria Open-Defecation-Free by 2025 (2016). President Muhammadu Buhari of Nigeria issued Executive Order 009 in 2019 in an attempt to combat open defecation. Nigeria's Ministry of Water Resources, in collaboration with UNICEF and a few other significant organizations, established the "Nigeria Open-Defecation-Free By 2025: A National Road Map" program that same year in an attempt to end the destructive practice by that date. The goal of the current ODF Roadmap is to provide a clear explanation of the many plans, tactics, and financial commitments needed to eradicate defecating in the open in Nigeria by 2025. To end defecating in the open in the country, all Nigerians must possess the ability to access and utilize restrooms, including those in marketplaces, health centres, schools, motor parks, and other public areas. In contrast to prior policies, which focused mostly on sanitation with minimal attention paid to open defecation, the OD Free Roadmap plan aims to abolish open defecation in Nigeria. It is also more focused on this goal than other programs. The Nigerian OD Free Roadmap, therefore, comprises nine distinct

sections that address various aspects of the country's sanitation situation, including the road map's phases of implementation, the roles and responsibilities of key stakeholders, the implementation plan, the required enabling environment, the current state of sanitation, the lessons learned from previous sanitation program implementation efforts, the reasoning behind the suggested strategies and action plan, and the required investment needs to eradicate open defecation by 2025.

CONCLUSION

It is often recognized that open defecation is one of the worst public health practices that progressively damages the society in which it is carried out. The habit of open defecation is not restricted to Nigerians living in rural regions; it also affects people in towns, cities, and villages. Both the affluent and the ignorant engage in this behaviour (Routray *et al.*, 2015). Nigeria has a bad reputation because of the top six, it is the nation with the third-highest prevalence of OD practices worldwide. Numerous Nigerians from disadvantaged backgrounds are reported to live in appalling conditions and below the poverty line. This is because organizations that ignore the underprivileged and display poor leadership are opening the door to OD. Having access to sanitary facilities and clean water is recommended by UNICEF and WHO and should not be considered a luxury but rather a fundamental human right (WHO 2017). Sanitation and water are critical components necessary to mitigate the threat of OD (Mills & Cumming, 2016). The most important point is that many diseases will be all eradicated if OD is controlled. To guarantee that people have no excuse for open defecation, there should be a concentrated effort to provide enough functional restrooms in public areas and to ensure this, all hands must be on deck.

However, nothing should be taken too lightly in the fight against the OD threat if Nigeria views the people as her most precious resource. When the common people cannot access and are not provided for by the laws, what good is it to enforce them? If a decent, functional toilet is built, people will use it, and such a toilet should have water, be well-ventilated, cleaned frequently, and be free of germs.

RECOMMENDATIONS

Some of the proposed recommendations (Mohammed and Oguntola, 2024) include the following:

- i. The risks and perils of open defecation require continuous, nationwide public awareness efforts via radio, social media, posters and handbills, other media platforms, as well as interpersonal communication,

such as having gatherings with locals, religious leaders, associations, and participating in community discussions.

- ii. By putting Community-Led Total Sanitation programs into place, which provide communities the authority to take charge of projects to improve hygiene and sanitation, communities may be successfully involved in recognizing and addressing sanitation challenges.
 - iii. To create and maintain sanitation infrastructure, cooperation with businesses in the private sector is essential.
 - iv. Water supply needs to be given top priority throughout Nigeria. Borehole drilling equipment and the installation of boreholes in strategic locations, particularly in rural areas, should be purchased by state and local governments.
 - v. Collaborating across multiple sectors is necessary to construct additional lavatories in public areas like shopping malls, schools, camps for internally displaced people, and other locations.
 - vi. Private corporations like banks, oil, insurance, and industrial firms should provide toilets across the nation, in areas that need them as part of their corporate social responsibility.
 - vii. It is important to look at new ways to finance sanitation initiatives and to actively seek assistance from international organizations like UNICEF and WHO for technical know-how for sanitation projects.
- Realizing the right to sanitation requires achieving the objective of putting an end to open defecation. If the right to sanitation is not recognized as directed by a legal framework, then building toilets for everyone may only be a temporary fix. Therefore,
- i. there should be “hygiene laws” passed by the state and federal legislatures that make it illegal to defecate in public, particularly in urban areas,
 - ii. toilets with flowing water are a requirement for parking lots, retail centres, markets, dining establishments, educational and financial establishments, communities, gas stations, and outdoor spaces,
 - iii. plans for any private structure or commercial property shouldn't be approved unless restrooms are included, and
 - iv. each local government needs to have sanitary officials who enforce compliance with hygiene laws and impose appropriate sanctions on those who fail to maintain their restrooms.

CONFLICT OF INTEREST

No conflicting interests exist for the authors.

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