



### Global Journal of Research in sMedical Sciences

Volume 02 | Issue 02 | March-April | 2022

Journal homepage: <a href="https://gjrpublication.com/journals/">https://gjrpublication.com/journals/</a>

**Review Article** 

## Negative Effects of Open Defecation on School Education in Nigeria

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Submission Date: 1st April 2022 | Published Date: 29th April 2022

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#### **Abstract**

Open Defecation (OD) is the practice of defecating outside (in an open environment). It is a practice of defecating not in a designated toilet. It occurs in fields, bushes, forests, ditches, streets, canals, or other open spaces. In Nigeria, the practice is common, and usual to find faeces even in cities, and school premises. This had caused Nigeria to ranked as the country with the largest turnout of OD in Africa and second globally after India. OD is been practiced at schools because of reasons, such as; lack of toilets, lack of water, poor awareness, culture and behavior. There are many effects of OD to education in Nigeria. Parable, OD enable diseases (example, diarrhea, trachoma, polio, typhoid, gastroenteritis, botulism etc.) transmissions and in turn impede children's physical ability and cognitive development; it can also prevent children from attending schools (443 million school days are lost every year due to water-related illnesses); it causes drop out especially among girls; hours and days are spent by girls or boys seeking for places to defecate. Moreover, girls that are menstruating have the habits of abandoning schools because of poor sanitation. Children or students might be exposed to wild animals or violence on their way to surf for place to defecate. OD at schools can be control by taking measures: construction and maintenance of enough toilets hardware for males and females, creation of awareness among students and parents, and making laws to provide sanitation at schools.

Keywords: Open Defecation, sanitation, children, education, school, diarrhea, typhoid fever

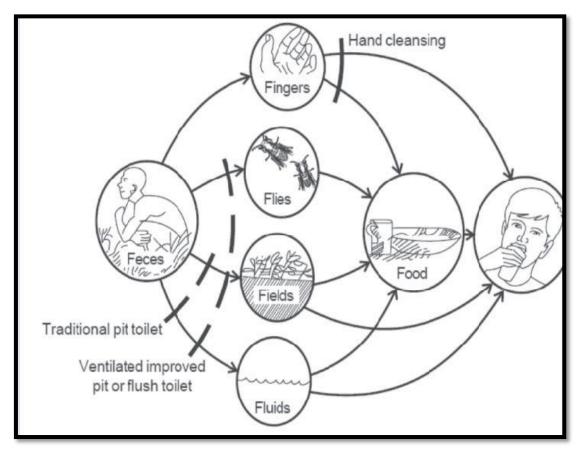
# Introduction

World over, children are entitled to the human rights of sanitation good health, and quality education. Through Sustainable Development Goals, world leaders have promised to deliver these rights for everyone by the year 2030, but current track shows that it is hard achieve this feat. One in five primary schools doesn't have any toilet at all. Children in these schools have to run to somewhere or home or field to defecate, or miss lessons entirely because they are sick or on their period [3, 4].

Nigeria is Africa's most populated country and largest economy in the continent. The unfortunate trend is, progress towards avoiding open defecation is decreasing. Half of the schools failed to provide students with adequate toilets, adding to national water and sanitation crises. In 2016, I Nigeria 63.5% of schools is without sanitation (toilets). In 2015 59,600 child deaths (under 5) occurred because of poor sanitation and contaminated water and 77% of children complete primary education [1, 4, 3, 2]. Pertaining objectives, in the underneath, the effects, and solutions to open defecation at schools are highlighted.

### How OD is a problem?

When a person defecates in the open, the disease causing agents present in the faeces travel from the hand to the mouth in the following manner (Figure 1): Flies, rainwater, contaminated water, wind, hoofs of domestic animals, shoes, children's toys, footballs, etc. are different agents or pathways through which faeces can enter one's home. Faeces can get into the mouth through hands and fingernails, flies on food, fruits and vegetables that have been fallen on or been in contact with faeces and have not been washed, utensils washed in contaminated water, dogs licking people and relations [3]



**Figure-1**: How OD causes problems, adopted from <sup>[3]</sup>.



Figure-2: Faeces Flow Diagram of OD, Adapted From [1]

### **Effects of open defecation (OD)**

#### Health

Due to OD or lack of sanitation millions of school-children suffered episodes of diarrhea. When diarrhea strikes, children become dehydrated and more vulnerable to infection, which can be deadly sometimes. Children who suffered repeated bouts of diarrhea, under nutrition, can be malnourished and stunted [4]. Malnutrition and stunting are responsible for reducing the intelligence quotient of students. Apart from diarrhea other diseases that are transmitted by OD are: topical enteropathy, polio, typhoid fever, Ascariasis, dysentery, trachoma, bookworm etc. When children fall sick, they avoid schools [3].

#### **Safety**

Inadequate school toilets or open defecation is a risk to children's safety. More especially, girls are vulnerable to violence and bullying from classmates and adults <sup>[4]</sup>.

#### Shame and dignity

Having to defecate in the open infringes on human dignity and safety of the school children. Specifically, women and girls are liable to lose privacy and face having to defecate in the open, or have to painfully wait until night falls in the school. Lack of toilets or accessibility to women or girls during menstruation, they remain excluded from opportunities to attend school <sup>[5,6]</sup>.

#### Violence

Boys or girls or women without toilets have to travel to public toilets (in some distances) or bushes. This in turn, increases their chances of being attack by others <sup>[5]</sup>.

#### **Education**

Due to lack of toilet or sanitation, children struggle to complete their education. They are face with related diarrhea; they miss school, and fall behind in class. Practice of OD by children due to lack of toilet at schools can lead to anxiety and stress. In turn discouraging children from attending classes. Lack of sanitation tends to force girls to stay at home or seek for toilets or private space at far places. This increases absenteeism and drop-outs <sup>[5,6]</sup>.

#### Solutions to open defecation in schools

Schools shall teach and motivate students and teachers to practice the three key hygiene behaviors (using improved sanitation facilities, washing hands with soap at critical times, drinking safe water). Key elements of the approach are:

1. Having proper hardware or water/sanitation/hygiene infrastructure and technologies. This means latrines, a water source with water that is safe to drink or the means in schools to make water safe to drink, and soap. Each school should have enough latrines for girls, for boys, and for female and male teachers and other staff. According to WHO recommendations, there shall be one toilet per 25 girls and one for female staff, and one toilet plus one urinal (or 50 cm of urinal wall) per 50 boys and one for male staff. Therein, toilets should have walls and a roof, washable slabs, doors or curtains for privacy, and ventilation to get rid of bad smells. Additionally, anal cleansing materials (paper, leaves, water) and a place to manage used wiping material should be provided. Latrines should also have a broom and other appropriate cleaning materials present. If a school has no latrines, you can start by simply digging temporary pit latrines and designating a fenced off urination area, until more permanent structures are built [1, 3, 2].

Furthermore, there should be a place to wash hands next to each latrine. At the least, a hand washing facility should have a basin, a way to pour or run water over hands, and soap or ash. There are many models for hand washing stations: sinks with taps, buckets of water, basins, and a pour cup, tippy taps made out of old plastic bottles or gourds, etc. Remember that soap or ash must always be available. It is also desirable to have a place for students to wash their hands by the classroom [1,3,2].

Schools should have safe drinking water available for everyone in the school community. WHO recommendations cited 5 liters per student per day. Safe water can come from a piped supply, or if there is no piped water, it can be treated through solar disinfection, boiling, filtering, or chlorination. Drinking water should be stored in clean jerry cans or other containers (one per classroom) with taps to prevent contamination from hands, dirt, or insects. Each student should have a cup or small bottle for his/her own drinking water <sup>[1,3,2]</sup>.

2. Teaching good hygiene and WASH practices inside and out of the classroom. Water, sanitation and hygiene (WASH) lessons can focus only on WASH or be sandwiched into subject areas within the established curriculum. Math, science, reading, language, and art classes all have a spot for WASH. Contamination and treatment of drinking water is a good science lesson. Calculating the quantity of feces deposed into the community environment on a daily, monthly, and yearly basis, if people practice open defecation, is a good math exercise. The important thing is to reconcile the

theoretical to the practical whenever possible because students need to practice the three key hygiene practices. WASH lessons are life skills that are well too many active, participatory, and reality-based teaching and learning methods [1, 3, 2].

3. Working with parents, families, and the community on WASH improvements. Parent inclusion in school WASH activities is a critical aspect of the program. Schools with Parent Teacher Associations (PTAs) can create WASH subcommittees to help organize latrine construction, soap availability, and repairs and maintenance of different WASH facilities. PTA members and, of course, the students can carry the lessons about the importance of WASH to their families and their neighborhood therewith.

School children are effective teachers of their smaller siblings. As part of school WASH or health club activities, students can organize special events that draw the community's attention to WASH and promote the three key hygiene practices in the home. Therewith, activities like WASH fairs, theater or musical performances with WASH themes, etc. can be organized as the culminating event of school club activities in which the students, who have learned about WASH issues in a practical way, present findings or lessons to the community in a meaningful and appealing fashion [1, 3, 2].

# Conclusion

OD at schools can be control by taking measures: construction and maintenance of enough toilets hardware for males and females, creation of awareness among students and parents, and making laws to provide sanitation at schools.

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