

An Investigation of Open Defecation at Female Hostels of Tertiary Institutions in Sokoto, Nigeria

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Abstract

This paper aimed at determining the level of open defecation at hostels of higher institutions in Sokoto. A survey type of study was undertaken. Questionnaire were used to elicit responses from respondents. Also, visual observation of hostels was carried out. The obtained data was managed to use descriptive statistics. The results revealed that the toilets are water closet, 50% were clean, (50.0%) were dirty. Majority of the toilets had no water supply (58.0%), while minority (42.0%) had water supply present. Most of the hostels (58.0%) had enough toilets, while many (33.0%) had few toilets. The number of students per toilet ranges from 2-10. Only 8.3 % had handwashing materials, while 91.7 had no handwashing materials. The number of toilets ranges from 2-12 at hostels. In most (62.5%) of the premises, there was faeces, in some (37.5%) there were no faeces. Demographic properties of respondents in this study show that, some of them are males, while others are females. The educational levels are ND, NCE, and Undergraduate. Most of the respondents (65.2%) engaged in OD, only 17.3% are not engaging in OD. The harms of OD asserted by respondents were spread of diseases (87.0%), climate change (8.6%), and loss of dignity (4.3). Causes of OD mentioned are culture (56.5%), lack of toilets (34.7%), and dirty toilets (8.6%). Solutions to OD as said by respondents are provision of clean toilets (48.0%), provision of enough toilets (26.0%), provision of enough water at toilets (17.3%), and awareness (13.0%).

Conclusively, this study revealed that, there was poor sanitation (toilets) levels and open defecation had been practiced by most of the hostel inhabitants.

Key Words: Female hostels; open defecation; culture; diseases; toilets; fields

Introduction

Open defecation (OD) is the practice of defecating not in a designated toilet. For example, in the field forest, bushes, rivers etc (Ngwu, 2017; Sarkingobir and Sarkingobir, 2017). It is harmful to the environment, reduces tourism, it causes girls (women) to abstain from schools, reduce intelligence etc (Centre for Lagislative Research and Advocacy, 2013). About 1 billion people across the world are doing open defecation. The highest number of people is found in India, then Indonesia, then Pakistan and lastly Nigeria (Sarkingobir and Sarkingobir, 2017). Thus, practically, when an individual defecates in the open, he is eating his faces and causing the public to eat his faces. OD causes several problems.

About 2,000 kids are dying every year due to OD, it facilitates in transmission of diseases such as trachoma, polio, ascariasis, typhoid, hepatitis, intestinal worms, diarrhea etc. Girls experience rape, loss of dignity, infections, violence, in their ways to open defecation. Moreover, they tend to leave classes or schools to search for field to defecate, if there are no toilets (or there are improper toilets) (Mara, 2017; Sarkingobir and Sarkingobir, 2017). Whenever, a person defecates in the open, the microorganism travel to the mouth using the flies to reach the hands, toys, skin, water, shoes etc; thereby causing contamination and infection (Coffey et al., 2014; Sarkingobir and Sarkingobir, 2017).

Furthermore, the importance of schools has been duly appreciated. There are health motives in the school system curriculum to protect the health of students, teachers and other school actors (Sarkingobir et al., 2019a). Because, health is a key factor in



entering and graduating from school.

To maintain health and safer environment, schools at all levels (from primary to tertiary institutions) compulsorily requires, WASH (water, sanitation, and hygiene). Consequently, the world leaders and organizations (such as United Nations, UNICEF, and WHO etc) recognized the importance of WASH at schools. Thereby creating a new term or phenomenon called WASH in schools, to provide proper and enough water, sanitation, and hygiene at schools (Sarkingobir et al., 2019ab).

On otherhand there is urgent need for improvement in girl-child education more especially in the Northern part of Nigeria (where Sokoto lies) (Sarkingobir and Sharu, 2018). Girl-child education is essential for improvement of standard of living female folks, children, and other members of the society. There are other attached benefits of girl-child education. However, one of the leading things that is affecting the girl-child education and the world at large is the issue of shortage/poor of WASH. Girls/women need WASH more than other section of the society because of their reproductive nature (such as menstrual cycle and relations) (Sarkingobir and Sharu, 2018). Open defecation is a militating behavior affecting millions of girls/women, children, and adult throughout the world. There is need for enough hygiene water, toilets, and relations at their schools to aid learning (O'Connell, 2014; Saleem et al., 2019). Whereas, the information revealing the level of open defecation in hostels in Sokoto is very scarce. Therefore, this study is trying to fill this gap. The main objective of this paper was to determine the level of open defecation among hostels of higher institutions in Sokoto, Nigeria.

Materials and Methods:

Study design:

The study design used in this study was cross sectional survey type.

Sampling, Instrument, and Data collection:

In this, simple and data collection was used to collect data. Using a prepared questionnaire validated through pilot study. Therein, 3 higher institutions (Shehu Shagari College of Education Sokoto, Sokoto State University, and Sokoto Polytechnic) were selected and questionnaires were distributed and retrieved from the – participants.

Similarly, visual observation was carried out toward the hostel premises to investigate nature of toilets and OD. Visual observation questionnaires were 38, while respondents' questionnaires were 92.

Data management:

After collection of data, filled questionnaires were analyzed using descriptive statistics to give frequency and percentage.

Results and Discussions:

The results for Investigation of Open Defecation among toilets at hostels of higher institutions in Sokoto were shown in the tables 1,2 and 3 below.

Parameter	Frequency	Percentage %
Type of toilet		
Water closet	48	100.0%
Nature of toilet		
Clean	24	50.0%
Dirty	24	50.0%
Present water supply		
Yes	20	42.0%
No	48	58.0%
Are there enough toilet		
Yes	28	58.0%
No	16	33.0%
No of students per toilet		
Empty	4	8.3%
2	4	8.3%
4	4	8.3%
7	2	4.2%
8	20	42.0%
12	6	12.5%
10	4	8.3%

Table 1: Results of visual observation toilets about OD in of institution in Sokoto.

Parameter	Frequency	Percentage %
Presence of soap in the toilet or hand washing materials		
Yes	4	8.3%
No	42	91.7%
Number of toilets in the hostel		
4	4	8.3%
6	2	4.2%
30	2	4.2%
18	12	25.0%
8	4	8.3%
25	2	4.2%
15	4	8.3%
14	4	8.3%
20	4	8.3%
32		
Nature of toilet		
Modern	34	70.8%
Local	14	29.1%
Presence of faeces		
Yes	30	62.5%
No	18	37.5%

Table 2: Results of assessment of Open Defecation among higher institutions in Sokoto

PARAMETER	FREQUENCY	PERCENTAGE
Sex		
Male	44	48.0
Female	48	52.0
Level of edu		
100	32	34.7
NCE	32	34.7
ND	28	30.4
Practice of OD		
Always	60	65.2
Sometimes	8	8.6
Rarely	8	8.6
Absent	16	17.3



Harms of OD		
Spread dz	80	87.0
Loss of dignity	4	4.3
Change climate	8	8.6
Loss of economics	0	0
Causes of OD		
Culture	52	56.5
Lack of toilets	34.7	34.7
Dirty toilet	8.6	8.6
Solutions to OD		
Provision of enough toilet	24	26.0
Provision of clean toilet	44	48.0
Awareness Provision of enough water	12	13.0
	16	17.3
Commitment		
Yes	36	39.1
No	56	60.8

Table 3: Results of Demography of participants and their responses of OD in tertiary institution in Sokoto State.

The results of Investigation of Open defecation (OD) at hostels of higher institutions in Sokoto, Nigeria were shown in the tables 1,2, and 3. Table 1 revealed the visual observation of toilets at hostels in higher institutions in Sokoto. The toilets are water closet, half were clean, and half were dirty (50.0%). Majority of the toilets had no water supply (58.0%), while minority (42.0%) had water supply present. Most of the hostels (58.0%) had enough toilets, while many (33.0%) had few toilets. The number of students per toilet ranges from 2-10.

In table 2, some results assessing OD in higher institutions toilets are shown. Only 8.3 % had handwashing materials, while 91.7 had no handwashing materials. The number of toilets ranges from 2-12 at hostels. In most (62.5%) of the premises, there was faeces, in some (37.5%) there were no faeces

Table 3 shows the responses and demographic properties of respondents in this study. Some of them are males, while others are females. The educational levels are ND, NCE, and Undergraduate. Most of the respondents (65.2%) engaged in OD, only 17.3% are not engaging in OD. The harms of OD asserted by respondents were spread of diseases (87.0%), climate change (8.6%), and loss of dignity (4.3). Causes of OD mentioned are culture (56.5%), lack of toilets (34.7%), and dirty toilets (8.6%). Solutions to OD as said by respondents are provision of clean toilets (48.0%), provision of enough toilets (26.0%), provision of enough water at toilets (17.3%), and awareness (13.0%).

Access to clean water, sanitation and hygiene (WASH) is essential at schools, particularly for girls/ ladies. Contaminated water, poor sanitation (toilets), poor hygiene, increases the risks of diseases, making it difficult for girls/ ladies to enroll, stay, learn at school to be educated. This is a greater challenge for girls, especially the menstruating ones, as they face barriers to enroll, stay, learn, and perform at schools.

From table 1 and 2, there was poor WASH. 50% of toilets are dirty, and most of the toilets had no handwashing hygiene materials. This is similar to findings elsewhere as reported by McMichael (2019), Sarkingobir et al., (2019ab), Institute for

Fiscal Studies (2020).

In table 3, the demographics of respondents were revealed. It shows that the respondents are aware of the demerits of OD, and ways to solve the issue. Ways of causing OD are problems of toilets availability, neatness of toilets, and water supply. This is similar to findings elsewhere Institute for Fiscal Studies (2020), Ullah (2020). Thus, more toilets, enough water, handwashing materials and proper maintenance should be provided.

Conclusion:

Conclusively, this study revealed that, there was poor sanitation (toilets) levels and open defecation had been practiced by most of the hostel inhabitants.

Recommendations:

Toilets are very significant to maintain the health of school actors and the public. It can be recommended based on this study that:

1. The management of higher institutions or governments should provide adequate toilets at school environment (in hostels and school premises), more especially at female hostels. These toilets can also be built by school organizations such as Students Union Governments, Muslim Students Society and relations.
2. There should be proper awareness among students on dangers of opens Defecation to public health. Teachers and unions should engage in massive campaigns against poor sanitation and hygiene as called by school curriculum.
3. There should be enrollment of enough staff to clean toilets regularly. Students are also enjoined to support in cleaning their environment
4. Walk of shame should be used to invite students to cleanliness in their toilets or environments.

References:

1. Centre for Lagislative Reearch and Advocacy (2013). Open defecation: this is also your business. Policy brief No 20,2013, august-september.
2. Coffey, D. Gupta, A., Hathi, P., Khurana, N., srivastav, N., Vyas, S., Spears, D., (2014). Open defecation: evidence from a new survey in rural north India. Economic and Political Weekly (EPW), xlix (38): 43-55.
3. Mara, D. (2017). The elimination of open defecation and its adverse health effects: a moral imperative for governments and development professionals. Journal of water, Saniattion and Hygiene for Development, 7(1): 1-13.
4. McMichael, C. (2019). Water, sanitation, and hygiene (WASH) in schools in low-income countries: A review of evidence of impact. International Journal of Educational Research and Public Health, 16(359): 1-21.
5. Ngwu, I.U. (2017). The practice of open defecation in rural communities in Nigeria: a call for social and behavior change communication intervention. International Journal of Communication Research ,7(10): 201-206
6. O'Connell, K. (2014). What influences open defecation and latrine ownership in rural households? Findings from a global review. Water and Saniattion Program Working Paper
7. Routray, P. Schmidt, W. Boisson, S. Classen, T. & Jankins, M.W. (2015). Sociocultural and behavioural factors



- constraining latrine adoption in rural coastal Odisha: an
8. Saleem, M. Burdett, T. & Heaship, V. (2019). Health and social impacts of open defecation on women: a systematic review. *BMC Public Health*, 19(158): 2-12
 9. Sarkingobir, Y. & Sarkingobir, S. (2017). Open defecation, a threat to public health and sustainable development goals: a case study of Gwadabawa local government, Sokoto state, Nigeria. *International Journal of Medical and Biosciences*, 1(1):28-37.
 10. Sarkingobir, Y., Sharu, A.U., Zayyanu, M.M. (2019a). Survey of water, sanitation, and hygiene (WASH) among primary schools in Sokoto state. *International Journal of Educational Research and Studies*, 1(3):1-5.
 11. Sarkingobir, Y. Nahantsi, M.S. Yarima, S.A. Adili, S.I. Bello, M.M. & Malami, Z. (2019b). Assessment of Safety Practices among Modern Barbers in Gwadabawa Local Government, Sokoto State, Nigeria. *Journal of Applied Science and Environmental Management*, 23(3): 407-410.
 12. Ullah, P.Z., Batool, Z., & Shabbir, M. (2020). Social impediments of public health practices among females in rural Faisalabad, Punjab. *Pakistan Global Regional Review*, 5(2):53-60.
 13. World Vision (n.d.). Water, sanitation, and hygiene in schools.

exploratory qualitative study. *BMC Public Health* ,15 :880.