



Students' Sanitation Practices in Lagos: A Case Study of Selected Secondary Schools in Ifako Ijaye Local Government Area, Lagos State

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Received: 📅 March 20, 2020

Published: 📅 June 17, 2020

Abstract

The study investigates availability and adequacy of sanitation practices on learning in selected secondary schools in Ifako Ijaye local government area of Lagos State, Nigeria. In order to select the secondary schools which, the study was cover, stratified sampling was employed to select 192 students in public and private secondary within the study area. The result of the findings revealed that there is variation in terms availability and adequacy of sanitation facilities across schools within the study area, and that highest percent of students' claimed of washing hand twice, majority of school (85.3%) means of waste disposal was un-sustainable (open burning) detrimental to students health and well-being. In light of this, the study concludes that environmental sanitation facilities are available in both public and private schools selected in the study area but differs in term of quantity and quality. This calls for improve and increase sanitation facilities in the affected schools, rules and regulations, health educating parent on sanitation and health and development of maintenance strategy so as to make the facilities maintain their initial condition as at the time of installation.

Introduction

Improving sanitation facilities and promoting hygiene in schools' benefits both learning and the health of the students (Vivienne, 2014). Child-friendly schools that offer private and separate toilets for boys and girls, as well as facilities for handwashing with soap, are better equipped to attract and retain students, especially girls [1]. Where such facilities are not available, girls are often withdrawn from school when they reach puberty. Inadequate sanitation facilities are common in residential, commercial and public places such as motor parks, market, and playground including schools. The study UNICEF [2] found that large numbers of both urban and rural schools still lack access to adequate sanitary facilities like latrines and handwashing facilities. The condition of environmental sanitation in schools where students learn is poor in developing world as they are characterized with inadequate toilet facilities [3]. Considering the fact that students spend most of their time in

school (approximately 9 hours daily), this gives them enough time to interact and play with friends from different homes with varying socio-economic background. Thus, availability and free access to sanitation facilities such as toilets, washing hand basin and water among others are crucial.

Studies have shown that lack of adequate sanitation facilities in schools lead to high rates of absenteeism, poor academic performance and reduced retention rates especially amongst girls [4] students of secondary schools, if taught the basics, principles, importance and practices of environmental sanitation in school will help to diffuse and impact knowledge to people outside the school, immediate family inclusive. Thus, this study attempts to investigate availability and adequacy of sanitation practices on learning in selected secondary schools in Ifako Ijaye local government area of Lagos State, Nigeria.

Literature Review

By "good sanitation" at school is meant that every students' should have ready access to a convenient and well-maintained facility for the safe disposal of human waste, suitable anal cleansing materials, most important the means to effectively wash hands with soap after defecation must be provided and used (World Health Organization, 2019). Sanitation encompasses the isolation of human excreta from the environment, maintenance of food and personal hygiene, safe disposal of solid and liquid wastes, safe drinking water chain and vector control [5].

Studies had pointed down the benefits of environmental sanitation practices in relation to the health, productivity and welfare of the people, and its goals in developing, maintaining clean, safe, and pleasant physical well-being of its inhabitant. Apart from high mortality rates caused by water and sanitation diseases, these diseases also account for high morbidity resulting in low productivity, high rate of absenteeism from work and high drop-out rates from schools especially among girls and children. These studies focused on the health implication of unsanitary environment without considering the environmental sanitation behaviors [6].

Agunloye and Olatubosun [7] examined the level of adequacy level of environmental sanitation facilities in Ado-Ekiti. But it also underlines the fact that most households in the study community with sanitation facility had breadwinners in highly remunerative employment. However, the study used waste management and toilet facilities as a measure to access environmental sanitation in the study area without considering other aspects such as the maintenance of these environmental sanitation facilities, and environmental sanitation behaviors of the students. He concluded that the present states of environmental sanitation in all the schools are not satisfactory due to inadequate provision of potable water supply, hygiene education and sanitation. This study covers an important area of environmental sanitation which includes water, sanitation and handwashing facilities. Hence, school sanitation comprises those activities carried out in schools to protect the pupils and staff from the adverse effect of an unsanitary and unsafe school environment. Hence, this study, therefore, examined the availability and adequacy of environmental sanitation practices among secondary school students in Ifako Ijaiye local government area [8].

Methodology

The sample frame for this study includes students of both public and private secondary schools in the selected schools in Ifako-Ijaiye Local Government Area. Thus, in order to select the secondary schools which, the study was cover schools were clustered based on ownership (private and public) in the local government area. From this cluster, as presented in Table 1 a total of four (4) schools were sampled in the local government area which consists of two

(2) public secondary schools and two (2) private secondary schools so as to have adequate representation from the two categories of secondary schools. In each school selected, 8 students in each class from JSS1 to SS3 will be selected randomly (Private and Public) which account for 48 students in each school. Descriptive statistics such as cross-tabulation were used in explaining students' socio-economic attributes, available environmental sanitation facilities and services and the level of environmental sanitation awareness among the students [9-10].

Table 1: Selected Schools in Ifako Ijaiye Local Government Area.

School Ownership	Selected Schools	Total Number of students	Number of students sampled
Public Schools	Iju Jnr & Ser. Grammar School	2400	48
	Vetland Jnr & Snr. Grammar School	1090	48
Private Schools	Normal College	151	48
	Dream Maker's International School	155	48
Total		3796	192

Result and Findings

This section discourses findings based on the data collected from the field survey conducted in the secondary schools in Ifako Ijaiye local government area of Lagos State. All tables in this section are from the field survey (2019), except otherwise stated.

Students' Socio-economic and Background Characteristics

This section contains background information of the students in the selected secondary schools in the study area. The socioeconomic information includes Gender, Age, Class of Respondents and Population of class. Presented in Table 2 is the gender distribution of respondents in the selected schools. From the table, it is clear that there are more female respondents who are 52.1% of the total population of respondents. In the private schools, 40.6% and 59.4% of the respondents were female respectively while the public schools accounted for 55.2% and 44.8% of the respondents as male and female, respectively. This indicates that both genders were adequately represented in this research, which gives the opportunity to examine environmental sanitation practices in the study area based on gender perspective [11].

Table 2: Gender of Respondents.

Type of School		Gender		Total
		Male	Female	
Private	Count	39	57	96
	%	40.60%	59.40%	100.00%
Public	Count	53	43	96
	%	55.20%	44.80%	100.00%
Total	Count	92	100	192

Table 3 contains information on the age distribution of respondents which is very important in determining the level of sanitation that one can carry out without assistance. As presented in the table, shows that total respondents are between 9-13 and 14-18 years of age as they accounted for 49.0% and 49.0% each,

respectively. In the private schools, 59.4% ranged between 9-13, 39.6% ranged between 14- 18, while 1.1% is between the range of 19 and above. In the public schools, 38.5% are between the range of 9-13, 58.4% are between the age of 14- 18 while 3.1% are between the age of 19 and above respectively [12-15].

Table 3: Age of Respondents.

Type of School		Age			Total
		13-Sep	14 - 18	19 & Above	
Private	Count	57	38	1	96
	%	59.40%	39.60%	1.00%	100.00%
Public	Count	37	56	3	96
	%	38.50%	58.40%	3.10%	100.00%
Total	Count	94	94	4	192
	% of Total	49.00%	49.00%	2.00%	100.00%

Presented in Table 4 is the class of respondents selected for the study. The classes selected for the study is from JSS1 to SS3 respectively and it shows that 16 students were selected in each class with 16.7% each. This indicates that there is no significant difference in the number of students selected in each class with the chi-square result with p-value= 1.000. Presented in Table 5 is the population of students in each class selected for the study. The

table revealed that half (50%) of the total respondents have their class population ranged between 26-50. Furthermore, 12.5% of the respondents' population ranged between 1-25, 40% of respondents have a population of 56-75 and 16.7% of the respondents have a population of 76 and above. Further analysis revealed that there is a significant difference in the population of each class selected with the result of chi-square result having p-value = 0.000.

Table 4: Class of Respondents.

Type of School		Class of Respondents						Total
		JSS1	JSS2	JSS3	SSS1	SSS2	SSS3	
Private	Count	16	16	16	16	16	16	96
	%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	100.00%
Public	Count	16	16	16	16	16	16	96
	%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	100.00%
Total	Count	32	32	32	32	32	32	192
	% of Total	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	100.00%

Table 5: Number of Students in Class.

Type of School		Population of Class				Total
		25-Jan	26-50	51-70	76 & Above	
Private	Count	24	64	8	0	96
	%	25.00%	66.70%	8.30%	0.00%	100.00%
Public	Count	0	32	32	32	96
	%	0.00%	33.30%	33.30%	33.30%	100.00%
Total	Count	24	96	40	32	192
	% of Total	12.50%	50.00%	20.80%	16.70%	100.00%

Availability of Environmental Sanitation Facilities and Services in Schools

This section gives account and findings on the available environmental sanitation facilities and services in the selected schools in the study area. As presented in Table 6 shows that both public and private secondary schools have access to the water closet as the type of toilet facility. This means that there is no

difference in the type of toilet facility used in both private and public secondary school in the study area. In the private schools, 61.5% of the respondents identified tap water as the main source of water supply, 1.0% identified well water as the source of water available, 34.4% identified borehole as the source of water supply available while 3.1% of the respondents claimed they have other means of water supply. In the public schools, 44.8% of the respondents

identified tap water as the main source of water supply, none of the respondents identified well water as the source of water available, 55.2% identified borehole as the source of water supply available

and none of the respondents claimed they have other means of water supply [16].

Table 6: Source of Water Supply.

Type of School		Source of Water Supply				Total
		Tap Water	Well Water	Bore Hole	Others (bottle and sachet ater)	
Private	Count	59	1	33	3	96
	%	61.50%	1.00%	34.40%	3.10%	100.00%
Public	Count	43	0	53	0	96
	%	44.80%	0.00%	55.20%	0.00%	100.00%
Total	Count	102	1	86	3	192
	% of Total	53.10%	0.50%	44.80%	1.6%	100.00%

As presented in Table 7 is the source of electricity supply that is available in the selected schools. Considering the total responses on the source of electricity shows that the main source is Power Holding Company of Nigeria (PHCN) with 89.1% of the total responses. In the private schools, 78.1% identified PHCN as

their source of electricity supply, 15.6% identified generator as their source of supply while 6.3% claimed there was no electricity supply. In public schools, 100% of the respondents identified PHCN as their source of electricity supply while there was no response to other options [17].

Table 7: Source of Electricity Supply.

Type of School		Electricity Supply			Total
		PHCN	Generator	No Supply	
Private	Count	75	15	6	96
	%	78.10%	15.60%	6.30%	100.00%
Public	Count	97	0	0	96
	%	100.00%	0.00%	0.00%	100.00%
Total	Count	171	15	6	192
	% of Total	89.10%	7.80%	3.10%	100.00%

Presented in Table 8 is the condition of the toilet that is available in selected schools. In the private schools, 44.8% claimed the toilet available to them in the school is in a very good condition, 45.8% claimed their toilet is in good condition, 9.4% claimed their toilet is fair in condition while none of the respondents claimed that they have a bad toilet. In the public schools, 7.3% claimed the toilet available to them in the school is in a very good condition, 29.2%

claimed their toilet is in good condition, 49.0% claimed their toilet is fair in condition and 14.6% claimed that they have a bad toilet. This indicates that the private schools have access to a better toilet than the public schools which was confirmed by the chi-square result with p-value= 0.000 confirmed that there is a significant difference in the condition of selected of private and public schools toilet.

Table 8: Condition of Toilet.

Type of School		Condition of Toilet				Total
		Very Good	Good	Fair	Bad	
Private	Count	43	44	9	0	96
	%	44.80%	45.80%	9.40%	0.00%	100.00%
Public	Count	7	28	47	14	96
	%	7.30%	29.20%	49.00%	14.60%	100.00%
Total	Count	50	72	56	14	192
	% of Total	26.00%	37.50%	29.20%	7.3%	100.00%

Presented in Table 9 is the rating of the quantity of water available supplied in the selected schools. The supply of water according to the respondents shows that of the total responses,

the condition of water supply is good with the highest percentage of 38.5% of all options. In the private schools, 62.5% claimed they had access to a very good supply of water, 37.5% claimed they had

access to a good supply of water while there was no response on fair and bad in this category. In the public schools, 3.1% claimed they had access to a very good supply of water, 39.6% claimed they had access to a good supply of water, 37.5% claimed they had access

to fair supply of water while 19.8% claimed they have a bad supply of water. Chi-square result with p-value = 0.000, indicates that there are significant differences in the quantity of water supplied in selected public and private school [18].

Table 9: Condition of the Quantity of Water Supplied.

Type of School		Condition of Water Supply				Total
		Very Good	Good	Fair	Bad	
Private	Count	60	36	0	0	96
	%	62.50%	37.50%	0.00%	0.00%	100.00%
Public	Count	3	38	36	19	96
	%	3.10%	39.6%	37.50%	19.80%	100.00%
Total	Count	63	74	36	19	192
	% of Total	32.80%	38.50%	18.80%	9.9%	100.00%

Presented in Table 10 is the rating of the quality of water supplied in the selected schools. The quality of water according to the respondents shows that of the total responses, the quality of water supplied is good with the highest percentage of 41.7% of all options. In the private schools, 56.3% of the respondents claimed the water quality is very good water, 43.8% claimed the water quality supplied is good and there was no response on fair and bad in this category. In the public schools, 12.5% claimed the

water quality is very good, 39.6% claimed the water quality is good, 41.7% claimed the water quality is fair and 66.3% claimed the water quality is bad. The table revealed that private schools have access to better water compared to public schools in the study area. This was confirmed by the chi-square result with p-value = 0.000, which indicates that there is a significant difference in the quality of water between public and private schools in the study area.

Table 10: Quality of Water Supplied.

Type of School		Quality of Water Supply				Total
		Very Good	Good	Fair	Bad	
Private	Count	54	42	0	0	96
	%	56.30%	43.80%	0.00%	0.00%	100.00%
Public	Count	12	38	40	6	96
	%	12.50%	39.6%	41.70%	6.30%	100.00%
Total	Count	66	80	40	6	192
	% of Total	34.40%	41.70%	20.80%	3.10%	100.00%

As presented in Table 11 is the information on the availability of water supply in toilets. From all indications, the majority of the respondents (55.2%) of the total respondents claimed that they do not have access to water supply running in toilets of the selected schools. In the private schools, 89.6% claimed to have access to water running in toilets of their schools while 10.4% claimed they

do not have access to water running in toilets of their schools. In the public schools, none of the respondents claimed they have access to water running in the toilets of their schools 100.0% claimed they do not have access to water running in toilets of their schools. This shows that public schools lack water running in the toilets of their schools which can affect effective sanitation practice by students.

Table 11: Availability of Water Supply in Toilet.

Type of School		Availability of Water Supply in Toilet		Total
		Yes	No	
Private	Count	86	10	96
	%	89.60%	10.40%	100.00%
Public	Count	0	96	96
	%	0.00%	100.00%	100.00%
Total	Count	86	106	192
	% of Total	44.80%	55.20%	100.00%

As presented in Table 12 is the information on the availability of washing basin and soap in toilets of selected schools. There is a clear indication that 87.5% which is the majority of the total respondents claimed that they do not have access to washing basin and soap in toilets of the selected schools. In the private schools, 20.8% of the respondents claimed to have access to washing basin and soap in toilets of their schools while 79.2% claimed they do not have access to washing basin and soap in toilets of their schools. In the public schools, 4.2% claimed to have access to washing basin

and soap in toilets of their schools while 95.8% claimed they do not have access to washing basin and soap in toilets of their schools. This shows that the public schools lack washing basin and soap their toilets compare to that of private schools. Further statistics using chi-square result giving p-value=0.000, revealed that there is a significant difference between public and private schools on the availability of washing basin and soap in toilets which may affect proper environmental sanitation practices among student.

Table 12: Availability of Washing Basin and Soap in Toilet.

Type of School		Availability of Washing Basin and soap in Toilet		Total
		Yes	No	
Private	Count	20	76	96
	%	20.80%	79.20%	100.00%
Public	Count	4	92	96
	%	4.20%	95.80%	100.00%
Total	Count	24	168	192
	% of Total	12.50%	87.50%	100.00%

Table 13 contains the information on the type of toilet that students make use of at their various homes. It was revealed that a higher percentage of students (61.5%) make use of a water closet toilet at their various residences. In the private schools, 79.2% of the respondents identified water closet as the type of toilet used in their residence, 18.8% identified pi latrine as the type of toilet used in their residence while 2.1% claimed they make use of mobile toilets at home. In the public schools, 43.8% identified water closet as the

type of toilet used in their residence, 55.2% identified pi latrine as the type of toilet used in their residence while just 1.0% make use of mobile toilets at home. This is an indication that students of the private school have access to a better toilet at home compared to public school students which may make the knowledge, awareness and practice vary too. The chi-square result confirmed this with p-value= 0.000, indicates that there is a significant difference in the type of toilet used by students at home [19].

Table 13: Type of Toilet Used at Home.

Type of School		Type of Toilet Used at Home			Total
		Water Closet	Pit Latrine	Mobile Toilet	
Private	Count	76	18	2	96
	%	79.20%	18.80%	2.10%	100.00%
Public	Count	42	53	1	96
	%	43.80%	55.20%	1.00%	100.00%
Total	Count	118	71	3	192
	% of Total	61.50%	37.00%	1.60%	100.00%

Presented in Table 14 is the source of water the students have access to at their various residence. From the table, it is clear that the majority of the students (45.8%) have access to tap water. In the private schools, 47.9% claimed to have access to tap water at home, 4.2% claimed to have access to well water and 47.9% have access to borehole water at their various residence. In the public schools, 43.8% claimed to have access to tap water at home, 35.4% claimed to have access to well water and 40.8% have access to

borehole water at their various residence. It can be deduced that private school students have access to a better source of water at home compared to public school students. Further analysis revealed that there is a significant difference in the source of water used at home by students of private and public school, with chi-square p-value of 0.000. This can determine the rate at which students at the school's contract water-borne diseases [20].

Table 14: Source of Water Supply at Home.

Type of School		Source of Water Supply at Home			Total
		Tap Water	Well Water	Bore Hole	
Private	Count	46	4	46	96
	%	47.90%	4.20%	47.90%	100.00%
Public	Count	42	34	20	96
	%	43.80%	35.40%	20.80%	100.00%
Total	Count	88	38	66	192
	% of Total	45.80%	19.80%	34.40%	100.00%

Recommendation and Conclusion

Summary of Findings

On the socio-economic and demographic characteristics of the students in the selected public and private schools, the study showed that majority of the students (52.1%) are female, there was variation also in the class population of students in the selected schools as the greater percentage of the respondents (50.0%) are between 26 - 50 students per class. Environmental sanitation facilities and services that were available in the selected secondary schools in the study area was also examined. The water closet was the only type of toilet that was identified in the selected secondary schools. Also, it was revealed that 53.1% of the total respondents had access to tap water while 44.8% of respondents had access to borehole as the source of water and both were the main sources of water as identified by respondents.

The study also revealed that more than half of respondents (55.2%) affirmed that there is no water supply in their toilets and 87.5% of the total respondents claimed they do not have washing basin and soaps in the toilet. The greater percentage of the respondents (35.9%) claimed they wash hands twice during school period and 37.5% of the respondents claimed that their toilet is in good condition while 29.2% claimed the toilets are fair in condition. Waste disposal method in the selected schools revealed that the use of Local Government van form of disposal practice accounted for 85.3% in the selected schools while the use of open burning, dumping outside school premises and open spaces accounted for 12.0%, 0.9%, 1.8% respectively which shows that the major disposal method adopted in the study area is the use of Local Government van. The students were also asked to identify the environmental sanitation facilities available in their various homes. The study revealed that the highest percentage of respondents (61.5%) was using flush toilets in their homes. Also, it was discovered that 45.8% of the total respondents had access to tap water, while 34.4% and 19.8% accounted for respondents that had access to well water and borehole respectively [21-23].

Conclusion

Based on the findings, it was revealed that environmental sanitation facilities are available in both public and private schools selected in the study area but differs in term of quantity and quality.

Hence, the quality of the facilities in public schools is in a poor state compared to that of the private school due to the maintenance behavior that differs between both categories as a result of the ownership type. Furthermore, findings from the study revealed that there were five major problems confronting the selected schools except that of a bushy environment which is present in the public but absent in the private schools. These are insect and pest, dirty gutter, dirty toilet, littered ground and bushy environment. From the findings, the following recommendations were made as suggesting measures that can be adopted to improve environmental sanitation and hygiene practices quality in secondary schools.

Recommendations

Improvement and Increase in Sanitation Facilities: The school authority needs to improve in the provision of quality sanitation facilities such as water supply, toilet, and accessories. The water supply situation in both the public and private secondary schools selected needs to be adequately improved. Thus there should be a standard that should be followed as regards the provision of facilities in schools so as to make both private and public school students have access to the same type of facility. Also, the government should make water run in the toilets and other strategic points of the schools also should mandate it for the private schools to do the same. This will also make sanitation practice effective in schools. This will help in preventing students from contracting diseases that might be caused by unsanitary behavior. Additional toilets should be constructed so as to make the number of toilets adequate for the total number of students in the schools. It was observed that the numbers of toilets available to the students are not enough for the total population.

Rules and Regulations: The school authority of both private and public schools should design rules and regulations that students will adhere to strictly so as to make them practice the sanitation activities as expected. Failure to comply should attract a fine; this will also help to curb the unwilling attitude of students to perform sanitation activities as expected to. **Health Educating Parents on Sanitation and Health Issues:** The school authority should organize a lecture in form of a seminar for the parents so as to extend the effective sanitation practices to the homes of each student so as not to limit it to schools. This could take a few minutes of the Parent

Teachers Association (PTA) meetings that comes up severally in a term. Maintenance Culture of Facilities: Maintenance strategy should be developed in a periodic manner so as to make the facilities maintain their initial condition as at the time of installation.

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