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Original Research Article

Constraints to Environmental Hygiene Practices among Boarding Students in Awka-South L.G.A of Anambra State

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Abstract

This study investigated constraints to environmental hygiene practices among boarding students in Awka-South L.G.A of Anambra State. Three research questions and two hypotheses guided the study which adopted descriptive e survey research design. The population for this study consisted of the 5336 boarding students (2,348 male and 2,988 female) in the 10 secondary schools in Awka-south Local Government Area of Anambra State. A multi-stage sampling procedure was adopted to draw the sample size of 800 boarding students. A questionnaire designed by the researcher entitled: "Constraints to Environment Hygiene Practices among Boarding Students Questionnaire (CEHPABSQ)" was used for data collection. The instrument was properly validated and a reliability index of 0.76 was obtained using Cronbach Alpha. Data generated were analysed with mean and standard deviation to answer the research questions while z-test was used to test the hypotheses at 0.05 level of significance. Results of the study revealed that constraints to environmental hygiene practices to include inadequate provision and maintenance of sanitary facilities by school authorities with aggregate mean scores of 2.90 > 2.5 criterion mean. Based on these findings, it was concluded that school authorities and parents should address environmental constraint without any compromise for promotion of good health of the students. Based on the conclusion the following recommendations were proffered; school authorities should ensure that there is constant water supply in their schools for good environmental hygiene practices.

Keywords: Environment Hygiene Practices, Cronbach Alpha, z-test, water supply.

INTRODUCTION

Environmental hygiene have continued to be public health concern in developing countries of the world including Nigeria. Hygiene generally refers to the set of practices associated with the preservation of health and healthy living (Kumar & Akoijam, 2015). It is the practice of keeping oneself and one's living conditions and areas clean, in order to prevent illness and diseases (Hornby, 2014).

Environmental hygiene is the practical prevention and control measures used to improve the basic environmental conditions affecting human health (European Environmental Agency, 2001). Environmental hygiene is the branch of public health that is concerned with the control of all those factors in mans' surroundings or physical environment which may have effect on human health and we llbeing (Abdulrahman, 2014). Therefore, environmental hygiene is a special way of taking care of the boarding school environments to prevent and control diseases, infections and improve a healthy living among students within the school premises. Environmental hygiene challenges occur due to rapid Urbanization and development, the natural resources and environment are threatened. It makes the urban areas and entire environment we live today faces a range of environmental health challenges which include contamination of natural air, water and soil.

Environmental health is associated with recognising, assessing, understanding and controlling the impacts of people on their environment and the impacts of the environment on the public (Nath, 2013). Environmental hygiene is an essential part of environmental health. Environmental health is a part of public health where the primary goal is preventing disease and promoting people's health. Environmental hygiene is an essential part of environmental health. Environmental health is a part of public health where the primary goal is preventing disease and promoting people's health. Environmental health is associated with

recognising, assessing, understanding and controlling the impacts of people on their environment and the impacts of the environment on the public (Nath, 2013).

Environmental hygiene is the practices or conditions that help preserve health is the environment (Ayinde, 2020). Environmental hygiene is a group of activities that aim to protect people from dangerous conditions arising from unsanitary shelters, air supplies or bodily nourishment centers. These conditions include unsanitary water supplies, waste disposal systems, food sources and temporary or permanent housing structures. Environmental hygiene entails the effective cleaning of surface using appropriate products, decontamination of medical equipments and devices used in patient-care procedures, safe and appropriate handling of sharp objects. Environmental hygiene is the practical prevention and control measures used to improve the basic environmental conditions affecting human health (European Environmental Agency, 2001). Environmental hygiene includes in general activities of disinfection (to control the bacteria and organisms which are harmful to health), fumigation, disinfections and rodent control.

The major environmental hygiene challenges are associated with the widespread of poverty, lack of knowledge, lack of sanitary facilities, lack of infrastructure and practices such as access to good drinking water, sanitation and lack of health care as well as emerging problems of industrial pollution (Remoundou & Koundouri, 2004). The boarding secondary schools students face mainly the environmental hygiene challenge of sanitation.

Sanitation system aim to protect human health by providing a clean environment that will stop the transmission of disease especial the face-oral route (Susana, 2008). The collection, transport, treatment and disposal or reuse of human excreta, domestic waste water and solid waste are associated with hygiene promotion (Evan, Vander Voorden & Peal, 2009). In order to achieve proper environmental sanitation practices, good sanitation behaviour and availability of facilities and services must work in unison (Mmorn & Mmom, 2011). Adequate environmental sanitation practices are more than just an inconvenience, it allows users knowledge and experience to the design and management of facilities and services and also to increase the likelihood that the services will be used sustainably. Poor sanitation is linked to transmission of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid and polio and exacerbates stunting (WHO, 2019).

Sanitation is defined by WHO (2007) as the promotion of hygiene behavior and the prevention of disease and other consequences of ill-health, relating to environmental factors. It is a measure taken to protect public health through proper solid waste disposal, sewage disposal and cleanliness during food processing and preparation (Protos Uganda, 2005). It also involves the maintenance of public health and hygiene especially the water supply, sewage system and garbage collection and disposal. Hygiene and sanitation related diseases are a huge burden in developing countries, causing many people to fall ill even to die (UNICEF, 1998).

Sanitation system aim to protect human health by providing a clean environment that will stop the transmission of disease especial the face-oral route (Susana, 2008). This sanitation system includes the capture, storage, transport, treatment and disposal or reuse of human excreta and waste water. The reuse activities within the sanitation system focus on the nutrients, water, energy or organic matter contained in excreta and wastewater (Gates Foundation, 2010). This process of reuse activities is refers to as sanitation value chain or sanitation economy (Paranipe, 2017).

Types of sanitation

There are different types of sanitation which include:

Basic Sanitation: That refers to the management of human feaces at the household level. It implies assessment of toilet. Basic sanitation is very important in all places and environments especially schools (Nwakile, Eze & Okanya, 2017). School sanitation refers to hygienic practices that occur in school. Coppens (2005) describe school sanitation and hygiene education as the combination of hardware and software components that are necessary to produce a healthy school environment to develop or support safe hygiene's behaviour.

Onsite sanitation: Onsite sanitation deals with collection and treatment of waste at the place where it is deposited. It is a system that is optional which treat the waste at source rather than dealing with it several miles away in a centralized manner (Seetha, 2015).

Food sanitation: Food sanitation is refers to the hygiene measures for ensuring safety food. Food hygiene is similar to food sanitation because the both entail obtaining and eating clean and safety healthy food. The poor state of food sanitation in the country has been shown to play a vital role in the etiology of food borne disease (Banga, 2015).

Housing sanitation: House sanitation refers to safeguarding the home and environment where people live and carry out their daily activities.

Ecological sanitation: Ecological sanitation is the meaning of recycling the nutrition from human and animal wastes to the environment. Akut sustainable sanitation, (2014) is cited in Sanni (2005), gives further explanation on ecological sanitation as he abbreviated to ecosan is an approach rather than a technology or a device which is characterized by a desire to "close the loop" (mainly for the nutrients and organic matters) between sanitation and agriculture in a safe manner.

Ecosan systems safely recycle excreta resources (plant nutrients and organic matter) to crop production in such a way that the use of non-renewable resources is minimized. He further said that Ecological sanitation system provide a hygienically safe, economical and closed loop system which converts human excreta into nutrients to be returned to the soil and water to be returned to the land if designed properly and operated.

Environmental Sanitation

This is the control of all the environmental factors that links to the transmission of disease of any kind. It includes industrial waste treatment, water and waste water treatment, solid waste management, pollution and noise control. Environmental sanitation is fundamental to health and development in schools because having healthy school environments sets schools on track for conducive and active learning (Igwe, Okezue, Nwaduru, Ezebuka & Ginikanwa, 2017). Environmental sanitation according to World Health Organization (WHO, 2008) definition is the control of all those factors in man's physical environment which exercise may effect on his physical development, health and survival. Vivienne (2014), also defines environmental sanitation as the practice of collection, reuse and disposal of human excreta and domestic wastes with the aim of protecting the school health. The concept of environmental sanitation entails the control of water supply, excreta disposal, waste water disposal, refuse disposal, vector of diseases, housing conditions, food supplies and the safety of the working environment (Acheampong, 2010).

Therefore, Environmental sanitation is the art and science of applying sanitary, biological and physical science principles and knowledge to improve and control the environment and factors therein for the protection of the health and welfare of the public. The effective environmental sanitation in cities is a function of positive environmental behaviour and availability of facilities and services (Mmom & Mmom, 2011). Atasoy (2005), stated that environmental deterioration, extinction or pollution in man vital earth system such as Air, water, soil, forest and biological diversity have required so many countries to develop some promote global cooperation on these issues

The poor environment sanitation practices exhibited in the disposal of solid waste, waste water and excreta, cleaning of drainage including personal, household and community hygiene significantly contribute to mortality of infant and children (Mmom & Mmom, 2011). They pointed out that the incidence of many diseases are reduced when people have access to and make proper use of adequate sanitary installations. As poor sanitary conditions of our environment provide a good breeding ground for disease pathogens, it also leads to the spread of diseases in most tropical areas like Nigeria. Some of the tropical diseases that have been difficult to control around us are due to this filthy conditions of our environment (Olowoporoku, 2017) are malaria, cholera, diarrhea, ascaris, low respiratory infections and unintentional injuries. These are the resultantly effect of these unsanitary and unhealthy environmental sanitation condition that is prevalence in Nigeria more especially the urban centers (Daramola, 2015).

World Bank, 2002; Mmom and Mmom (2011), and other researchers agreed that other environmental management activities, environmental sanitation practices are influenced by various factors. These factors include social, economic and demographic attributes such as age, income, gender, education, religious participation, enabling law and place of residence. Adequate environmental sanitation practices are more than just an inconvenience, it allows users knowledge and experience to the design and management of facilities and services and also to increase the likelihood that the services will be used sustainably. Environmental 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 (Joseph, Bhaskaran, Saya, Kotian, & Menezes, 2012).

Aim and Objectives of the study

The aim of the study is to investigate the constraints to environmental hygiene practices among boarding students in Awka-South Local Government Area, Anambra State. The specific objectives of the study will include to:

1. Examine the constraints to environmental hygiene practices among boarding students;
2. Establish the constraints to environmental hygiene practices among boarding students based on gender;
3. Establish the constraints to environmental hygiene practices among boarding students based on age.

Research Questions

In this study, the following research questions were answered

1. What are the constraints to environmental hygiene practices among the boarding students?
2. What are the constraints to environmental hygiene practices among the boarding students based on gender?
3. What are the constraints to environmental hygiene practices among the boarding students based on age?

Hypotheses

Two hypotheses were tested in this study at 0.05 alpha level as follows:

1. There is no significant difference in the constraints to environmental hygiene practices of boarding students based on gender

2. There is no significant difference in the constraints to environmental hygiene practices based on age

Significant of the study

This study will be useful, as baseline information in the design of educational interventions aimed at equipping secondary school students with knowledge, attitude and skills for taking responsibilities of their environmental hygiene and environmental sanitation. The findings from this study are useful in carrying out well planned, implemented and evaluated School Health Programmes with environmental health integrated into all the stages.

MATERIALS AND METHODS

This study was carried out using the descriptive survey research design. The area of this study covered the ten public and private boarding schools in Akwa-South Local Government Area, Anambra State. The population consisted of the five thousand, three hundred and thirty-six (5336) boarding students (2,371 male and 2,965 female) in the ten (10) boarding schools in the study area. Stratified random sampling technique was adopted to draw the sample size based on the ratio of male boarding students to that of female boarding students.

The instruments used for data collection were self-structured questionnaire entitled "Constraints to Personal and Environmental hygiene practices among Boarding Students Questionnaire (CPEHPABSQ)". The questionnaire was divided into two sections, Section A and Section B. Section A was used to capture socio-demographic information about the respondents, while section B contained the questionnaire items. The questionnaire items were structured according to the three (3) research questions

The reliability of the instrument was done using test-retest method to ascertain the degree which the instruments suppose to measure. The reliability coefficients (r) of 0.73 were obtained which guaranteed the use of the instruments for the study.

The researcher administered copies of questionnaire to the respondents with the help of three (3) teachers who served as research assistance from each school.

The data collected for the research questions were analysed using SPSS version 25. Mean, standard deviation and average mean was used to answer the research questions while the null hypotheses were tested with Z-test. Any mean score from 2.50 criterion mean and above was accepted while the reverse is the case for those below 2.50.

DATA ANALYSIS AND RESULT

Research Question 1: What are the constraints to environmental hygiene practices among boarding students in Awka-South Local Government Area of Anambra State.

Table 1: Weighted Mean and Standard Deviation Scores of boarding students on the constraints to Environmental hygiene practices among boarding students in Awka-South L.G.A. Anambra State

S/N	Constraints to environmental hygiene practices among boarding students	SA	A	D	SD	Mean	Std	Decision
1.	Poor knowledge of students about the importance of environmental sanitation like compound cleaning, manual labour etc.	476	228	35	11	3.56	0.65	Agree
2.	Inability of students to keep their toilets/bathrooms neat by washing them with disinfectants, detergents, harpic, etc.	219	206	243	82	2.75	1.00	Agree
3.	Weakness of some students to sweep their classrooms, bed corners, school compound etc regularly.	261	303	164	22	3.07	0.82	Agree
4.	Lack of strength by some students to cut grasses, flowers, bushes surrounding their school compound.	435	252	39	24	3.46	0.74	Agree
5.	Inability of some students to clean the drainage system regularly with spade, rake, shovel etc.	275	212	194	69	2.92	0.99	Agree
6.	Inability of some students to dispose their refuse on time.	62	397	261	30	2.65	0.69	Agree
7.	Poor maintenance of the school drainage, sewage system gutters, suckaway, septic tanks etc.	483	165	35	67	3.42	0.93	Agree
8.	Lack of knowledge /skills of how to keep sanitary facilities clean by some students.	214	91	56	389	2.17	1.32	Disagree
9.	Indiscriminate dropping of items like papers, water proof, orange peels etc in the school compound.	214	91	10	435	2.11	1.35	Disagree
10.	Admission of under aged students in the school.	347	94	12	297	2.65	1.39	Agree
11.	Prolonged disposal of refuse at the dumping site around the school compound which causes pollution.	62	397	261	30	2.65	0.69	Agree

S/N	Constraints to environmental hygiene practices among boarding students	SA	A	D	SD	Mean	Std	Decision
12.	Poor administrative monitoring of workers attitude towards refuse disposal/environmental sanitation.	214	91	10	435	2.11	1.35	Disagree
13.	Inadequate provision of detergents, harpic, disinfectants, deodorants etc for washing of toilets/bathrooms.	476	228	35	11	3.56	0.65	Agree
14.	Poor planning /construction of the school drainage facilities.	219	206	243	82	2.75	1.00	Agree
15.	Inadequate supply of water for washing/cleaning of the school toilets, bathrooms, classrooms etc.	261	303	164	22	3.07	0.82	Agree
16.	Lack of enough workers or machines to cut over grown grasses, flowers, bushes that enhance the breeding of pests, flies, mosquitoes, reptiles etc.	435	252	39	24	3.46	0.74	Agree
	Aggregate Mean and Standard Deviation					**2.90**	**0.95**	Agree

In Table 1 it was revealed that the respondents agreed to items 1, 2, 3, 4, 5, 6, 7, 10, 11, 13, 14, 15 and 16 with mean scores which is above the criterion mean of 2.5 except for items number 8, 9 and 12 which they disagreed, that Lack of knowledge /skills of how to keep sanitary facilities clean by some students, Indiscriminate dropping of items like papers, water proof, orange peels etc in the school compound and Poor administrative monitoring of workers attitude towards refuse disposal/environmental sanitation are not constraints to environmental hygiene practices among boarding students in Awka-South L.G.A with mean scores of 2.17, 2.11 and 2.11 respectively which is less than the criterion mean of 2.5. An aggregate mean scores of 2.90 was obtained, this implies that most of the respondents agreed to the listed items as constraints to environmental hygiene practices among boarding students in Awka-South L.G.A.

Research Question 2: What are the constraints to environmental hygiene practices among boarding students based on gender?

Table 2: Weighted Mean and Standard Deviation Scores of Male and Female boarding students on the constraints to Environmental hygiene practices among boarding students based on gender

S/N	Constraints to environmental hygiene practices among boarding students	MALE (N = 332)			FEMALE (N= 418)		
		$\bar{X}$	Std	Remark	$\bar{X}$	Std	Remark
1.	Poor knowledge of students about the importance of environmental sanitation like compound cleaning, manual labour etc.	3.50	0.72	Agree	3.61	0.60	Agree
2.	Inability of students to keep their toilets/bathrooms neat by washing them with disinfectants, detergents, harpic, etc.	2.74	1.01	Agree	2.76	0.99	Agree
3.	Weakness of some students to sweep their classrooms, bed corners, school compound etc regularly.	2.97	0.91	Agree	3.15	0.74	Agree
4.	Lack of strength by some students to cut grasses, flowers, bushes surrounding their school compound.	3.48	0.75	Agree	3.45	0.73	Agree
5.	Inability of some students to clean the drainage system regularly with spade, rake, shovel etc.	2.89	0.99	Agree	2.95	1.00	Agree
6.	Inability of some students to dispose their refuse on time.	2.64	0.68	Agree	2.67	0.69	Agree
7.	Poor maintenance of the school drainage, sewage system gutters, suckaway, septic tanks etc.	3.42	0.92	Agree	3.42	0.94	Agree
8.	Lack of knowledge /skills of how to keep sanitary facilities clean by some students.	2.17	1.31	Disagree	2.18	1.34	Disagree
9.	Indiscriminate dropping of items like papers, water proof, orange peels etc in the school compound.	2.14	1.36	Disagree	2.09	1.35	Disagree
10.	Admission of under aged students in the school.	2.59	1.40	Agree	2.71	1.39	Agree
11.	Prolonged disposal of refuse at the dumping site around the school compound which causes pollution.	2.64	0.68	Agree	2.67	0.69	Agree
12.	Poor administrative monitoring of workers attitude towards refuse disposal/environmental sanitation.	2.14	1.36	Disagree	2.09	1.35	Disagree
13.	Inadequate provision of detergents, harpic, disinfectants, deodorants etc for washing of toilets/bathrooms.	3.50	0.72	Agree	3.61	0.60	Agree
14.	Poor planning /construction of the school drainage facilities.	2.74	1.01	Agree	2.76	0.99	Agree
15.	Inadequate supply of water for washing/cleaning of the school toilets, bathrooms, classrooms etc.	2.97	0.91	Agree	3.15	0.74	Agree
16	Lack of enough workers or machines to cut over grown grasses, flowers, bushes that enhance the breeding of pests, flies, mosquitoes, reptiles etc.	3.48	0.75	Agree	3.45	0.73	Agree
	Aggregate Mean and Standard Deviation	**2.87**	**0.97**	**Agree**	**2.92**	**0.93**	**Agree**

From Table 2 it was revealed that both genders agreed to items 1, 2, 3, 4, 5, 6, 7, 10, 11, 13, 14, 15 and 16 with mean scores which is above the criterion mean of 2.5 except for items number 8, 9 and 12 which they disagreed, that Lack of knowledge /skills of how to keep sanitary facilities clean by some students, Indiscriminate dropping of items like papers, water proof, orange peels etc in the school compound and Poor administrative monitoring of workers attitude towards refuse disposal/environmental sanitation are not constraints to environmental hygiene practices among boarding students in Awka-South L.G.A. From the aggregate mean, the male respondents have a mean score of 2.87 while the female counterpart has a mean of 2.92 respectively. This indicated that the female respondents also have a slightly higher mean scores than the male respondents and since both means score of male and female respondents are above the criterion mean of 2.5 implies that both sexes shared common views about the constraints to environmental hygiene practices among boarding students in Awka-South Local Government Area.

Research Question 3: What are the constraints to environmental hygiene practices among boarding students in Awka-South LGA based on age?

Table 3: Weighted Mean and Standard Deviation Scores of younger and older secondary school boarding students on the constraints of environmental hygiene practices among boarding students Awka-South LGA based on age

S/N	Constraints to environmental hygiene practices among boarding students	OLDER (N= 400)			YOUNGER (N = 350)		
		$\bar{X}$	Std	Remark	$\bar{X}$	Std	Remark
1.	Poor knowledge of students about the importance of environmental sanitation like compound cleaning, manual labour etc.	3.51	0.70	Agree	3.62	0.60	Agree
2.	Inability of students to keep their toilets/bathrooms neat by washing them with disinfectants, detergents, harpic, etc.	2.71	1.04	Agree	2.80	0.95	Agree
3.	Weakness of some students to sweep their classrooms, bed corners, school compound etc regularly.	2.94	0.99	Agree	3.22	0.54	Agree
4.	Lack of strength by some students to cut grasses, flowers, bushes surrounding their school compound.	3.46	0.78	Agree	3.47	0.69	Agree
5.	Inability of some students to clean the drainage system regularly with spade, rake, shovel etc.	2.88	1.02	Agree	2.98	0.97	Agree
6.	Inability of some students to dispose their refuse on time.	2.65	0.68	Agree	2.66	0.69	Agree
7.	Poor maintenance of the school drainage, sewage system gutters, suckaway, septic tanks etc.	3.36	0.99	Agree	3.48	0.86	Agree
8.	Lack of knowledge /skills of how to keep sanitary facilities clean by some students.	2.18	1.31	Disagree	2.17	1.34	Disagree
9.	Indiscriminate dropping of items like papers, water proof, orange peels etc in the school compound.	2.10	1.35	Disagree	2.13	1.36	Disagree
10.	Admission of under aged students in the school.	2.63	1.42	Agree	2.69	1.37	Agree
11.	Prolonged disposal of refuse at the dumping site around the school compound which causes pollution.	2.65	0.68	Agree	2.66	0.69	Agree
12.	Poor administrative monitoring of workers attitude towards refuse disposal/environmental sanitation.	2.10	1.35	Disagree	2.13	1.36	Disagree
13.	Inadequate provision of detergents, harpic, disinfectants, deodorants etc for washing of toilets/bathrooms.	3.51	0.70	Agree	3.62	0.60	Agree
14.	Poor planning /construction of the school drainage facilities.	2.71	1.04	Agree	2.80	0.95	Agree
15.	Inadequate supply of water for washing/cleaning of the school toilets, bathrooms, classrooms etc.	2.94	0.99	Agree	3.22	0.54	Agree
16	Lack of enough workers or machines to cut over grown grasses, flowers, bushes that enhance the breeding of pests, flies, mosquitoes, reptiles etc.	3.46	0.78	Agree	3.47	0.69	Agree
	Aggregate Mean and Standard Deviation	**2.86**	**0.99**	**Agree**	**2.94**	**0.89**	**Agree**

Data on Table 3 showed that majority of the respondents agreed to the listed items based on age. The aggregate mean of 2.86 and 2.94 for younger and older students respectively showed that the older students agreed more on the constraints to environmental hygiene practices than the younger respondents and since the both obtained mean scores is greater than the criterion mean of 2.50. This implies that both age group agreed on the constraints to environmental hygiene practices among boarding students in Awka-South LGA.

Testing of Hypotheses

The following hypotheses were tested at 0.05 level of significance:

Ho_1: There is no significant difference between the mean scores of male and female boarding students

on the constraints to environmental hygiene practice of boarding students based on gender.

Table 4: z-test of difference between the mean scores of male and female boarding students on the constraints to environmental hygiene practices of boarding students based on gender

Gender	N	$\bar{X}$	STD	Df	z-cal	z-critical	Level of Signi.	Decision
Male	332	2.88	0.37		1.66	±1.960	0.05	
				748				Null Hypothesis Not significant Retained
Female	418	2.92	0.34					

Results in table 4: indicated that the mean scores of male and female respondents stood at 2.88 and 2.92 respectively. At 748 degrees of freedom and 0.05 level of significance, the calculated z-score of 1.66 is less than the z-critical value of ±1.960. Hence, the researcher retained the null hypothesis because it was not significant. The researcher therefore established that there is no significant difference between the mean scores of the male and female respondents on the constraints to environmental hygiene practices of boarding students in Awka-South LGA based on gender.

Ho_2: There is no significant difference between the mean scores of younger and older boarding students on the constraints to environmental hygiene practices of boarding students based on age.

Table 5: z-test of difference between the mean scores of younger and older boarding students on the constraints to environmental hygiene practices of boarding students based on age

Age	N	$\bar{X}$	STD	Df	z-cal	z-critical	Level of Signi.	Decision
Younger Boarding Students	350	2.86	0.37		3.259	±1.960	0.05	
				748				Null Hypothesis significant Not Retained
Older Boarding Students	400	2.95	0.34					

The results in Table 5 revealed that the mean scores of younger and older boarding students stood at 2.86 and 2.95 respectively. At 748 degrees of freedom and 0.05 level of significance, the calculated z-score of 3.259 is by far greater than the z-critical value of ±1.960. Hence, the researcher failed to accept the null hypotheses because it was significant. The researcher therefore, established that there is a significant difference between the mean scores of younger and older boarding students on the constraints to environmental hygiene practices based on age.

DISCUSSION OF FINDINGS

The constraints to environmental hygiene practices of boarding students according to the findings of the study include: The inability of the management of some schools to provide adequate supply of water, power, sanitary facilities and cleaning materials such as detergents, disinfectants, harpic, deodorants, shovel, spade, rake etc for the maintenance of environmental hygiene. This findings is in agreement with that of Sarkar, (2013) who indicated that the provision sanitation facilities in schools is a basic step towards a healthy physical learning environment benefiting both the learning process and health of the students. However, mere provision of sanitation facilities with adequate knowledge and training of students on how to use such facilities might not yield the desired benefits of rising responsible future citizens among students who adhere to sanitation practices of utilization latrine facilities. But the challenge of space within primary schools whereby most schools are located on limited piece of land hindered the construction of rubbish pits in some schools.

This administrative challenges coupled with poor supervision of workers involved in the maintenance of school environment as well as the inability of school management to ensure that boarding students are adequately provided for impede hygiene practices which include inability of some students to keep their toilets/bathrooms neat; inability of some students to dispose their refuse timely; poor maintenance of school drainage/sanitary facilities; indiscriminate dumping of items in the school compound. of boarding school students. These findings is also supported by Oluwafemi, (2017); Nwakile, Eze and Okanya, (2017) who in their respective studies identified the causes of poor sanitation and its effect on students health are due to poor managerial practices. The number of sanitary facilities like toilets, bathrooms, wash hand basins etc that are provided in most public and private schools are not enough and adequate for these boarding students. This results to over utilization of some of these facilities. This could result to frequent damage of these facilities, blockage of pipes and chambers, thus increasing the cost of maintenance in the school. The challenge of inadequate provision of sanitary facilities is compounded by poor maintenance culture observed in most public schools. Routine maintenance services are seldomly carried out on time reduces the life span of these facilities coupled with their over utilization. The major difference between public and private schools are seen in their quality of administration. There is a better maintenance

culture and supervision of workers in private schools than in public schools. They appear to be better organized than public schools.

Some public and private school administrators do not ensure that most parents provide enough personal hygiene materials ranging from pants, singlets, brasers, tights, soaps, towels, crimes, shaving sticks, foot wears, deodorants, sanitary pads etc to these students. Most schools do not check these items one after the other to ensure that the quantity provided for the student is enough. This has negative implication for personal hygiene practice. The result obtained in this study is supported by a similar study of Bastos (2010) which showed that all the respondents agreed true to the definition of hygiene. In another similar study by Kumar *et al*., 2015, about 85.5% of the respondents knew correctly the meaning of hygiene

CONCLUSIONS

Results of the study has revealed the constraints to environmental hygiene practices among boarding students in Awka-South Local Government Area of Anambra State. Environmental hygiene practices are very important for improved health conditions and general well-being of boarding students. Adequate provisions should be made by both parents and school management to enhance environmental hygiene practices among boarding students. Issues of steady water supply should be paramount to boarding schools because good hygiene cannot take place without regular supply of water. These should be carefully handled with their peculiarities and welfare of every student on one hand and the tackling of the constraints to personal and environmental hygiene practices amongst the students on the other hand.

RECOMMENDATIONS

Based on the findings, conclusion was drawn and the following recommendations were provided:

1. School authorities should provide adequate sanitary materials/facilities for effective environmental hygiene practices by boarding secondary school students in Awka-South Local Government Area of Anambra State.
2. Routine environmental hygiene inspection should be organized by school authorities and defaulters should be corrected or punished.
3. School authorities should ensure that there is constant water supply in their schools for good environmental hygiene practices.
4. School authorities should ensure that adequate number of cleaners are employed and supervised in their schools for effective cleaning of rest rooms and the school premises.

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