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# Age Differences on the Knowledge and Practice of Hostel Sanitation among Students of Tertiary Institutions in Enugu State

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## Abstract

University education has continued to grow in strength and capacity with many programmes being developed, thereby luring more people into the system. This growth comes with a major challenge in respect to accommodating the vast majority of the populace that are trooping into the universities. The purpose of the study was to determine the knowledge and practice of hostel sanitation among students of tertiary institutions in Enugu State. A cross-sectional survey research design was adopted for the study. The population of the study comprised of 276,000 students while the sample was 480 respondents. Research questions were answered using frequencies, percentages, mean and standard deviation respectively. The null hypotheses were tested using chi-square analysis and t-test respectively at 0.05 level of significance. The findings revealed among others that students of tertiary institutions in Enugu State have high level (72.6%) of knowledge and practiced hostel sanitation to a moderate extent ( $\bar{X}=2.83$ ;  $SD=0.97$ ). Additionally, there were no significant differences in the level of knowledge ( $\chi^2=69.110$ ;  $p\text{-value}=0.719$ ) and extent of practice ( $F=0.618$ ;  $p=0.604$ ) of hostel sanitation among students of tertiary institutions in Enugu State based on age. The author recommended among others that since students have high level of knowledge of hostel sanitation but practiced hostel sanitation to a moderate extent, school authorities should set up task force team to check and punish students who fail to practice hostel sanitation effectively and adequately.

**Keywords:** Hostel sanitation, Knowledge, Tertiary institutions, Students

## Introduction

All over the world, improved hostel sanitation quality is increasingly recognized to be a major drive for socio-economic development, students' safety, health and survival in the universities. The global analysis of hostel sanitation problems in the world today is heart rending, and these are mostly in the underdeveloped countries of the world (Odunsi et al., 2018; Ogunde et al., 2017; SheiKhAldeen, 2020). University education has continued to grow in strength and capacity with many programmes being developed, thereby luring more people into the system. WHO (2022) also noted that poor sanitation contributes to the spread of antimicrobial resistance. These reports are worrisome and need rapid intervention to ensure the health and safety of students in hostels.

In Sub-Saharan Africa, hostel situation is worse. Multiple reports indicate some challenges affecting hostel sanitation practices among students in hostels in sub Saharan Africa to include inadequate toilets in the hostel, poor drainage system in the hostel, absenteeism of hostel cleaners, inadequate water supply in the hostel, overcrowding, among others (Ikhioya, 2018; Mensah-Kufuor & Gablah, 2017). Ikhioya (2018) found out that, cleaners have issues in acquiring their materials for executing their duties. Some students also reported that at one point in time they had suffered some health issues which include malaria, typhoid, and dysentery. The public universities in Africa are having problems with

hostel management, most of the schools are overcrowded with poor living conditions, insufficient finance, poor learning facilities, and scarcity of modern hostel facilities (Chikafalimani et al., 2021).

In Nigeria, hostel sanitation compliance varies widely. It is as low as 15 per cent in some areas and about 58-65 per cent in some tertiary institutions (WaterAid, 2016). Currently, Nigeria is one of the countries whose sanitation coverage rates are between 25 and 40 per cent points below the Sustainable Development Goal (SDG) targets (Banerjee & Morella, 2019). The authors averred that over 155 Nigerian institutions are off the SDG sanitation target and that they have no access to improved hostel sanitation facilities which are functional, private, and accessible and with fecal sludge safely disposed and treated. Igudia et al. (2019) found out that, inadequate water supply, poor toilet facilities, insufficient toilet, bathroom and waste disposal facilities and poor drainage system are the major causes of poor sanitation in the hostel environment.

Hostel sanitation in Enugu State remains unsatisfactory. Available literature shows that sanitation in institutions has been observed to be poor and unhygienic (Nwakile et al., 2017; Nwobi, 2022). The authors stressed that water for cleaning, washing and drinking are in short supply, sewage systems are always not enough for the teaming population of students and channels for waste water disposals are usually poor. Nwobi (2022) opined that it is essential for hostels to maintain a high standard of sanitation because hostels place a popular and affordable choice of housing for many students. The author further decried the poor state of hostels in a typical Nigerian institution as usually unpleasant and unhygienic, and further observed that the surrounding of most hostels emits unpleasant odour which is not conducive for the health of students and that of the staff working in the hostels.

Sanitation is a part of healthy living process of the individual. Sanitation can be seen as the policy and practice of protecting health through hygienic measures. Sanitation is a powerful drive of human development and advancement. Sanitation is necessary in all places which includes schools. School sanitation refers to hygienic practices that occur in schools (Nwakile et al., 2017). Waddington et al. (2019) had earlier indicated that sanitation and hygiene are key factors for economic growth and human development. However, when sanitation is overlooked, it could lead to so many health problems. Aigbiremolen et al. (2017) reported that poor housekeeping, presence of rodents and defective housing was more widespread than personal hygiene practices in student hostels. In this study, sanitation refers to the provision of facilities and services such as safe disposal of water, human excreta and solid wastes to provide healthy conditions among people living in the environment

The present study is concerned with hostel sanitation. Hostel sanitation is fundamental to the health and wellness of students. Hostel sanitation refers to all activities that are geared towards maintaining hygiene so as to promote health of students in their hostels. Hostel sanitation refers to the conditions and practices that ensure the cleanliness and hygiene of living spaces in hostels. This includes measures such as access to clean water, proper waste management, and regular cleaning of common areas and individual rooms. Hostel sanitation is termed a group of methods to collect students' excreta as well as solid waste in a hygienic way within the hostel environment (WHO, 2018). In this study, hostel sanitation refers to the means of collecting and disposing excreta, students' liquids and solid waste materials in a hygienic way, so as not to endanger the health and welfare of students, and also to prevent the social and environmental effects it may have on students of tertiary institutions in Enugu State.

Precisely, there are five (5) main components of hostel sanitation. These include solid waste management, excreta management, water management, personal hygiene and insect, vectors and rodent control (European Commission, 2018). Solid waste management

incorporates all the activities involved in the gathering, conveyance and disposal of refuse. Solid wastes can lead to physical injuries when they are not well disposed and can equally cause serious pollution in the surroundings which is dangerous to human health (Mara et al., 2019). WHO (2020) observed that solid waste include debris; which are wastes generated from flammable and non-flammable substances like, plastics, can drinks, broken glasses, rages, sachet water bags, sanitary pads, polyethene bags, and so on.

Excreta management is another component of hostel sanitation. It involves the measures taken as to manage and dispose human excreta appropriately without any negative effect on human health (Saho et al., 2015). An excellent excreta management in the hostels requires the use of approved toilet facilities for defecation and urination, providing soap for washing of hands, providing steady running water for flushing of the system (Shittu et al., 2019). According to World Bank (2020), it also requires the employment of cleaners that oversee the total maintenance of the sewer systems and facilities.

Water management is another vital aspect of hostel sanitation that involves the supplying, storing, and provision of clean water in the hostels. It also involves the proper disposal of waste waters to eliminate the breeding of mosquitos and other aquatic insects that are vectors of diseases. Koyra et al. (2017) advanced that water supply in the hostel is indispensable for maintaining cleanliness and hygiene such as flushing of the toilets after use, cleaning the floors, hands, surfaces, equipment, and drinking by the hostel students.

Personal hygiene is also an aspect of hostel sanitation. This aspect addresses all kinds of personal cleanliness among students and visitors (Andersson, et al., 2016). It involves the proper disposal of solid waste materials into the waste bin, good use of the toilet and disposal of waste waters. It also took into account the care of the body such as dressing, bathing, washing of hands, brushing of teeth and timely washing of clothes and under wares (Water Aid, 2016). Personal hygiene has something to do with individual's knowledge of disease and infection.

Insect and rodent control in the hostel is of a paramount importance. The United Nations Children's Fund (UNICEF, 2016) stated that this is the area that covers the elimination of insects and rodents that transmit diseases through food poisoning. According to United Nations (2020), these organisms such as bed bugs, cockroaches, mosquitoes, rats, and so on could transmit infectious diseases on their body to the drinking water or cooked food thereby causing illness to students. Sometimes, the infectious agent may be transmitted through their excreta or feces to the cooked food that may be consumed by students. To save students from diseases, there is need to ensure proper hostel sanitation to eliminate the presence of these organisms and that cooked foods must be properly warmth before consumption. Thus, absolute knowledge of these components is required for improved hostel sanitation among students.

Knowledge is a stimulating power that authorizes persons to have intellect of self-worth that could help them to develop optimistic character to healthy living. Knowledge includes information and skills learnt from experience or education. Onuzulike (2017) asserted that the knowledge of negative consequences about unhygienic human surroundings is an activator to positive sanitary practice. Contextually, knowledge is defined as the idea or understanding which students of tertiary institutions in Enugu State possess and which is used to take effective action to achieve the hostel sanitation. Good knowledge of hostel sanitation engenders practice of hostel sanitation.

Practice is the real life application of knowledge and a predictable way of carrying out skillful activities in a given setting. Ugeheche and Osademela (2015) asserted that practice is the consistent use of skills over time for a given result. Kicketas et al. (2016) defined practice as the act of repeating an action in order to obtain the necessary outcome.

The basic practices for ensuring good sanitation include hostel room cleanliness, proper solid waste management, proper use of the toilet facilities, and cleanliness of the lavatories. Practice in this study means the constant application of appropriate actions/activities that fosters positive/good hostel sanitation by students of tertiary institutions in Enugu State.

Students are persons who have undergone secondary schools and pass the necessary examinations that could qualify them for further studies on any academic area of interest. According to Piero (2011), students are those who have completed their high school education and decided to further their studies and, so are currently training for their first degree. They are a group of learners in the university between the age of 16 to 25 years old or above, who have precisely completed their secondary education with credits in relevant subjects. According to Operationally, a student refers to a learner who is studying for a higher degree certificate in any of the tertiary institutions in Enugu State. The researcher is interested on this population because of their constant generation of wastes both solid and liquid on daily basis that may cause pollution and causes illness among students in the hostel.

Socio-demographic variable of age was investigated in this study. Age is the length of time that a person has lived (SheiKhAldeen, 2020). In addition, SheiKhAldeen reported that majority of students in hostels are below 24 years with high preponderance of females. Odunsi et al. (2018) submitted that more youngsters are admitted into the university compared with polytechnic and college of education due to a delay in securing admission to the former that then made some people opt for the latter. However, by aggregating the age distributions of all three institutions they studied, students within the age group of '20-24 years' constituted the highest respondents (40.9%), and this was followed by those in the 'less than 20 years of age' group (36.0%). Younger students may be careless with waste and refuse disposal compared to older students. This study investigated age as it relates to knowledge and practice of hostel sanitation among students living in the hostels in Enugu State Universities. This research study categorized age as follows: 16-18 years, 19–21 years, 22–24 years, 25 years and above to determine the knowledge and practice of hostel sanitation among students. This is because the present admission guideline of students starts from the lowest age of 16 and above.

Some of students of the Enugu State tertiary institutions live in the hostels. Their hostels are mostly located inside the campuses. University hostels are large residential buildings designed to accommodate many students, with porters' offices located at the basement for administrative control. Students are allocated rooms through an online management system and registered with the porters to ensure accountability and prevent illegal occupancy. However, the high number of occupants leads to the generation of substantial waste from daily activities. The researcher observed that sanitation conditions in the hostels are generally poor, with refuse dumped indiscriminately, open defecation, and wastewater congestion within and around the hostels. These conditions highlight the need for improved sanitation and waste management in university hostels. The outlined reasons prompted the researcher to examine the knowledge and practice of hostel sanitation among university students in Enugu, Enugu State, Nigeria.

Hostel sanitation is essential to promote healthy conditions among the hostel inmates. Hostel sanitation is a joint responsibility of students and contracted cleaners. In practicing quality hostel sanitation, it is expected that students in the hostels could promote sanitary hygiene by properly handling wastes from the point of generation to the point of temporal disposal, practicing proper sewage management and cleanliness, maintaining water sanitation and personal hygiene, and controlling insects and rodents in the hostels.

The University hostel administrators established sanitary department to oversee proper sanitation management in the hostels in an effort to ensure quality sanitary measures.

There are hired sanitation management teams to support the cleanliness of the toilets with antiseptics, sweeping the corridors and disposal of wastes in the waste bins to the waste collation centers where the works department of the universities could transport them to the appropriate disposing units in most universities. Some students still open defecate, especially the male students. Notwithstanding the above efforts by the hostel administrators through the works department of the university, there are still indications that the sanitation knowledge and practice of students in the university hostels is in poor condition and unsatisfactory. Observations around the hostels showed refuse dumped outside the hostels. Some of the refuse are not removed promptly which leads to foul smell and breeding sites for some flies and other disease carrying organisms. Sewage leakages and foul odours also emanate from some hostels.

These observations prodded the researcher to worry about the knowledge and practice of hostel sanitation in tertiary universities in Enugu State. More so, it is unknown whether certain socio-demographic variables, such as age, gender, year of study and marital status of students have an impact on students' knowledge and practice of hostel sanitation in the tertiary institutions in Enugu State. Thus, this study asks in a question form, "What is the knowledge and practice of hostel sanitation among students of tertiary institutions in Enugu State?"

### **Purpose of the Study**

The purpose of this study was to investigate the knowledge and practice of hostel sanitation among students of tertiary institutions in Enugu State. Specifically, the study sought to determine the:

1. level of knowledge of hostel sanitation among students of tertiary institutions in Enugu State; and
2. extent of practice of hostel sanitation among students of tertiary institutions in Enugu State.

### **Research Questions**

The following research questions guided the study:

1. What is the level of knowledge of hostel sanitation among students of tertiary institutions in Enugu State?
2. What is the extent of practice of hostel sanitation among students of tertiary institutions in Enugu State?

### **Hypotheses**

The following null hypotheses were postulated and tested at 0.05 level of significance.

1. There is no significant difference in the level of knowledge of hostel sanitation among students of tertiary institutions in Enugu State based on age.
2. There is no significant difference in the extent of practice of hostel sanitation among students of tertiary institutions in Enugu State based on age.

### **Methods**

The study utilized a cross-sectional survey research design. Cross-sectional survey research design according to Setia (2016), is a type of research design in which a potentially related factor is measured at a specific point in time for a defined population. The population for the study comprised all registered hostel occupants in all tertiary institutions in Enugu State, including male and female hostels which were estimated at about 276,000 students. The study sample size consisted of 480 registered student hostel occupants in tertiary institutions in Enugu State; obtained using multi-stage sampling technique. The instrument

for data collection was a researcher-structured instrument titled “Knowledge and Practice of Hostel Sanitation Questionnaire (KPHSQ)”. The instrument was validated by five experts from the Department of Human Kinetics and Health Education, Faculty of Education, University of Nigeria, Nsukka. The reliability of the instrument was calculated using Spearman's rank order correlation formulae ( $\rho = .725$ ) and Cronbach alpha statistics ( $\alpha = .732$ ) reliability indices which were adjudged reliable for use in the present study. Out of the 480 copies of the questionnaire distributed for the study, 471 (98.1%) were duly filled and returned, and thus used for data analysis. Frequencies and percentage were used to answer research question one while mean and standard deviation were used to answer research question two. Chi-square statistics was used to test hypothesis one, while one-way ANOVA was used to test hypothesis two. All the hypotheses were tested at 0.05 level of significance.

## Results

Table 1  
**Percentage Responses on the Level of Knowledge of Hostel Sanitation among Students of Tertiary Institutions in Enugu State (n=471)**

s/n	Knowledge of Hostel Sanitation	Correct f(%)	Incorrect f(%)
	Hostel sanitation means:		
1.	Brushing can be done anywhere.	62(13.2)	409(86.8)
2.	Proper disposal of generated wastes from the rooms into the waste bins.	445(94.5)	26(5.5)
3.	Ensuring appropriate water storage, safety and cleanliness for students' use using clean storage tanks.	35(7.4)	436(92.6)
4.	Ensuring proper and regular cleanliness of rooms and corridors by the hostel inmates.	445(94.5)	26(5.5)
5.	Ensuring quality personal hygiene by washing of clothes and underwear by students.	427(90.7)	44(9.3)
6.	Ensuring that rodents are eliminated from the rooms and eatery stores.	433(91.9)	38(8.1)
7.	Proper hostel sanitation increases the mental health of students	428(90.9)	43(9.1)
8.	Evacuating the septic tanks or pit latrines when they are filled up.	429(91.1)	42(8.9)
9.	Hostel sanitation can reduce diabetes, heart diseases.	169(35.9)	302(64.1)
10.	Proper hostel sanitation promotes air pollution	128(27.2)	343(72.8)
11.	Proper hostel sanitation boosts self-image and confidence of students	406(86.2)	65(13.8)
12.	Making sure that adequate cleanliness of the sewage systems or latrines are kept.	440(93.4)	31(6.6)
13.	Proper hostel sanitation involves only making sure that hands are washed with soap before eating food.	231(49.0)	240(51.0)
14.	Proper hostel sanitation reduces the incidence of diseases and contaminations	450(95.5)	21(4.5)
15.	Making sure that vectors of diseases and insects are eliminated from the hostel rooms and surroundings using fumigants leads to academic success.	330(70.1)	141(29.9)
16.	Proper hostel sanitation prevents outbreak of epidemics	396(84.1)	75(15.9)
17.	Proper handling of hostel wastes from the point of generation to the disposal unit improves wellbeing	452(96.0)	19(4.0)
18.	Providing clean water from an approved water sources for students' use in the hostels.	427(90.7)	44(9.3)



19.	Provision of adequate and functional sanitary facilities such as sewage cisterns or latrines, waste bins, and so on for defecation and urination in the hostels	443(94.1)	28(5.9)
20.	Hostel sanitation is the partial elimination of solid wastes inside and outside the hostel surroundings.	261(55.4)	210(44.6)

**Overall %** **72.6** **27.4**

**Key:** 0–39%=Low level of knowledge; 40%–69%=Moderate level of knowledge; 70% and above=High level of knowledge.

Result in Table 1 shows that students of tertiary institutions in Enugu State have high level (72.6%) of knowledge of hostel sanitation.

Table 2

**Extent of Practice of Hostel Sanitation among students of tertiary Institutions in Enugu State (n=471)**

s/n	Extent of Practice of Hostel Sanitation	$\bar{X}$	SD
	Indicate the extent at which you and your roommates adopt the following hostel sanitation practices:		
1	Do your roommates dispose of solid wastes in the facilities provided by the school for waste disposal?	3.48	0.73
2	Do your roommates ensure proper and regular cleanliness of rooms and corridors?	3.37	0.76
3	Do you and your roommates ensure that rodents are eliminated from the rooms?	3.35	0.93
4	Do your roommates make use of the convenience for urination, defecation and bathing?	3.48	0.92
5	Do you ensure timely washing of hands with detergent and clean running water after using the toilet?	3.39	0.90
6	I and my roommates mop our room daily.	2.91	0.94
7	I dispose waste water through the right channels to avoid water logs and breeding of insects.	3.48	0.84
8	I have seen my hostel mates defecate inside nylon and throw through the window.	3.21	1.14
9	I sort my refuse waste before disposing.	2.46	1.16
10	I throw sanitary pad into the rubbish dup.	2.35	1.32
11	I wash my hands in the toilet after use with water and soap.	3.14	1.09
12	Maintaining high level of personal hygiene in the hostels such as regular bathing and brushing of teeth before and after lectures	3.40	0.81
13	Making sure that hands are washed with soap before eating food.	3.23	0.82
14	Making sure that vectors of diseases and insects are eliminated from the hostel rooms and surroundings using fumigants.	3.01	0.86
15	My roommates or hostel mates urinate in the room in buckets before taking it to the toilet.	2.26	1.24
16	My roommates and I recycle and reuse both solid and liquid generated wastes for the purpose of managing waste	1.77	0.92
17	Some of my roommates or hostel mates brush their teeth outside the designated place. Some brush from upstairs littering the wall.	2.28	1.07
18	Some of my roommates or hostel mates store their urine in bucket for some hours or days before disposing it.	1.86	1.00
19	My roommates store up dirty plates for a day or more before taking them out to wash them.	2.61	0.98
20	My roommates urinate in the room even if someone is cooking or eating food	1.64	0.99
	<b>Cluster</b>	<b>2.83</b>	<b>0.97</b>



**Key:**  $\bar{X}$  = 1.00-1.99 (Low Extent);  $\bar{X}$  = 2.00-2.99 (Moderate Extent);  $\bar{X}$  = 3.00-3.49 (High Extent);  $\bar{X}$  = 3.50-4.00 (Very High Extent)

Result in Table 2 shows that overall, students of tertiary institutions in Enugu State practiced hostel sanitation to a moderate extent ( $\bar{X}$  = 2.83; SD=0.97).

Table 3

**Summary of Chi-square Analysis in the Level of Knowledge of Hostel Sanitation among Students of Tertiary Institutions in Enugu State Based on Age (n=471)**

Age	N	Knowledge of Hostel Sanitation		$\chi^2$	df	p-value	Decision
		Correct O (E)	Incorrect O (E)				
16 – 18 years	78	58 (57.2)	20 (20.8)	69.110	3	.719	Not Rejected
19 – 21 years	201	144 (142.5)	57 (58.5)				
22 – 24 years	133	97 (96.6)	36 (36.4)				
25+ years	59	43 (42.7)	16 (16.3)				

\*Significant at  $p \leq 0.05$ ; df = degree of freedom

Table 3 shows that there is no significant difference in the level of knowledge of hostel sanitation among students of tertiary institutions in Enugu State based on age ( $\chi^2=69.110$ ;  $p$ -value=.719). Since, the  $p$ -value of .719 is greater than .05 level of significance; the null hypothesis was not rejected. Therefore, students of tertiary institutions in Enugu State did not differ in their knowledge of hostel sanitation based on age.

Table 4

**Summary of One-way ANOVA Testing Difference in the Extent of Practice of Hostel Sanitation among students of tertiary Institutions in Enugu State Based on Age (n=471)**

Source of Variance	Sum of Squares	df	Mean Square	F	p-value
Between Groups	.217	3	.072	0.618	.604
Within Groups	54.604	467	.117		
<b>Total</b>	54.821	470			

**Key:** F = F-ratio value; df = degree of freedom

\*Significant at  $p \leq 0.05$

Table 4 shows that there is no significant difference in the extent of practice of hostel sanitation among students of tertiary institutions in Enugu State based on age ( $F=0.618$ ;  $p=.604$ ). Since the  $p$ -value of .604 is greater than 0.05 level of significance, the null hypothesis was not rejected. This implies that students of tertiary institutions in Enugu State did not differ in their practice of hostel sanitation based on age.

## Discussion of Findings

Result in Table 1 showed that students of tertiary institutions in Enugu State had high level of knowledge of hostel sanitation. This finding is expected and because students ought to have high knowledge of hostel sanitation so as to avoid all forms of diseases that may arise due to dirty environment. Students may have acquired this knowledge from their teachers and health-related subjects they were taught during the course of their secondary school education. These students also study several health courses including environmental health in their various tertiary institutions which exposes them to the need and importance of acquiring good and adequate knowledge of hostel sanitation. This finding is in agreement with those of Mensah-Kufuor and Gablah (2017) who reported high level of knowledge of hostel sanitation among students in Accra Technical University, Ghana. On the contrary, the findings of Samuel and Abudulahi (2018) revealed that the level of knowledge of hostel sanitation among students living in the hostels in Ahmadu Bello University Zaria was poor, hence, the study recommended proper hand washing practices after using the toilet and education on the need for proper sanitation to reduce the number of people involved in the cases of disease contamination.

Result in Table 2 showed that overall, students of tertiary institutions in Enugu State practiced hostel sanitation to a moderate extent. This finding is surprising. This is because students that showed high level of knowledge of hostel sanitation are also expected to practice hostel sanitation to a very high extent, for their own health benefits. When students fail to effectively practice hostel sanitation, their health status may be affected which may result to frequent sicknesses and diseases from contamination. Hence, there is need for effective sanitation education for students so as to reduce the incidence of communicable diseases in educational institutions. The finding of this study is not in line with those of Mantle et al. (2016) that recorded high level of sanitation practices among Russian women below 30 years of age. Contrastingly, the study of Aduku (2014) revealed that sanitation education given to students has not been real as there was poor hostel sanitation in schools. The author therefore recommended that effective management of hostel sanitation should be taught to students to equip their knowledge and practice of hostel sanitation among students.

Result in Table 3 showed that there is no significant difference in the level of knowledge of hostel sanitation among students of tertiary institutions in Enugu State based on age. This finding implies that students of tertiary institutions in Enugu State did not differ in their knowledge of hostel sanitation based on age. This finding is expected. This is because age as a factor may not influence students' level of knowledge of hostel sanitation because all students must have passed through secondary education where they may have learnt and acquired adequate knowledge of hostel sanitation. Therefore, as students, the knowledge they must have acquired during their secondary education may not be influenced by age. Thus, age may not have much role to play as regards students' knowledge of hostel sanitation. The finding of this study is in disagreement with those of Igudia et al. (2019) who reported that age influenced hostel sanitation practices among students in University of Benin, Edo State, Nigeria.

Result in Table 4 shows that there is no significant difference in the extent of practice of hostel sanitation among students of tertiary institutions in Enugu State based on age. This finding implies that students of tertiary institutions in Enugu State did not differ in their practice of hostel sanitation based on age. This finding implies that students of tertiary institutions in Enugu State did not differ in their extent of practice of hostel sanitation based on age. This finding is expected. This is because age as a factor may not influence students' extent of practice of hostel sanitation because students must have passed through secondary education where they may have learnt and acquired adequate knowledge and good practice of hostel sanitation. Hence, age may not play major role in students' extent of practice of hostel

sanitation. The finding of this study is in disagreement with those of Silas and Johnson (2016) and Igudia et al. (2019) who reported that age influenced sanitation practices among students in University of Benin, Edo State, Nigeria.

## Conclusion

Based on the major findings and discussions, the study concluded that students of tertiary institutions in Enugu State have high level of knowledge of hostel sanitation and practiced hostel sanitation to a moderate extent. Additionally, there were no significant differences in the level of knowledge and extent of practice of hostel sanitation among students of tertiary institutions in Enugu State based on age.

## Recommendations

Based on the conclusion of this paper, the following recommendations are made:

1. Since students have high level of knowledge of hostel sanitation but practiced hostel sanitation to a moderate extent, school authorities should set up task force team to check and punish students who fail to practice hostel sanitation effectively and adequately.
2. The use of the mass media especially radio and television adverts and social media promotion campaigns periodically to create more awareness of the importance of effective sanitation in the school and the society at large.
3. Public health educators should put in more efforts in health education regarding hostel sanitation for students in their schools and for the world at large.

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