

ENVIRONMENTAL HYGIENE PRACTICES AMONG UNDERGRADUATES IN A TERTIARY INSTITUTION IN THE SOUTH-WEST, NIGERIA

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Abstract

*This study was carried out to assess the hostel hygiene practices adopted among undergraduates in Ekiti State University, Ado-Ekiti. The descriptive research design of the survey type was adopted. One hundred and twenty-four undergraduate students (58 male and 66 female), randomly selected from six hostels of residence for students in Ekiti State University, constituted the respondents for this study. Data were collected with the aid of a questionnaire. Frequency counts, percentages, *t*-test, and ANOVA, were used for analyzing data at 0.05 level of significance. 71.7%, 54.0%, 27.4%, 24.2%, and 29.8% of the respondents indicated regular cleaning of the rooms, grass cutting in the hostel surroundings, sweeping of hostel surroundings, and the regular cleaning of toilets and bathrooms, respectively. There is no significant difference in hostel hygiene status based on type ($F=2.964$; $p>0.05$) and ownership of hostel ($t=-2.160$; $p>0.05$). There is a need for improvement in hostel hygiene practices adopted by these students. Therefore, environmental health education is required.*

Keywords: *Environment, hostel, hygiene, health education, tertiary institution*

Introduction

The environment where students learn and live plays a crucial role in their overall health. While a hygienic environment safeguard students from contracting communicable diseases (Igudia, Agbonifor & Omobude-Idiado (2019), the reverse is the case for students living or learning under unhygienic environmental conditions. Unhygienic environment puts students at risk of illnesses like malaria, typhoid, diarrhea, cholera and other hygiene-related diseases which affect their health and academic performance negatively.

Environmental hygiene is the practice of keeping the surroundings where people live clean, tidy, and safe. It entails adequate routine cleaning of the environment, which includes sweeping the surroundings, clearing the bushes around houses, washing the toilets, and keeping the surroundings free from – smokes and smells (Sumampouw and Risjani, 2014). Environmental hygiene involves those practices that are conducive to providing a healthy environment, and it is a vital part of good infection prevention and control (*Management of Infectious Diseases in Schools*, 2013).

Tertiary institutions are educational institutions providing post-secondary education. These include public and private universities, polytechnics, colleges,

vocational schools, and technical training characterized by a large number of students. As most of these students are far away from their homes, there is the need for accommodation for learners in such institutions. According to Proshare (2019), the provision of students housing in tertiary institutions is a fundamental part of the primary goal of getting students educated.

The provision of accommodation for students in tertiary institutions is considered an essential facility to assist students to achieve their intellectual capabilities (Aigbavboa, 2015). Although many of the tertiary institutions in Nigeria have halls of residence for the students, however, owing to overpopulation in most of the institutions, the school provided hostels are often not commensurate with the number of students. Hence many of the students stay off-campus in privately provided hostels of residence (Ogungbe, Olukolajo & Binuyo, 2018)

The environmental condition of students' residence can either contribute positively or negatively to their health and academic performance. As a matter of fact, human health is a biological indicator of the quality of the environment (Kiku & Yarigina, 2014). Students live and interact with their environment. Hence, a bridge in the environmental condition of such residence can mar the health status of students affecting the academic performance of such students. On the other hand, a place of residence characterized by good environmental hygiene, reduces the risk of infection and contribute to the general wellbeing, and academic performance of students.

One of the ways by which the environmental condition of the students' hostels can be maintained is through regular cleaning of the various sections of the hostels. This can be done through regular sweeping, mopping of the floor, scrubbing of the toilets and bathrooms, the removal of trash from the residency, regular cutting of bushes around the residency and, cleaning of drainages. Although, most of the activities involved in maintaining a good environmental condition of students' hostel lie on hostel providers, students also have the responsibility or part to play in ensuring the cleanliness of where they live. The aim of this study was therefore to assess the hygiene practices in the students' hostels to determine the need for intervention.

Methodology

The descriptive research design of the survey type was adopted in this study. One hundred and twenty-four students randomly selected from six hostels based on ownership (one school-owned and five private-owned), comprising of male, female and unisex hostels in Ekiti State University, Ado-Ekiti, constituted the respondents for this study. Ekiti State University does not have many provisions for students' hostel; hence most of the students stay off-campus. In selecting respondents for this study, the available hostels were divided into six clusters. These include a school-owned hostel, private-owned hostels in Iworoko, private-

owned hostels in Osekita, private-owned hostels in Phase two, private-owned hostels at the school gate, and private- owned hostels in Satellite. At least one hostel and two students within each cluster were randomly selected to constitute the respondents for this study.

The instrument for data collection was a self-structured questionnaire having five sections. The first section of the questionnaire contains items to elicit information on the demographic attributes of the respondents. Section B contained eight items to assess hostel hygiene practices adopted by respondents. Items 1-4 of this section were multiple-choice, while items 5-8 had a 4 point rating scale of ‘Never, 1-2 times a week, 3-5 times a week and Everyday’. The questionnaire was administered with the help of 6 research assistants. Only students who consented to participate in the study constituted the respondents. On the spot method of collection of the instrument was adopted. The questionnaires were collected, coded and analyzed using SPSS version 21. Descriptive data were analyzed using frequency and percentages, while hypotheses were tested using t-test and Analysis of Variance at the 0.05 level of significance.

Results

A total number of 124 respondents participated in this study. Fifty-eight (46.8%) of the respondents were male, majority (83.1%) were living in private owned hostels, and 73.4% of the respondents lived in unisex hostels

Research Question 1: What are the hostel hygiene practices adopted by undergraduates of Ekiti State University

Table 1: Hostel Hygiene Practices Adopted by Respondents (n=124)

S/N	How often do you do the following?	Never (%)	1-2times a week (%)	3-5times a week (%)	Everyday (%)
1	Sweeping of personal rooms	4 (3.2)	17 (13.7)	14 (11.3)	89 (71.8)
2	Sweeping of hostel surroundings	13 (10.5)	55 (44.4)	22 (17.7)	34 (27.4)
3	Cleaning of toilets	7 (5.6)	61 (49.2)	26 (21.0)	30 (24.2)
4	Cleaning of bathrooms	5 (4.0)	61 (49.2)	21 (16.9)	37 (29.8)

The result presented in Table 1 shows that majority (71.8%) of the students sweep their rooms every day, 10.5% of the respondents don't sweep their hostel surroundings at all, while less than 30% of the respondents clean their toilets and bathroom every day. Further analysis revealed that only 54% of the respondents cut the grasses in their hostel surroundings at least once a month.

Research Question 2: What are the methods of refuse disposal commonly adopted by undergraduates of Ekiti State University?

Table 2: Methods of Refuse disposal (n=124)

S/N	Method of refuse disposal	Freq.	%
1	Disposing refuse anywhere around the hostel	11	8.8
2	Refuse disposal by refuse collectors	41	33.1
3	Burning	72	58.1

Table 2 reveals that 33.1% of the respondents dispose their refuse through the help of refuse collectors.

Research Question 3: What are the available cleaning materials and personnel in the hostels?

Table 3: Descriptive Analysis of Cleaning Materials and Personnel in the Hostels (n=124)

Item	Freq	%
Available cleaning material in the hostel		
None	9	7.3
Brooms only	22	17.2
Cutting implement only	10	8.1
Detergents only	4	3.2
Disinfectants only	4	3.2
Broom & Cutting implement	41	33.1
Brooms, cutting implements, detergent and disinfectants	27	21.8
Others	7	5.6
Personnel responsible for hostel cleaning		
Nobody	12	9.7
Students	89	55.6
Cleaners	43	34.7
Personnel responsible for cutting bushes around the hostel		
Nobody	10	8.1
Students	67	54.0
Gardeners	47	37.9

Table 3 shows that only 21.8% of the respondents have varieties of hostel cleaning materials like brooms, cutting implements, detergents and disinfectants. The rest of the respondents had just one or two type of cleaning materials in their hostels. In addition, 55.6% and 54% indicated that students are responsible for the cleaning of the hostels and cutting of bushes around the hostels respectively.

Research Question 4: What is the perception of undergraduates of Ekiti State University about hostel hygiene maintenance?

Table 4: Mean Scores of Respondents' Perception about Hostel Hygiene Maintenance

S/N	Items	Mean	SD
1	Availability of cleaning materials in the hostels will go a long way in ensuring cleanliness of the hostel	3.07	0.87
2	Availability of water in the hostels will go a long way in ensuring cleanliness of the hostel	3.03	0.96
3	Availability of refuse disposal facilities in the hostels will go a long way in ensuring cleanliness of the hostel	2.98	0.98
4	Availability of hard working cleaners in the hostels will go a long way in ensuring cleanliness of the hostel	3.10	0.96
5	Prompt payment of cleaners will go a long way in encouraging them to discharge their duties effectively	3.12	0.98

Table 4 shows that the most commonly perceived factor required for ensuring cleanliness in the hostel is prompt payment of cleaners (Mean =3.12, SD=0.98). This is closely followed by availability of hard working cleaners (Mean= 3.10, SD=0.96), and availability of cleaning materials (Mean=3.07, SD=0.87). The least commonly perceived factor is availability of refuse disposal facilities (Mean= 2.98, SD=0.98).

Research Question 5: What is the level of hostel hygiene in Ekiti State University?

Table 5: Level of Hostel Hygiene

Level	Freq.	%
Poor	6	4.8
Fair	53	42.7
Good	65	52.4
Total	124	100.0

The result presented in table 5 shows that only 52.4% of the respondents have good hostel hygiene status. This is an indication that the level of hostel hygiene among these respondents was just marginal.

Testing Hypotheses

Hypothesis 1: There is no significant difference in hostel sanitation status based on hostel type

Table 6: Difference in Hostel Sanitation Based on Hostel Type

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	105.932	5	21.186	2.023	.080
Within Groups	1235.552	118	10.471		
Total	1341.484	123			

Table 6 reveals that the p-value (.080) for difference in hostel hygiene status among the various types of hostels (male, female and unisex hostels) is greater than 0.05. This is an indication that there is no significant difference in hostel hygiene status based on type of hostel hence Hypothesis 1 is not rejected.

Hypothesis 2: There is no significant difference in hostel hygiene status based on ownership of hostel

Table 7: T-test Analysis on Difference in Hostel Hygiene based on Ownership of Hostel

Ownership of hostel	N	Mean	Std. Deviation	t	P-value
School owned	21	19.6667	3.51188	-2.160	.331
Private owned	103	21.3495	3.20144		

Table 7 shows that the p-value for difference in hostel hygiene status between school owned and private hostels ($t=-2.160$; $p=.331$) is greater than 0.05. This is an indication that school owned hostel does not significantly differ from private owned hostels in hostel hygiene status Hence Hypothesis 2 is not rejected.

Discussion

The findings of this study indicate that only a little above 50% of the hostels assessed were of good hygiene status. Also, only a few of the hostels have various types of cleaning materials. Many of the hostels have either brooms or cutting implements only which are not enough to maintain good environmental hygiene. This is likely the reason why the hostel hygiene status of many of the hostels was just marginally adequate. Poor environmental hygiene puts people at risk of contracting communicable diseases. Nwakile, Eze and Okanya (2017) stated that poor sanitation leads to students' ill health and this could manifest as malaria, diarrhea, cholera, and death in extreme cases. Efforts should therefore be made at making available all resources required for maintaining good hygiene status of hostels in tertiary institutions

The finding of this study is in agreement with that of Miko, Cohen, Haxall, Conway, Kelly, Stare, et al (2011), who indicated that cleaning of the various sections of the hostels like the surroundings, toilets, bathrooms, and cutting of grasses are not regularly done. The possible explanation for this is likely that there are not enough cleaners and gardeners employed to assist the students in carrying out these activities. Students alone cannot effectively maintain the cleanliness of the hostels. Hostel providers need to employ capable hands to do the work.

The finding of this study, with regards to the adequacy of cleaning materials in the hostels is somewhat similar to that of Mensah-Kufuor & Gablar (2017) where many of the respondents indicated that the cleaning materials available in the hostels were not adequate. This is likely a contributory factor to the marginal level of hygiene status observed in the hostels. To ensure proper cleanliness of any home surrounding, it is important to have a variety of cleaning materials and implements to be able to meet up with the various hygiene demands.

The finding of this study with regards to availability of cleaners in the hostels is similar to that of Muazu, Musa & Haque (2016). In the majority of the hostels, there is no adequate provision of cleaners and gardeners. Only a few of the hostels have cleaners and gardeners for cleaning and cutting bushes around the hostels. Hence, the students are saddled with the responsibility of maintaining the cleanliness of their hostels. Hostel providers need to take the major responsibility of maintaining hostel hygiene to ensure effectiveness. However, the effort of the hostel providers can be complemented by that of the students.

The finding of this study, on the method of refuse disposal, is similar to that of (Ifegbesan, Ogunyemi & Rampedi,2017) who reported that open burning was the most common method of refuse disposal in a tertiary institution. Refuse burning is one of the environmentally unfriendly methods of refuse disposal (Ana, 2011). Open burning, according to Cogut (2016), releases into the air toxic pollutants such as carbon monoxide, particulate matter, aromatic hydrocarbons and other health risk materials that, when inhaled, cause severe cases of

respiratory diseases and other health problems. Therefore, to prevent sanitation-related infectious diseases and improve the quality of life of students in tertiary institutions, the provision of proper means of refuse disposal in the students' hostels is essential (Anamali, Amadi, Okereke, Azuamah & Amadi, 2019).

The findings of this study also showed that the hostels do not differ significantly in hygiene status both based on the ownership and the type of hostel. Students experience the same issues relating to the availability of materials and personnel required for maintaining hostel hygiene. Even the school provided hostels were not better in hostel hygiene status than private hostels.

The findings of this study showed that the availability of hard-working cleaners and prompt payment of cleaners are the two most common factors perceived by respondents as required to ensure cleanliness of the hostels. Muazu et al (2016) citing Katsantoni *et al* (1986), noted that the availability of adequate personnel to take charge of the cleaning and washing of the environment will go a long way to ensure the cleanliness of the environment and safeguard the health of the people.

Conclusion

Based on the findings of this study, it can be concluded that environmental hygiene practices adopted by students in the tertiary institution is not adequate to ensure good environmental health status of the hostels. Based on the findings of this study, the following recommendations were made:

- i. Hostel providers in Ekiti State University, Ado Ekiti and other tertiary institutions should employ hardworking cleaners to handle the sanitation of the hostels/halls of residence.
- ii. Hostel providers should also ensure prompt payment of hostel cleaners to encourage them to discharge their duties effectively.
- iii. Hostel providers should make provision for adequate material resources necessary for maintaining hygiene in the hostels.
- iv. Students residing in hostels should join hands with hostel cleaners in maintaining the cleanliness of their environment.

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