

## Waste Control Strategies for Healthy Environment: A Case Study of Female Students Hostels

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### Abstract

The paper focused on the proper waste control strategies as a panacea for healthy environment in female students hostels in Ezeugo and oboli hostel oko. four research question were formulated. Population of the study consisted of Female students living in the hostels. Data were collected with questionnaire. Mean was used to analyze the data collected. The findings revealed the various methods of waste disposal adopted by the Female students living in the hostel such as use of refuse bins, burning, "throwaway" methods etc. Also the reasons for poor waste disposal were identified such as lack of adequate refuse bins, insufficient cleaning equipment and materials, delays in collecting of waste for disposal by the authorities etc. The study further revealed the effects of improper waste disposal on the environment to include air pollution, unsightly environment, breeding places for vectors among others. Finally, possible strategies for improvement were also identified.

### 1. Introduction

Waste in the simplistic term is any thing that is unwanted and discarded, garbage or trash. According to wikipedia free dictionary (2006). waste is unwanted or undersired material left over after the completion of a process. Horn by (2005) also opined that waste is unwanted material or substance that are left after you have used something. It is all substance, which the holder wishes or is required to dispose of in solid, liquid or gaseous form (<http://www.enfo.ie/lefts/fs/.htm>).

Any material unused and rejected as worthless or unwanted.(wordnet.princeton.edn/per/we/wn). Because these materials are no longer valuable or useful. They ought to be properly disposed and should not be dumped any how to litter or menace the environment.environment according to environmtal planning/ and protection (EPP)is the world we live in which consist of land, water and air. Charle's Davids cited by Anyakoha and Igboeri (1993) upon that environment is one surrounding, including external conditions influencing growth and development of people animal and plants. They further stated that fical environment is were all human beings live and that it provides the resources and process, which makes life possible. hornby defines environment and conditions, circumstances etc that affect the behaviors and development of peoples live Again ,the Encyropaedia Britannia as cites by Uchegbu (2002) noted that environment constitutes both the physical, chemical and biotic factors that acts upon an organism or an ecological community and ultimately determines its forms and survival. Therefore, a clean and healthy environment enhances peoples lives while any damage or deviation from an ideal situation to environment puts the health of its occupants at stake.

Due to substantial growth in students population over the years resulting to increase in the number of students in the hostel as well as the era of "throughway" in which we live, air and soil pollution have increased to the point where they are surpassing the ecosystem coping capacity. Thus, the indiscriminate dumping of waste around the campus especially in areas surrounding the female hostels has become a serious environmental problem facing the hostel. It is becoming very difficult to have fresh air around the hostels and their environment. It is therefore important to manage and the environment for the good Health of

the people in the hostel .It was in pursuance to maintaining healthy environment for leaving /learning process that gave rise to the environmental sanitation program which was flagged by the management of the Hostel in may, 2006.

This paper focuses on problem of waste disposal among female students hostels and strategies of improvements.

### 1.1 Purpose of study

The major purpose of this study was to identify the proper waste control strategies for healthy environment in female students hostels in Oko .Specifically ,the study identified;

1. The various methods of waste disposal, adopted by the female students living inside the Hostel .
2. The reasons for poor waste disposal among the students.
3. The effect of improper waste disposal on the environment.
4. The possible strategies of improvement.

### 1.2 Research Questions;

The study sought answers to the following research questions.

- What are the various methods of waste disposal adopted by female students living inside the hostels ?
- What are the reasons for poor waste disposal among the female student by female student in the hostels?
- What are the effects of improper waste disposal on the environment?
- What are the possible strategies of improvement?

## 2. Methodology

Research Design; The study adopted a survey research design. It sought information from hostel attendants and female students living inside the hostels.

Population ;The study were Ezeugo and obedi in Oko. The population consisted of the hostel attendants and female students living inside the hostels.

Sample and sampling Technique; The sample size of two hundred (200) was made from the population. The sample was drawn from the two female hostels, inside the Hostel Ezeugo and okoli hostel, in each hostel , a total of ninety-five (95) students and five (5) Host el attendants were randomly sampled.

Instrument for Data Collection; The instrument for data collection was structured questionnaire developed based on the objectives of the study. The questionnaire items were divided into four (4) sections. These were; methods of waste disposal adopted by student, reasons for poor waste disposal, effects of improper waste disposal on the environment and possible strategies for (4) points scale of strongly agree ,agree, disagree and strongly disagree representing 4,3,2 and 1 respectively was used. It was validate by Estate Management experts.

Data collection and Analysis Techniques; A total of two hundred (200) copies of the questionnaire were distributed to the respondents, out of which only one hundred and seventy-five(175) copies were completed and returned. Frequencies and mean were used to analyze the data collected. All items items with mean of 2.50 or above were regarded as agreement while those with mean below 2.50 were regarded as disagreement.

### 3. Findings

The following findings were made;

#### 3.1 Method of waste disposal adopted by students

**Table1:** Mean Response on the Method of waste Disposal Adopted by Students

S/N	Methods of Waste Disposal	Means	Remark
1.	Use of refuse bins	3.85	Agreed
2.	Burning	2.73	Agreed
3.	Dumping beside the hostels	2.26	Disagreed
4.	Burning	3.40	Agreed
5.	Use	2.50	Agreed
6.	Throw away method	1.90	Disagreed
7.	Animal feed	2.20	Disagreed

The result in table 1 revealed the method of disposing waste adopted by the respondents .it showed that they agreed with four (4) items in the questionnaire with mean rating between 2.50 to 3.85 while they disagreed with three (3) of the items with mean rating between 1.90 to 2.26.

#### 3.2 Reasons for poor waste disposal

**Table 2:** Mean responses on the reasons for poor waste disposal.

S/N	Reasons for poor waste Disposal	Mean	Remark
1.	lack of adequate waste disposal facilities	3.92	Agreed
2.	Ignorance of the importance of clean environment	3.81	Agreed
3.	Ignorance of waste Management Techniques	3.40	Agreed
4.	insufficient staff/hostel attendants	2.62	Agreed
5.	Throw away lifestyle attitude of some students	2.75	Agreed
6.	Poor drainage system	2.84	Agreed
7.	Congestion in the hostel	2.93	Agreed
8.	Delay in collection of waste for disposal by the authorities	3.60	Agreed
9.	Insufficient hostel attendants /cleaners	2.51	Agreed

Table 2 revealed that all the items recorded means above the criterions level of acceptance. This shows that the respondents agreed with the reasons of poor waste disposal

#### 3.3 Effects of improper waste disposal

**Table 3:** Mean responses on the effects of improper waste disposal

S/N	Effect of improper waste disposal	Mean	Remark
1.	Air pollution	3.91	Agreed
2.	Breeding of mosquitoes & other insects	3.17	Agreed
3.	Unightly environment	2.96	Agreed
4.	Increase in spread of diseases	3.02	Agreed
5.	Flooding of the environment	3.62	Agreed
6.	Aback by rodent and scavengers	3.15	Agreed
7.	Over flowing waste bins	2.95	Agreed

Table 3 showed that all the items in section 3 part of the questionnaire were the effect of improper waste disposal on the environment. This can be seen from their high means rating from 2.95 to 3.91.

### 3.4 Possible strategies for improvement.

**Table 4:** Mean responses on the proper strategies for improvement.

S/N Possible Strategies for improvement	Mean	Remark
1. Provision of adequate waste disposal facilities	3.93	Agreed
2. Prompt collection & disposal of waste	3.96	Agreed
3. Students disposing waste at the appropriate place not on the road side	3.92	Agreed
4. Conducting weekly environment exercise by the students & hostel attendants	3.87	Agreed
5. Provision of mowers for easily cutting of grasses in the hostels	3.81	Agreed
6. Organizing environmental education seminar	2.94	Agreed
7. Inspection of hostels by hostel supervisors	3.05	Agreed
8. Maintaining of manageable students size to avoid overcrowdings	3.43	Agreed
9. Cultivation of flowers and shrubs to improve the surroundings	2.47	Disagreed
10. Provision of proper drainage system	3.56	Agreed
11. Ensuring that septic tanks are properly closed to prevent breeding places for mosquitoes & flies	3.77	Agreed
12. Removal of kiosks and stalls very close to the hostels	3.11	Agreed

From Table 4 above eleven(11) of the items were accepted as strategies for improving waste disposal in the hostel by the respondents with means rating of 2.47 rejected only one (1).

## 4. Discussion

Proper waste control strategies are required to maintain clean and healthy environment. Connect (1990) as cited by Anyakoha and Igboeli(1993) ranked a clean and beautiful environment first out of ten basic human needs which include a clean and adequate supply of water, simple clothing, food, healthy care, communication, simple housing, energy requirement, total education etc. According to them, these other basic human needs have direct or indirect bearing to the environment. However, due to the methods of disposing waste by the female students in the hostels sustainable clean and beautiful environment cannot be achieved. The study therefore identified four (4) methods of waste disposal use by the students. These include; use of refuse bin, burning, burying and use of incinerator. The study also indicated eight (8) reasons for poor clean environment and waste disposal facilities, ignorance of the importance of clean environment and waste disposal techniques, congestion in the hostels among other. Again is the increase in students population in the hostels, which influence the rate of waste generation of refuse. They also pointed out that where the increased rate of waste generation is not matched by a rapid and efficient disposal system, problem of waste disposal such as population of air, water and land are bound to occur.

It was also discovered from the study seven (7) effects of improper waste disposal with the greatest effects on air pollution, flooding of environment, unsightly environment, breeding places for mosquitoes and other insects. Abazu (2005) noted that the consequences of indiscriminate disposal of waste could be a problem to public health. She opined that waste disposal in the home create forum for breeding of mosquitoes and flies, which encourage diseases. Like typhoid, dysentery, diarrhea, malaria etc. Citing Kumar(2005), she opined that the survey of health hazards of the human environment suggests the provision of basic sanitation facilities. Furthermore, some possible strategies were identified to improve waste disposal in order to enhance clean and beautiful environment within the hostels surroundings. This is because the ultimate aim of waste control is to minimize waste and thus create a healthy environment achieves healthy or

protective family or home. Thus, Anyakoha and (199) emphasized the need for good quality refuse bin and stressed that bins should be properly covered always and kept clean by washing thoroughly each time they are emptied.

The findings therefore indicated that that student disposes waste appropriately and only on places meant for it. Findings also revealed that since waste is disposed promptly, weekly exercise should be mapped out for students and attendants. This is necessary to ensure that all the surroundings are kept neat clean. It was also pointed out that the authorities should provide molars to enhance cutting of gasses around hostels, carry out adequate inspection of hostels to ensure that the hostel attendants and cleaners do their work efficiently. The findings also revealed that environment education should be organized through seminars and workshops to create awareness of healthy environment. Supporting this Ania and Salau (1992) as cited by Anyaoha and Igbeli(1993)observed that the better the understanding of the environment the more effectively it can be used and supported. Finally it was revealed that kiosks and stalls surrounding the hostel premises should be removed. This is in line with the findings of Kabuga (2003) where he noted that road side shopping complexes in the metropolitan kano has resulted to the littering of the major roads in the metropolis with waste materias thereby converting the open land land spaces meant for landcaping, gardens, recreational land and playing ground into shopping complexes. This is a similar cse with the hostel environmental in Ezeugo and Obodi, oko. Such spaces occupied by these kiosks and stalls can be converted into receeational parks, gardens as seen in most tertiary institutions. This will help to keep the surroundings neat and beautiful.

## **5. Conclusion and Recommendations**

From the finding, the respondents adopted certain methods of waste disposal. The study also showed reasons. For poor waste disposal such as lack of adquate waste disposal facilities ignoornce of the importance of clean environment etc. a lot of problems were identified as the effects of improper waste disposal. These include air pollution. Unsightly environment, increase in spread of diseases etc. also some possible strategies for improvement were identified. Based on the findings. The following recommendations were made:

1. The hostels need large waste bins because of the quality of waste generation to avoid over flowing of waste and therefore making the waste collection site unsightly.
2. There is need of placing waste bins at various points where they can be easily located in the hostel premises so that refuse such as paper, pure water sachets can be easily disposed of rather than littering them around the premises.
3. Students, should be given adequate orientation on the importance of maintaing sustainable clean environment through seminars and workshops. This will help to eliminate the danger of indiscriminate littering of the compound that presealty characterizes their lifestyles
4. Environmental education should be included into the general course curriculum to help students have better understanding of the environment and teach them other ways of reducing waste such as refuse, recycling of materials etc.
5. The college should establish a collection frequency for all waste bins to ensure that all waste is removed before it become unsanitary.
6. The college should provide adequate evacuation facilities such as barrows and tippers or trucks to facilitate easy evacuation of waste.
7. the college may where possible enter into retainship operation with waste disposal agency who will take up sweeping, cleaning and disposal of waste within the college premises.
8. creation of dumpsites where decayable waste can be turned into composed manure, plastics sent for recycling and others used as feedstock or raw materials else where, thus helping in wealth creation.

9. open land spaces within the hostel environment should not be converted fro shopping stalls and kiosks but rather can be used for recreational parks and gardens.
10. more flowers and shrubs should be cultivated around the hostels to improve the aesthetic environment.

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