



# Sanitation in Accra Technical University Hostel and Its Environs: A Case Study of Accra Technical University Old Hostel

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**Abstract:** Sanitation and hygiene are among the powerful drives of human development as they affect quality of life at many levels including improved health and economic status. Until proper hygiene is consistently practiced everywhere, the desired impacts of improved sanitation and hygiene in terms of health benefits cannot be realized. The purpose of this study is to identify and analyse factors which lead to better sanitation management and minimise ill health costs of students and staff of the University. Three sets of questionnaires were designed for the Hostel Manager, housekeeping staff and the students. Convenience and judgmental sampling was used to select housekeeping and student respondents respectively. The study revealed that absenteeism of labourers, lack of water, working and cleaning materials and refuse disposal were the factors which contribute to sanitation problems. The implementation of good hygiene and sanitation practices were indicators of cleaning of sleeping and bathroom and the environs in general. In addition, sanitation programs management had been put in place by management to check unhygienic practices, and students were encouraged to practice personal, food and environmental hygiene. It is recommended that Accra Technical University should look at any sanitation situation as a challenge to prevent health related problems; water reservoirs should be made available and positioned at all vantage points for the cleaning staff to clean the environs on a daily basis. Again, cleaning of the environs should be a total responsibility of all stakeholders of the institution and not only the cleaners and all should endeavour to practice all forms of hygiene to achieve a healthy sanitation status.

**Keywords:** Sanitation, Healthy, Environment, Development

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## 1. Introduction

Sanitation and hygiene are among the powerful drivers of human development as it affects quality of life at many levels including improved health and economic status. There is growing awareness among public health practitioners that, until proper hygiene is consistently practiced, both at home, in the community as a whole and institutions, the desired impacts of improved sanitation and hygiene infrastructure in terms of community health benefits cannot be realized [7]. Every year 2.5 million Children die from diarrhoea which could have being prevented by good sanitation. Millions

more suffer the educational, economic loss in having diarrhoea which sanitation could have prevented. Poor sanitation has led to the infestation of over two billion people globally [9], largely children, with a variety of worm infections which has caused corresponding cost-related problems in health. Human excreta are also responsible for transmission of schistosomiasis, cholera, typhoid and many other infections.

Sanitation refers to the conditions and processes relating to people's health, especially the systems which supply water and deal with human waste. The [8] also refers to sanitation as the system for taking dirty water and waste products away

from buildings to protect people's health. In a nut shell, sanitation refers to a process whereby people demand, effect, and sustains a hygienic and healthy environment for them by erecting barriers to prevent the transmission of agents of diseases. Such an approach is needed not only to prevent disease and promote health but also to lay the foundation for sustainable development. Sanitation and good hygiene practices are fundamental to health, survival, growth and development. Considering the Sub Saharan Region of Africa, Ghana to be precise, has set up several sanitation programs which stems from the Millennium Development Goals (MDGs) which have set such as a common course to push back poverty, inequality, hunger and illness.

In the Greater Accra Region, the capital city of Ghana, Accra Metropolitan Assembly (AMA) is primarily the government institution responsible for waste management; this area is divided into sixteen (16) waste collection zones, each contracted to different waste management firm responsible for collection and disposing solid waste. Ghana has waste management difficulties which extend from the capital to the local municipalities, and refuse of shapes and sizes is a common site in both urban and rural areas. These difficulties are contracted and complicated by population pressures in few heavily populated cities of which Accra is the most prominent.

Accra can be considered as one of the hub of educational institutions in Ghana ranging from the basic to the tertiary levels. Universities, polytechnics and colleges provide hostel for students who have to study away from home and are called Halls of Residence or Hostels. Housekeeping being a department under the Rooms Division is the main provider of accommodation, and its proper implementation will, in no doubt, ensure student and staff satisfaction [2]. Accra Technical University (ATU) which is categorically a tertiary institution and the only polytechnic of the region, Greater Accra happen to have a reflection of the sanitation syndrome in its student's hostel facilities and its environs especially the old hostel which was built at the early stage of the Polytechnic.

### **1.1. Statement of the Problem**

The main aim of every hostel is to provide clean, comfortable and safe accommodation and environment to prospective students and staff in return for work efficiency and good academic results yet the performance and implementation of good hygiene and sanitation practices in the Accra Technical University hostel and its environs do not meet the requirements of accommodation services rendered for students and staff. It leaves much to be desired of the institutions' hostel cleaners to provide the requisite quality services to the students and staff. However little study has been done on the sanitation and hygienic practices of the Accra Technical University Hostel, therefore the study seeks to fill in this gap by looking at sanitation in the Accra Technical University Hostel (old hostel) and its environs.

### **1.2. Aim**

This research seeks to evaluate the risk associated with the

Accra Technical University Hostel and its environs and propose possible hygienic measures that can be taken to create a favourable environment to enhance teaching and learn.

### **1.3. Research Objectives**

The purpose of this study is to find out the implication of sanitation and hygienic practices on students health at the Accra Technical University Hostel. Specifically this study is to:

- (a) Investigate the factors inhibiting the proper implementation of good hygiene and sanitation practices in the Accra Technical University Hostel.
- (b) Identify the various sanitation programs management has put in place to check unhygienic practices at the hostel.
- (c) Evaluate the effects of poor sanitation practices on students' health at the Accra Technical University Hostel.
- (d) Assess the impact of sanitation on development at the Accra Technical University Hostel.

## **2. Brief History of Accra Technical University Student's Hostel**

In the early stages of academic development, residing in Accra Technical University institute was accomplish mostly on student sleeping in classroom, and other opened place like under trees with a little protection from the night, rain and sun, rendering residing in the rainy season and night very dangerous and almost impossible, the idea of hostel was to serve as an abode for the various student on long-term stay on the premises. The hostel which is allocated to student offering Higher National Diploma (HND) in the institution has exact eighty (80) rooms with utility facilities such as appropriate equipment for cooking and ironing. It also has basic sleeping facilities such as a bed, storage facilities, wash hand basin, and toilet and bathrooms in separate cubicles for everyone to use. In Accra Technical University, the hostel has an occupancy capacity of six (6) people in each room and thirty (30) students for each cubicle of toilet and bath facilities.

Thus, out of these 80 rooms, the hostel is a five (5) story-building facility with each floor containing 16 rooms, six (6) toilets, ten (10) wash room facilities, a urinal and six (6) hands wash sinks. The hostel is managed by the administration in conjunction with the hostel warden and the environmental health inspector or officer. Each cleaner is also allocated to one floor for proper cleaning exercise in order to maintain hygiene and sanitation [13]. Hostels are houses or halls of residence for groups who have specific needs, as students, young workers, tourists and organized parties. It was again said that, majority of the hostels came into existence in response to demand for safety.

According to [13]; hostels are provided by universities and some colleges for students who have to study away from home. Over the early 1900s, youth hostel became very common in Germany and they provided inexpensive

overnight lodging for one or two nights only for students on budget. This spread the idea of building hostels for the youth through the rest of Europe and in 1932 the international Federation of Youth Hostel was formed.

Hostels offer a variety of affordable and safe accommodation options to students, young workers and tourist from dormitory style rooms to private rooms with en-suite facilities (Facilities and Accommodation Operations DHM 132 / DHCM 132 19). Halls of residence provide accommodation to students and are located on or nearby campus. Accommodation varies from single rooms with en-suite facilities to double or triple rooms with shared bathroom facilities (Facilities and Accommodation Operations DHM 132 / DHCM 132 19).

Over the last 20 years, the student population engaged in the higher education sector has been increasing consistently. It has become the interest of universities and colleges to provide hall or residence, as it keeps the student close to the lectures rooms and libraries and involves them in college activities. Some Universities can offer the hostel only the first year of study [13].

The University halls of residence do not need a large reception area for the student, as new arrivals are generally limited to the beginning of the academic year in late September or October. At this time the administrative department will need to make temporary arrangement to deal with the registration of students. A number of universities have decided to enter the tourist and conference market during the vacation period in order to generate additional funds [13].

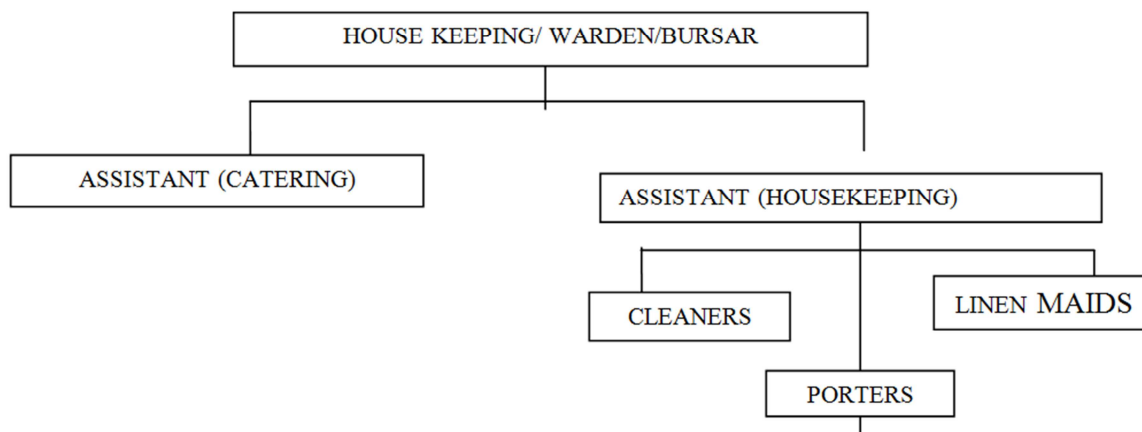
According [13] again held that, sleeping facilities in halls of residence are very basic especially when compared with hostels. Hostel forms are usually for single occupancy with a provision of a bed, storage facilities and a wash basin. Toilet, baths and showers are provided in separate cubicles for everyone to use. Again, some universities have some hostel forms with en-suite bathroom especially for the tourist and

conference markets. These are usually given during the academic semester to postgraduate students who are older and generally more likely to look after themselves. In addition, some halls of residence may be supplied with clean bed linen on a weekly or fortnightly basis and are usually required to make their own beds. Some halls of residence may have utility rooms where students congregate while they eat and space for storing food items, and appropriate equipment for cooking, laundering and ironing [13].

### 2.1. Hostel Housekeeping Staff and Responsibilities

In the overall responsibility of maintaining standards of cleanliness and the new accommodation product, the student bedroom and washroom are the sensitive and perishable commodities of the hostel [1]. This is because a bedroom which remains unsold for the year is revenue lost forever [1]; as such the housekeeper and his department plays a large part in the economic running of any hostel, by maintaining efficiency throughout the department and saving as much operating cost as possible. The organization and running of the hostel housekeeping department is therefore an important factor to be considered if students and staff are to be comfortable and academic success is to be achieved. The housekeeper or hostel Warden in the bid to maintain the standards of cleanliness required to meet the expectation of students and staff must devise suitable cleaning methods and frequencies, provide orders of work in suitable temperature and equipment and cleaning materials for the work to be carried out effectively [2]. However, since the responsibilities and duties of the housekeeping department cut across the public areas to students' bedrooms and all other departments, there is the need for delegation of work to ensure efficiency in all output of the department [2].

#### ORGANISATIONAL STRUCTURE OF HOSTELS

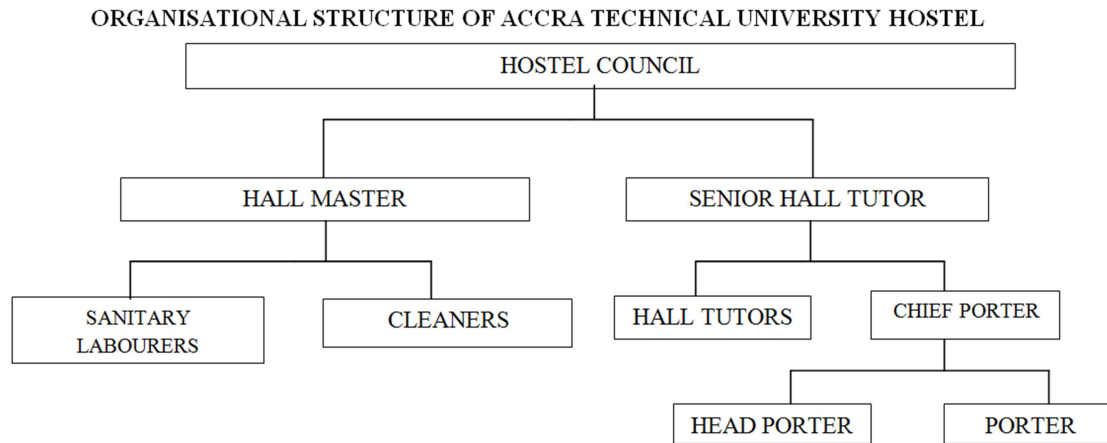


Source: Branson and Lennox, 1998.

**Figure 1.** Organizational structure of a typical housekeeping department in a hostel.

Figure 1 above, shows the organizational chart of a typical housekeeping department in a hostel [2]. Depending on the size of a hostel and the service that they offer certain staff

may not be required. This chapter would further look at the various staff members and the duties that they are supposed to perform in the department.



Source: Accra Technical University warden.

*Figure 2. The Organizational structure of Accra Technical University student's hostel.*

## 2.2. Head Housekeeper

The Head Housekeeper might be to a man or a woman with varied responsibility from one establishment to another. In establishments other than hostels, the heads of the housekeeping or accommodation departments will have different titles. Domestic Bursars are responsible for the housekeeping in hostels and university halls of residence. Where the welfare of the residents comes within the scope of this person, the term 'Warden' is more usual. 'Domestic Services Manager' is the title used in hospitals, while in boarding schools and homes for children and the elderly, the term 'Matron' will be appropriate.

The housekeeper is in constant contact with management, housekeeping staff, staff from other departments and students'. The Head Housekeeper is not selected based on his or her knowledge and skills only, but also on his or her personality. The housekeeper should have a passion for hospitality and make students' feel welcome, be able to inspire confidence in staff by leading them effectively, handle difficulties, problems and complaints, train the staff and lead by example and must have patience.

The aim of the housekeeper is to run the department with maximum efficiency but at no expense of the student care and comfort. A high standard of cleanliness of all areas are under the responsibility of the head and to ensure these areas are well maintained, establish a hospitable atmosphere in the department with courteous staff; ensure that all staff are trained and supervised and that safety and security regulations are made known to all staff of the department; (Facilities and Accommodation Operations DHM 132 / DHCM 132 14) maintain a good working relationship with other departments and keep the Warden or administrators informed of all matters requiring attention. The Head at the departments is committed to achieving the organisational goals and targets. As manager main responsibilities are the management functions which are; planning, organizing, leading and directing and controlling.

### 2.2.1. Bursar/Warden/Housekeeper

Warden or bursar being the highest position of responsibility in the housekeeping department is concerned mainly with the general administration of the hostel, the catering, and housekeeping and maintenance of the building and environment. The Head is also responsible for the welfare and discipline of the residents. The span of control of the Warden or Housekeeper extends over students bedroom, public areas such as the corridor and the staircase, the housekeeper has to delegate some of these duties to his assistants and other staff of the department while maintaining the overall responsibility of ensuring clean, safe and comfortable environments for residents. Due to the sensitivity of the housekeeper areas, the head housekeeper may come out with work orders, rules and regulation to be followed by subordinates in order to maintain the standards of the establishment [1]. In order to achieve the standards of performance, the following may be some of the duties that the Housekeeper/Warden may carry at:

- (1) Ensure cleanliness of the staff and provision of suitable work clothing.
- (2) Ensure that safety and security regulations are made known to all staff.
- (3) Ensure that all staffs are well supervised, controlled and trained. Compiling of duty rosters, wage sheets and maintenance report sheets etc.
- (4) Ensure that all keys in the department are well-controlled and kept under lock.

Although the Housekeeper/Warden's work entails a lot of paper work, there is the need that during the day there should be visits as many areas as possible to ensure that things are being done accordingly. Each establishment depending on its policies may vary the duties of the Housekeeper/Warden, however the final results expected is that the economic and objectives as set out by management is achieved [2].

### 2.2.2. Cleaners

Cleaners are responsible for cleaning corridors, bathrooms

and offices. Cleaners can be employed on a full-time or part-time basis with working hours vary according to the work which they have to do. Public areas and offices are often cleaned at night or very early in the morning (Facilities and Accommodation Operations DHM 132 / DHCM 132). These are the various departments and the various responsibilities of an ideal hostel. In these recent times, some of these departments such as the assistant (catering), assistant (housekeeping), and linen maid are virtually non-existence. And these responsibilities have been added to the student's time apportioned for studies and other academic activities making the academic community aberrant. Also, since these departments are no more, the students' various rooms have been multi- purposed. Instead of it being primarily for rest, it has now been turned it a kitchen and a dining. According to the Article 20 of the "Unified Condition of Service to Union Staff of Accra Technical University in Ghana". The Accra Technical University shall take such measures as to ensure the good health and safety of its employees in accordance with the provision of factories, offices and shops or any amendment thereof. As a result, the food left-over does attract rodents and other harmful animals to the rooms making the room stuffy as well, affecting wellbeing of the student.

### **2.3. Sanitation and Hygiene Practices**

Environment (from the French word: to circle or surround) is the social and cultural conditions that affect an individual or community [3]. In its widest use, it refers to all the biophysical features, organic and inorganic resources and all bio-diversity disposable to humankind. [1] defines environment as the sum total of conditions within which organisms live. According to [12] in relation to human health, the "environment" includes not only the physical and biological elements of nature, but also human-based systems like cultural, economic, political, technological, spiritual and relational that make up the setting in which people live. The concept of environment encompasses all the natural resources which interlink in a complex global ecosystem embodying many sub-systems. Disruption in such systems, which is as a result of cumulative indiscriminate degradation which takes place in localized environments such as villages, towns and cities, distort the delicate ecological balance and have dire consequences for mankind, and thus provide a compelling justification for the preservation of the environment.

Hygiene is the discipline of health and it's safeguarding. Health is the capacity to function efficiently within one's surroundings. Our health as individuals depends on the healthfulness of our environment. A healthful environment, devoid of risky substances allows the individual to attain complete physical, emotional and social potential. Hygiene is articulated in the efforts of an individual to safeguard, sustain and enhance health status. Measures of hygiene are vital in the fight against diarrhoea diseases, the major fatal disease of the young in developing countries [10]. The most successful interventions against diarrhoea diseases are those that break off the transmission of contagious agents at home. Personal

and domestic hygiene can be enhanced with such trouble-free actions like ordinary use of water in adequate quantity for hand washing, bathing, laundering and cleaning of cooking and eating utensils; regular washing and change of clothes; eating healthy and clean foods and appropriate disposal of solid and liquid waste.

The WHO defines hygiene to the conditions and practices that help to maintain health and prevent the spread of diseases. Medical hygiene therefore includes a specific set of practices associated with this preservation of health, for example environmental cleaning, sterilization of equipment, hand hygiene, water and sanitation and safe disposal of waste. Progress in sanitation and improved hygiene has greatly improved health, but many people still have no adequate means of appropriately disposing off their waste. This is a growing nuisance for heavily populated areas, carrying the risk of infectious disease, particularly to vulnerable groups such as the very young, the elderly and people suffering from diseases that lower their resistance. Poorly controlled waste also means daily exposure to an unpleasant environment.

### **2.4. The Need for Hygiene and Sanitation Management**

Poor sanitation gives many infections the ideal opportunity to spread: plenty of waste and filth for the flies to breed on, and unsafe water to drink, wash with or swim in. Among human parasitic diseases, schistosomiasis (sometimes called bilharzias) ranks second behind malaria in terms of socio-economic and public health importance in tropical and subtropical areas. The disease is endemic in 74 developing countries, infecting more than 200 million people. Of these, 20 million suffer severe consequences from the disease [5]. Sound environmental sanitation management ensures that appropriate intervention are introduced and implemented to promote behavioural change.

Poor environmental sanitation or hygiene also has tremendous economic costs. The health impact of inadequate environmental sanitation leads to a number of financial and economic costs including direct medical costs associated with treating sanitation-related illnesses and lost income through reduced or lost productivity and the government costs of providing health services. A World Bank country environmental analysis conducted in Ghana has shown that health cost resulting from poor water, sanitation and hygiene is equivalent to 2.1% of Annual Gross Domestic Product (UNICEF, 2008). The significant economic benefits of good environmental sanitation are not well known; the media often emphasize on health benefits, but the time savings and opportunity cost are equally important stories. Environmental sanitation management ensures that there is prudent allocation of limited resources tailored to the needs of the people to ensure economic sustainability.

Poor environmental sanitation practices also affect the environment in diverse ways. In regions where a large proportion of the population are not served with adequate water supply and sanitation, sewage flows directly into streams, rivers, lakes and wetlands, affecting coastal and

marine ecosystems, fouling the environment and exposing millions of children to disease. Particularly in the context of urbanization, indiscriminate littering, domestic wastewater, sewage and solid waste improperly discharged presents a variety of concerns as these promote the breeding of communicable disease vectors as a result of air, water and soil pollution. Poor waste management also contributes to a loss of valuable bio-diversity. Improved environmental sanitation management reduces environmental burdens, increases sustainability of environmental resources and allows for a healthier, more secure future for the population.

Solid waste management is an integral part of urban and environmental management, like most of other infrastructural services has come under great stress, consider low priority areas, solid waste management was never taken up seriously either by public or by concerned agency or authorities and now the piled up waste is threatening our health, environment and wellbeing.

### **2.5. Choice of Equipment**

The housekeeper is responsible for choosing equipment, and doing so should not only consider the cost of the equipment, but rather weigh up its cost with the cost of labour and the saving of time. Efficiency will also be determined by the result obtained for the effort needed. Expensive pieces of equipment not used frequently are a waste of money, an alternative to buying would be to hire the equipment or buy dual purpose equipment. When choosing cleaning equipment, the housekeeper has to consider its safety factors, ease of operation and cleaning, work performance and end results, saving of time and labour and it's others are maintenance and servicing arrangements and initial and operating costs [12].

### **2.6. Cleaning Agents**

Dust is composed of fine dry particles. It can be removed by dusting or damp dusting without the use of cleaning agents. Dirt on the other hand adheres to the surface by means of grease or moisture. To remove it from surfaces, cleaning agents as well as equipment is required.

#### **2.6.1. Detergents**

Detergents are cleaning agents which, when used in conjunction with water, can loosen and remove dirt, then hold the dirt in suspension so that it is not re-deposited on the clean surface. There are many different detergents available, each one a mixture of chemical substances that makes it suitable for removing a specific type of dirt or for cleaning a particular surface or material. An important consideration in choosing detergents is that they should be biodegradable, that is, they should break down in rivers and sewage works waters [13].

#### **2.6.2. Toilet Cleansers**

Toilet cleansers are available in crystalline, powdered or liquid form. It contains acid which aids the removal of metal stains example lime scale to clean and keep the WC pan hygienic. Liquid chlorine bleaches, which are alkaline-

stabilized solutions of sodium hypochlorite, may also be used to clean and disinfect lavatories and should never be mixed with other lavatory cleansers.

#### **2.6.3. Soda and Ammonia**

These are alkalis, and are used as grease emulsifiers and stain removal agents. Extreme care has to be taken in their use as they are very strong materials which make it harmful to the skin and when inhaled [12].

#### **2.6.4. Disinfectants, Antiseptics and Deodorants**

Disinfectants, antiseptics and deodorants are not strictly cleaning agents but are often used during cleaning operations. Disinfectants kill bacteria. Antiseptics prevent bacterial growth and are frequently diluted disinfectants. Deodorants mask unpleasant smells either by combining chemically with the particles forming the smell or by their smell being predominant.

#### **2.6.5. Corridors and Staircases**

Corridors and staircase has to be washed while students' are less using it, provided that it is wide enough, half should be done at a time, enabling the students' to walk up and down on the dry part of the staircase. All banisters and handrails should be dusted before cleaning, or after sweeping, and washed.

### **2.7. Orders of Work**

Sweeping with a broom is done before dusting, vacuum cleaning after dusting is done from high to low, cleaning methods should be efficient but also economical of time, labour and cleaning materials. Before starting the job, the cleaners should have the correct cleaning agents, equipment and materials (Facilities and Accommodation Operations DHM 132 / DHCM 132 129).

#### **2.7.1. Cleaning a Bathroom**

Bathrooms are a breeding ground for bacteria, thus extra care should be taken to protect the student and staff against the spread of bacteria. Clothes and brushes used in bathrooms must be kept for that purpose only. Remove the rubbish, empty the waste bin and remove any rubbish lying about.

#### **2.7.2. Clean the Toilet**

Flush the toilet, lift the toilet cover and seat, squirt toilet cleaner around the bowl, scrub the inside of the bowl thoroughly, flush and rinse the toilet brush under the running water, damp wipe and lower the toilet seat and close the lid.

### **2.8. Safe Working Practices**

#### **2.8.1. Personal Health**

Accommodation workers should never put their health at risk. Infection and diseases are spread through body fluids and direct contact with blood or body fluids found on bathroom surfaces and should be avoided.

#### **2.8.2. Work Safely**

Everyone at work has the duty to protect the health and

safety of those around them. Distraction, haste, use of incorrect working methods and failure to apply safety measures causes accidents. One of the most important steps employees can take is to work in accordance with training and instruction provided.

### 3. Study Area

The Study area is Accra Technical University which is located in the city centre of the Accra Metropolis along the Barnes Road in Tudu where most of the city's businesses are located. Accra Technical University was the premier Polytechnic in Ghana which provides adequate workforce for the country's middle man power. Accra locates the seat of government, Flagstaff House the only international airport, the Kotoka International Airport.

#### 3.1. Research Design

The research design is the basic plan or strategy of research, the logic behind it which makes it possible and valid to draw conclusions [11]. The study adopted a purely quantitative approach which suit a case study was used through the administration of questionnaires to collect data. The strengths of a quantitative approach as it allows the researcher to learn at hand about the social world being investigated by means of involvement and participation in that world through focus on what individual actors are involved in.

#### 3.2. Sources of Data

Data were collected from both primary and secondary sources. The primary source of data is the unprocessed information being used for the first time; this is the administration questionnaires gathered from housekeeping staff, management and students who can help with first-hand information for the research. Secondary data were gathered from already existing materials and write ups on effects of sanitations and its impact on development obtained from various libraries and web site, also existing materials from management textbooks and on the internet.

#### 3.3. Sampling Techniques

The target population was comparatively too large to successfully examine under the time and budgetary confines of the study. The researchers therefore employed a survey technique in sampling respondents and gathered information about the importance of sanitation at the Accra Technical University hostel and its impact on development. This technique provides feedback from the respondent's point of view. Sampling is the inclusion or exclusion criteria for certain components from a population. The assumption is that every unit under observation carries the traits of the

population from which it is drawn so that decisive conclusions can be made from samples.

An analysis of the costs, time and the number of people required for the project were the determinants of the sample size. This study adopted simple random and strategic methods of selecting samples. It was random in the sense that there was no certain structure followed in selecting students and management. It involved asking people questions about their attitudes and opinions about sanitation and hygiene in writing by having respondents complete a questionnaire. The researchers asked respondents.

Total numbers of student sampled were hundred (100) while management were ten (10) adding up to hundred and ten (110) respondents. With respect to students, the simple random technique was employed to select samples as they had similar traits and conditions and each one is believed to have represented the whole group. This therefore means that every group or individual found on campus was deemed an eligible candidate to participate in this study. For the students questionnaires and semi-structured interviews were done randomly with groups and individuals found at the hostel excluding visitors.

#### 3.4. Population

The target population of the study included management team of the hostel, housekeeping staff and students of Accra Technical University. This consists of thirty (30) management and one hundred (100) students, this gave a fair representation of respondents and aid in the elimination of biasness in the data collection.

#### 3.5. Data Analysis

The questionnaire administered by respondents was recorded and coded. The Statistical Package for the Social Science (SPSS) as well as Microsoft Excel was used to analyse the data to obtain descriptive statistics mainly in the form of frequencies and percentages. For the statistical analysis, cross tabulations were used. Quantitative data from in-depth interviews were also analysed and the information generated used to further support the information from the questionnaires.

## 4. Data of Socio-demographic Characteristics of the Student and Staff

The study sought to describe the socio-demographic characteristics of the sampled respondents used for the study. The result of this analysis is shown in Table 1 below:

*Table 1. Socio-demographic characteristics of respondents.*

Socio-demographics	Frequency	Percentage
StudentsSex		
Male	10	25
Female	30	75

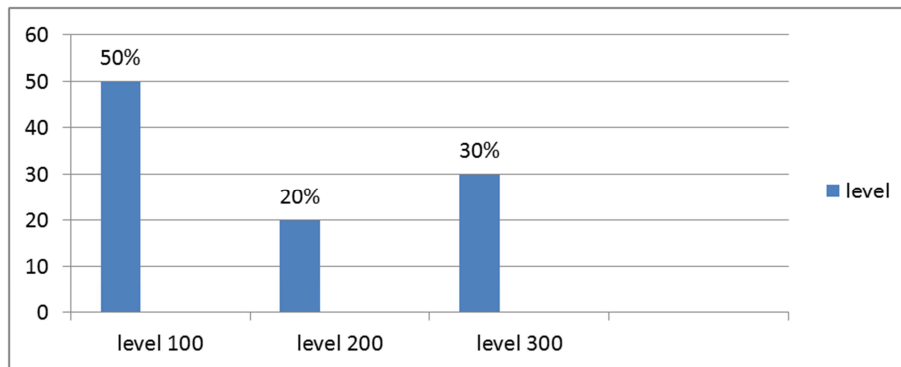


Socio-demographics	Frequency	Percentage
Total	40	100
Age		
18-23	15	37.5
24-29	20	50
30-35	5	12
Total	40	100
Accra Technical University staff		
Sex		
Female	8	40
Male	12	60
Total	20	100
Age		
30-35	3	15
36-41	8	40
42 and above	9	45
Total	20	100
Marital status		
Single	11	25
Married	9	75
Total	20	100

Source: Fieldwork, 2015.

Majority of the student respondents (75%) were females whilst males were 25%. This is because females occupy three (3) floors of the five-storey students’ hostel. The age range of 24 to 29 constitutes 50% of the total respondents whilst the other two ranges totalled 50%. This portrays that mostly the students are mature and might be working. With respect to the

housekeeping staff respondents, most of them were male (60%); their age ranges were 36 and above (85%) implying that majority of the workers were quite old and three-quarters were married. The sex, age, educational background and occupations of the respondents give an idea to the nature of people who answered the questionnaires being male or female.



Source: Fieldwork, 2015.

Figure 1. Educational level of student respondents.

Figure 1: depicts majority of student respondents being level 100 students which constitute 50%, level 300, 30%and Level 200, 20%.

**4.1. Descriptive Analyses of Respondents of Accra Technical University**

Half of the students’ respondents (50%) were impressed with services rendered by the housekeeping staff with respect to the sleeping and bathrooms and its environs and majority of the students’ respondents (75%) declared that the environment is cleaned daily.

Table 2. Respondents’ impression with sanitation situation of the hostel and its environs.

Statements	frequency	Percentages
Students impression of duties performed by Housekeeping staff		
Staff and the service they render	20	50
Cleaning of the rooms, bathrooms and environs	5	12.5
Teaching	15	37.5
Total	40	100



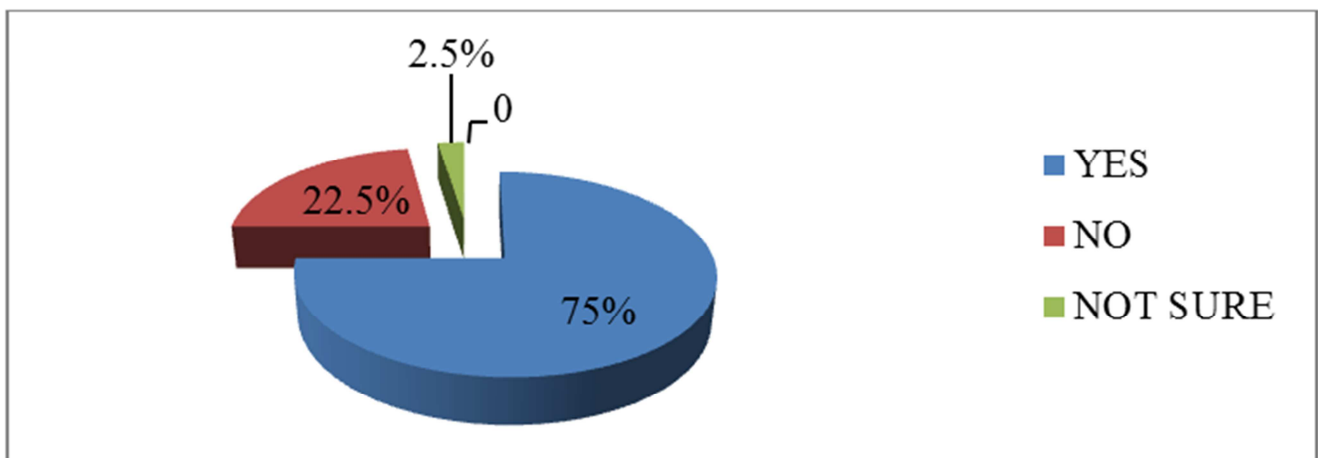
Statements	frequency	Percentages
Sanitation ratings in the institution		
Excellent	5	12.5
Very good	15	37.5
Good	4	10
Satisfactory	10	25
Poor	6	15
<b>Total</b>	<b>40</b>	<b>100</b>
Frequency of how the hostel environment is cleaned		
Daily	30	75
Twice daily	6	15
Weekly	4	10
Monthly	0	0
Yearly	0	0
<b>Total</b>	<b>40</b>	<b>100</b>
Adequacy of cleaning materials for cleaning		
Yes	5	12.5
No	10	25
Not sure	25	62.5
<b>Total</b>	<b>40</b>	<b>100</b>
Ratings for the acquisition of cleaning agents for daily cleaning		
Easily accessible	7	17.5
Accessible	8	20
Somewhat accessible	15	37.5
Difficult	10	25
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field data, 2015.

From the above table, to how many times the environment is cleaned, some said daily, twice a day and some weekly from the student respondents' while others were not sure of how often it is cleaned and the adequacy of cleaning materials to staff. From the study there was an indication that cleaners have issues in acquiring their materials for executing their duties.

#### 4.2. Students' Complaints about Sanitation Problems

All the students' respondents affirmed the need for personal, food and environmental hygiene in order to be healthy to accomplish their objectives for being in Accra Technical University. Although 50% of the students' respondents were impressed with the services rendered by the housekeeping staff most of the total student respondents had problems with the sanitation conditions of the hostel and the environs.

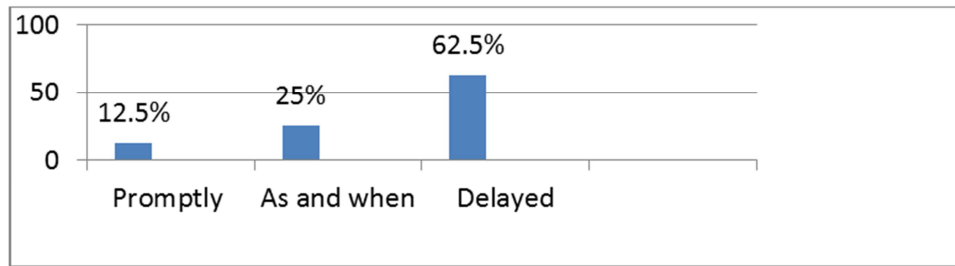


Source: Field data, 2015.

Figure 2. Respondents' complaint about sanitation problems.

Majority of the respondents (75%) had complaints whilst 22.5% of them did not.

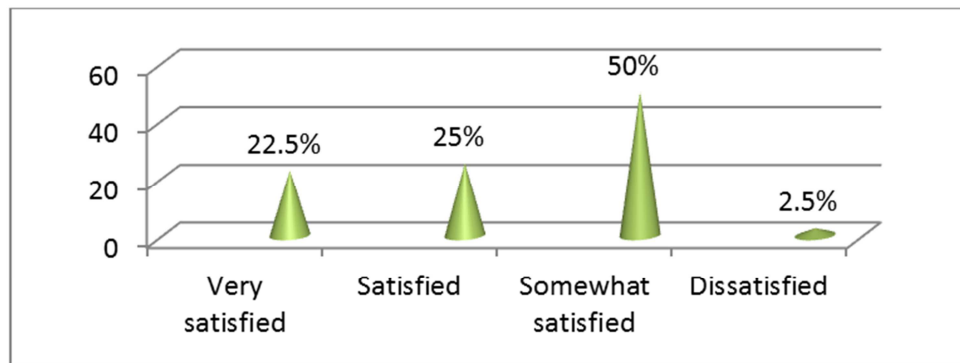
#### 4.3. The address of Students' Complaints



Source: Field data, 2015.

**Figure 3.** Address of students' complaints.

The response of as many as 62.5 % of the respondents who had complaints with the sanitational conditions of the hostel was delayed; only 12.5 % of them had their problems addressed promptly.



Source: Field data, 2015.

**Figure 4.** Respondents satisfaction with resolution of hostel challenges.

Almost 50% of the students were satisfied with how the hostels challenges were resolved; only 2.5% were somewhat satisfied.

#### 4.4. Hygiene and Cleaning of the Hostel

To some respondents the hostel uses more than one cleaning agents making some satisfied, dissatisfied and somewhat satisfied with cleaning staff. From the study, majority of the student said yes to challenges in sanitation bringing us to the sanitation situation at the hostel.

**Table 3.** Hygiene and cleaning of the hostel.

Statements	Frequency	Percentage
Popular cleaning materials in Accra Technical University		
Water	40	100
Disinfectants, antiseptics and deodorants	40	100
Bleaches	40	100
Manual equipments ( broom, mop, buckets etc )	40	100
Abrasives	40	100
Satisfaction with cleaning conditions of cleaning staff		
Very satisfied	7	17.5
Satisfied	8	20
Somewhat satisfied	15	37.5
Dissatisfied	10	25
Total	40	100
Response to whether students face sanitation challenges		
Yes	30	75
No	9	22.5
Not sure	1	2.5
<b>Total</b>	<b>40</b>	<b>100</b>

Statements	Frequency	Percentage
Challenges encountered by respondents		
Personal health	40	100
Lack of water	40	100
Refuse disposal	40	100
Absenteeism of labourers	40	100
Working materials	40	100
Hygiene practices		
Personal hygiene	40	100
Food hygiene	40	100
Environmental hygiene	40	100

Source: Field data, 2015.

Majority of students respondents were impressed with staff and services they render to some teaching and others cleaning of room's bathroom and the institution in general, showing and indicating a problem with the schools hygienic environment. Some students were not aware of complaining about their problems, some respondents had fair result of complaining and positive or negative response making some satisfied or dissatisfied with how challenges is resolved in the school.

## 5. Findings

Sanitation and hygiene are among the powerful drives of human development as it affects quality of life at many levels including improved health and economic status. There is growing awareness among public health practitioners that, until proper hygiene is consistently practiced both at home and in the community and institutions as a whole, the desired impacts of improved sanitation and hygiene infrastructure in terms of community health benefits cannot be realized.

The study therefore aimed at analysing the importance of good sanitational practices and their effects on health benefits based on the following objectives: (a) Identify factors that contribute to sanitation problems in the hostel of Accra Technical University and its environs; (b) Investigate the factors inhibiting the proper implementation of good hygiene and sanitation practices in the hostel; (c) Identify the various sanitation programs management has put in place to check unhygienic practices; (d) Evaluate the effects of poor sanitation practices on student's health at the hostel;

In order to obtain sound conclusions in fulfilment of these objectives, questionnaires were designed into three groups constituting students, housekeeping staff and management. Various techniques were employed in framing these questionnaires. Convenience sampling was used to select students due to the ease of accessibility. Judgmental sampling was used to select the housekeeping staff and managements of Accra Technical University. Data was collected from both primary and secondary sources. The research instrument for the study included observation and survey, questionnaires which were developed by the researchers and a tape recorder which was used for personal interview. It took the researchers 14 days to administer the questionnaires. The researchers contacted the respondents personally for both interview and answering of questionnaires.

Summarized outcome of the study and major findings from

the data analysis. (a) The study identified that absenteeism of labourers, lack of water, refuse disposal, lack of working materials, accessibility of cleaning materials were the factors which contribute to sanitation problems in the hostels of Accra Technical University. (b) The study identified factors such as cleaning of the rooms, bathrooms and the institution in general as the proper implementation of good hygiene and sanitation practices in the hostel. (c) There was an indication that sanitation programs management has been put in place by Accra Technical University to check unhygienic practices. (d) There is an indication that students were encouraged to practice personal hygiene, food hygiene and environmental hygiene.

## 6. Conclusion

Sanitation and hygiene are among the powerful drives of human development as it affects quality of life at many levels including improved health and economic status. There is growing awareness among public health practitioners that, until proper hygiene is consistently practiced, both at home, in the community as a whole and institutions, the desired impacts of improved sanitation and hygiene infrastructure in terms of community health benefits cannot be realized [3]. Accra can be considered as one of the hub of educational institutions in Ghana ranging from the basic to the tertiary levels. Universities, polytechnics and colleges provide hostel for students who have to study away from home and are called Halls of Residence or Hostels. Housekeeping being a department under the Rooms Division is the main provider of accommodation, and its proper implementation will, in no doubt, ensure student and staff satisfaction. Accra Technical University which is the only main tertiary institution and Technical University of the Region. Greater Accra happens to have a reflection of the sanitation syndrome in its student's hostel facilities and its environs especially the old hostel which was built at the early stage of the Polytechnic. Based on the above findings from the study, there is an indication showing that there are sanitation problems in the institution. Availability of cleaning materials has been a problem and other health related issues.

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