

ASSESSMENT OF HYGIENE AND SANITATION PRACTICES ON HEALTH AMONG STUDENTS OF FEDERAL UNIVERSITY GASHUA, YOBE STATE, NIGERIA

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ABSTRACT: This research examines the hygiene and sanitation practices among students at Federal University, Gashua, Yobe State. The study aimed to determine the student's attitudes toward maintaining good hygiene practices, and identify the extent of use of and sanitation ensuring good health in the environment. Two research questions were raised to guide the work: The researcher randomly administered 375 questionnaires to students across five hostels: of male and female students in the University. The data obtained were analyzed with the use of Statistical Package for the Social Sciences. The findings of the study show that, students of Federal University, Gashua have serious challenges of good hygiene and sanitation practices due to inadequate facilities needed for optimal health. While many students of the University, demonstrate good hygiene and sanitation practices, there are significant gaps in key areas such as handwashing, waste management, and personal hygiene routines. Suggested strategies require targeted interventions to improve overall hygiene and sanitation practices among students leading to a safer and healthier environment.

Keywords: Sanitation, hygiene, health, practice, students

INTRODUCTION

Sanitation is defined as access to and use of facilities and services for the safe disposal of human urine, feces and community liquids in a hygienic way (WHO, 2018). So as not to endanger the health and welfare and also for the social and environmental effects, it may have on people; people have been suffering from one disease to another without knowing the problems of their illness, which can be circumstantial due to distress or dirty environment (Anand and Prakash, 2018). Hygiene is a set of practices performed to preserve health. According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases (Ahmed *et al.*, 2021). A healthy environment through sanitation and hygiene practices ensures good health and makes one sound for worthwhile activities including learning. To state that a healthy environment and hygiene practices in the universities and other institutions of higher learning has a fundamental importance in achieving the set goals and objectives of these institutions is an understatement.

Sanitation literally means measures necessary for improving and protecting health and wellbeing of the people. It is any system that promotes proper disposal of human and animal wastes, proper use of toilet and avoiding open space defecation. While hygiene on the other hand is the practice of keeping oneself and surroundings clean, especially to avoid illness or the spread of preventable diseases (Gammon and Hunt, 2020; UNICEF, 2020; WHO/UNICEF, 2019). The government of Nigeria at different levels of governance (Federal, State and Local Council levels) and their institutions have made efforts to eradicate filth and ensure adequate sanitation of the environment but have not come up to the maximum effort required to combat unsanitary practices and hygiene abuses in the homes, institutions and general environment, as people still engage on

indiscriminate disposal of wastes (Nwankwo *et al.*, 2016). Despite governments efforts towards ensuring a safe and healthy environment, many Nigerians still go with the dangerous impression that dirty *no de* kill black man (Nwakile *et al.*, 2017; Onyejieke and Onyeaso, 2023; Nwanko *et al.*, 2023).

Statements of the Problem

Sanitation and healthy school environment is no doubt a prerequisite for the implementation of any effective educational program at all levels. This calls for proper provision of sanitation and hygiene facilities and its practices in our institutions of higher learning, universities inclusive. Due to a lot of disturbing situations towards hygiene and sanitation practices in Federal University, Gashua, Yobe State, such as the presence of stagnant water all over the school vicinity due lack of proper drainage system, the presence of fecal matter all over the school premises most especially in female hostel and even class rooms, presence of cow dung all over the school premises including walk ways, lack of water as a facility due to poor power supply, lackadaisical attitudes of cleaners towards their tasks, carefree attitudes of students towards proper maintenance of school facilities (such as hostel surrounding, toilets and the entire school at large), disposal of garbage anywhere in school vicinity due to lack of dustbins, the presence of mosquitoes, rodents and other insects due to the presence of stagnant and bushes all over the school premises and host of others (Armah *et al.*, 2018; Assefa and Kumie, 2019; Lopez-Quintero *et al.*, 2019).

Students contribute to poor hostel sanitation practices by the laziness of students to use facilities provided by the school authority for waste disposal in the hostels. Outside cleaning their rooms in the hostels most of the students feel it is humiliating for them to tidy their surroundings. Even though the University system has hired cleaners to clean the hostels these cleaners are poorly supervised and with them not doing their jobs properly the hostel surrounding becomes a breeding site for all sorts of dangerous insects and pests such as mosquito which can expose the students to malaria, tsetse-fly which when a student is bitten by will cause sleeping sickness and some many more insect with different health complications, even some students go as far as urinating and defecating indiscriminately outside the hostels because they cannot clean the dirty toilets themselves and in the long run they will still come to those polluted areas to carry out their daily activities like cooking, bathing, washing among other activities (Nwakile *et al.*, 2017). It is on the above background that this study was carried out on assessment of hygiene and sanitation on students' health at the Federal University, Gashua, Yobe State, Nigeria.

Purpose of the Study

The general purpose of this study was to assess the hygiene and sanitation practices on health among students in Federal University Gashua, Yobe State. Specifically, the purpose of the study was to:

- Investigate the attitudes of students towards hygiene and sanitation practices on their health in Federal university, Gashua
- Investigate the extent of use of the available hygiene and sanitation facilities by the students of Federal University, Gashua.

Research Questions

In order to find answers to the objective of this study, the following research questions were raised to guide the work:

- What are the attitudes of students towards hygiene and sanitation practices on their health in Federal university, Gashua?
- What is the extent of use of the available hygiene and sanitation facilities by the students of Federal University, Gashua?

METHODOLOGY

Research design

A survey research method was adopted for the study (Nwakile *et al.*, 2017).

Study Area

The study was carried out in Federal University Gashua, Yobe State, particularly among the students of the University. It is located at Gashua town in Bade Local Government Area, Yobe State, Nigeria. The university has five hostels which include: 2male and 3female hostels, with several sections housed under each of them (Nwakile *et al.*, 2017).

Population and Sample of the Study

A population of the study comprises of 4870 students of university. The sample size of 380 students drawn from the five hostels of the university. This study adopted a simple random sampling method in order to cover all the five hostels of 2 male and 3 female hostels. Seventy-six (76) students from each of the five hostels of the university was randomly selected and used for the study (Nwakile *et al.*, 2017).

Instrument for data collection

A structured questionnaire was used as instrument for data collection for this study. The Questionnaire for this study was divided into two (2) sections. The first section aimed at collecting the demographic data of the respondents, while the second section aimed at gathering data pertaining to the research questions raised for the study. The questions employed the Likert Scale of Measurement, asking respondents to choose between a number of categories that gave an indication of how closely they agreed or disagreed with a set of statements. Numerical values were allotted to the different categories so that the respondent's attitude or opinion could be measured by the total of these numerical values. While the remaining questions were provided with options for the respondent to tick appropriate option that best described their opinions (Nwakile *et al.*, 2017).

Validation and Reliability of the Instrument

The instrument used was subjected to face and content validation by the researcher and other senior lecturers by making necessary observations, corrections and amendments in order to improve upon the instrument. The questionnaire was subjected to reliability test by conducting pilot study a pilot study in a neighbouring college University using split-half method in order to determine its reliability (Nwakile *et al.*, 2017).

Data Collection and Analysis

Data collected were analyzed using descriptive statistics, in the form of simple percentages and frequency distributions using SPSS (Statistical Package for the Social Sciences, also known as IBM SPSS Statistics, is a software package used for the analysis of statistical data), was used for the research questions formulated (Nwakile *et al.*, 2017). The hostel distribution of the participants indicates a nearly equal representation from each hostel within university. The hostels each contribute 100% of the total participants. The gender distribution of the participants shows a higher representation of females, with 60% (225 respondents) of the total participants being female, compared to 40% (150 respondents) who are male. This distribution highlights significant participation from female students in the survey, providing valuable insights into hygiene and sanitation practices from the female hostels' demographics at the University. The age and academic levels are not a factor in this study (Nwakile *et al.*, 2017).

RESULTS AND DISCUSSION

Table 1 shows the distribution of the respondents based on gender. Females 60% and males 40%. Females being more interested in health-related issues than males being less willing to discuss

health related issues. Implying that, female students in Federal University, Gashua (FUGA) might be more aware of or concerned about hygiene and sanitation practices (Nwanko *et al.*, 2023; Onyejieke and Onyeaso 2023).

Result of study in Table 2: presents the detailed responses regarding the practices of hygiene and sanitation among students FUGA. The responses are categorized as Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Disagree (D), with their respective percentages. For the statement "Always wash hands with soap after defecation" only 13.33% strongly agree, 20% agree, 33.33% strongly disagree, and 33.33% disagree. This indicates a significant gap in this crucial hygiene practice, highlighting the need for increased awareness and education. When asked if they wash hands with soap after handling garbage or dirt, 20% strongly agree, 53.33% agree, 20% strongly disagree, and 6.67% disagree, showing similar gaps in practice as with other hygiene behaviors (Nwakile *et al.*, 2017; Mackinnon *et al.*, 2019). Cutting nails at least once a week is less common, with only 13.33% strongly agreeing, 20% agreeing, while 33.33% strongly disagree and 33.33% disagree. This suggests that many students do not regularly maintain this basic hygiene practice.

The habit of daily brushing teeth in the morning and before going to sleep is well-established, with 66.67% strongly agreeing and 26.67% agreeing. Only 4% strongly disagree and 2.67% disagree, indicating that most students recognize the importance of oral hygiene. Bathing daily is practiced by most students, with 53.33% strongly agreeing and 33.33% agreeing, though a small percentage still do not adhere to this routine. Wearing daily washed clothes is similarly well-practiced, with 66.67% strongly agreeing, 26.67% agreeing, and a small portion not following this practice. Changing underwear daily is a common practice, with 66.67% strongly agreeing, 26.67% agreeing, and only a small portion do not. Washing toilets or bathrooms daily shows a significant gap, with only 13.33% strongly agreeing, 20% agreeing, while 33.33% strongly disagree and 33.33% disagree. This highlights a critical area for improvement in maintaining communal hygiene.

The proper disposal of household waste shows a similar pattern, indicating a need for better waste management practices among students (Mmom and Mmom, 2019). Covering water and other edibles properly is generally practiced, with 53.33% strongly agreeing and 33.33% agreeing, though some students still do not adhere to this practice. Sweeping rooms daily is a well-established habit for most, with 66.67% strongly agreeing and 26.67% agreeing. Washing cooking pots and dishes immediately after eating shows significant gaps, with only 13.33% strongly agreeing and 20% agreeing, while a majority do not follow this practice, indicating a need for better kitchen hygiene. Washing clothes weekly is more common, with 20% strongly agreeing and 53.33% agreeing, though some students still do not follow this routine. Using the bush for open defecation daily is less common, with only 13.33% strongly agreeing and 20% agreeing, but a significant portion still practices this, highlighting a need for better sanitation facilities. Using only the toilet for defecation is more common, with 20% strongly agreeing and 53.33% agreeing, though some students still prefer open defecation, indicating a need for improved toilet facilities and education on their use. While many students at Federal University, Gashua, demonstrate good hygiene and sanitation practices, there are significant gaps in key areas such as handwashing, waste management, and personal hygiene routines. These areas require targeted interventions to improve overall hygiene and sanitation standards among students (Mohammed *et al.*, 2021; Nath, 2020; Onyejieke and Onyeaso 2023).

Table 3 presents the detailed responses regarding the extent of use of hygiene and sanitation facilities by students at Federal University, Gashua. The statement "Daily brush teeth in the morning only," showed a significant portion of students (33.33% strongly disagree and 33.33% disagree) who do not follow this practice, this observation suggests a need for improved awareness of the importance of brushing teeth twice daily. "Do not always wash hands before meals" showed with only a minority adhering to this less effective practice, but with a significant portion of students still engaging in them, indicating areas for improvement. "Always wash hands with soap after defecation" observed a notable portion of students not adhering to the recommended practice of

using soap, highlighting a critical area for education. The proper disposal of household waste ("Always disposes household waste properly") shows a concerning pattern, with only 13.33% strongly agreeing, 20% agreeing, and a large portion of students not following this practice, indicating a significant gap in waste management habits. "Keep water and edibles covered/protected from flies" is a well-adhered-to practice, with 66.67% strongly agreeing and 26.67% agreeing, though there are still some students who do not adhere to this practice. "Cut nails at least once a week," "Cut nails once in two weeks," and "Cut nails at least once a month" all show similar patterns, with a significant portion of students not maintaining regular nail hygiene, indicating another area for improvement (Mackinnon *et al.*, 2019).

Using toilets for defecation ("Strictly use toilets available for defecation" and "Occasionally use toilets available for defecation") also shows mixed adherence, with some students still preferring open defecation, indicating a need for improved sanitation facilities and education. Finally, the use of available water ("Use the available water for drinking, toileting, and hand washing") shows a majority of students adhering to proper practices, though there are still some gaps in compliance. While many students at Federal University, Gashua, demonstrate good hygiene and sanitation practices, there are significant gaps in key areas such as handwashing, waste management, and personal hygiene routines. These areas require targeted interventions to improve overall hygiene and sanitation standards among students (Mohammed *et al.*, 2021; Onyejieke and Onyeaso 2023).

CONCLUSION

The analysis revealed a high level of positive attitudes towards hygiene and sanitation practices, the availability of hygiene and sanitation facilities at the university was identified as a significant issue, the extent of use of hygiene and sanitation practices varied among students and the study identified several challenges associated with maintaining hygiene and sanitation practices. Lastly, the findings suggested several strategies to effective hygiene and sanitation practices in the University. Proper education on sanitation issues, outsourcing cleaning services, establishing an efficient sanitation taskforce committee, and improving infrastructure, such as boreholes and water pumps and proper drainage systems. Based on inference, several other important conclusions were drawn. Firstly, it is evident that there is a high certain hygiene practices, such as washing hands without soap or inconsistent hand washing before meals, highlight areas where behavior does not fully align with knowledge. This discrepancy suggests the need for targeted interventions to translate awareness into consistent and effective hygiene behaviors.

Secondly, while students exhibit generally positive attitudes towards hygiene and sanitation practices, the availability and adequacy of facilities significantly impact their ability to maintain these practices. The study revealed that many students have access to basic hygiene facilities, such as toilets and water for drinking and washing. However, the adequacy and maintenance of these facilities are often insufficient, particularly in the face of overpopulation and inadequate infrastructure. This underscores the critical need for substantial improvements in the quality and maintenance of hygiene and sanitation facilities at the university. Thirdly, the extent to which students make use of available hygiene and sanitation facilities varies considerably. While many students adhere to good practices, such as using toilets for defecation and keeping water and edibles covered, there are notable instances of non-compliance. Practices like preferring open defecation or not washing hands after certain activities highlight significant gaps in facility use and personal hygiene habits. These gaps point to the necessity for enhanced facility maintenance, increased access to hygiene resources, and continuous education to reinforce proper hygiene practices. Further work is ongoing on the challenges and strategies to effective hygiene and sanitation practice in FUGA.

RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations are proposed to improve hygiene and sanitation practices among students (Mmom and Mmom, 2019;

Nwakile *et al.*, 2017; Assefa and Kumie, 2019; Onyejieke and Onyeaso, 2023; Nwanko *et al.*, 2023) in FUGA, Yobe State, Nigeria.

Create education, implement continuous education and awareness programmes. The awareness programmes should focus on the importance of hygiene and sanitation, targeting both students and staff, emphasizing proper hand washing techniques, use of sanitary facilities, and the health risks associated with poor hygiene practices.

Improve hygiene and sanitation facilities, invest in the improvement and maintenance of hygiene and sanitation facilities. Including adequate supply of pipe borne water for drinking, washing, and flushing of toilets and conveniences, as well as the provision of additional toilets, wash hand basins, waste bins across the campus and hostels, and provision of improved sewage systems.

Establish an efficient sanitation taskforce committee to regularly monitor and maintain hygiene and sanitation standards within the University. The taskforce committee should be equipped with the necessary resources and free hand to enforce compliance with sanitation policies and regulations.

Outsource cleaning services to ensure professionalism, competencies for maintenance of sanitary facilities and open spaces in the campus.

Promote waste segregation and recycling amongst staff and students. Provide adequate waste bins labeled for different types of wastes (e.g., recyclable, non-recyclable) and conduct awareness campaigns on the benefits of recycling and proper waste disposal in house activities.

Ensure proper sanitation by campus foods, water and beverages vendors. Implement strict sanitation standards for all campus operators. Regular inspections should be conducted to ensure adherence to hygiene practices, including proper food and water handling, wastes disposal, and personal cum environmental cleanliness.

Improve sanitary and sewage infrastructure with boreholes and water pumps. Addressing issue of water supply by installing additional boreholes and water pumps within the university campus. This will ensure a consistent and reliable source of water for drinking, washing, and other sanitary needs. Implementing these measures helps to enhance the overall hygiene and sanitary practices, contributing to better health outcomes and quality of life for the university community.

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Table 1: Distribution of the respondents based on gender in 2024

Gender	Frequency	Percentage (%)
Male	150	40
Female	225	60
Total	375	100

Source: Survey data, 2024

Table 2: Distribution of the respondents based on Practices of Hygiene and Sanitation among Students in Federal University, Gashua in 2024

Sanitation Practices of Hygiene; and do you....	SA	SA (%)	A	A (%)	SD	SD (%)	D	D (%)
Always wash hands with soap after defecation	50	13.33	75	20	125	33.33	125	33.33
Wash hands with soap after handling garbage or dirt	75	20	200	53.33	75	20	25	6.67
Cut nails at least once a week	50	13.33	75	20	125	33.33	125	33.33
Daily brush teeth in morning and before going to sleep	250	66.67	100	26.67	15	4	10	2.67
Bath daily	200	53.33	125	33.33	25	6.67	25	6.67
Wear daily washed clothes	250	66.67	100	26.67	15	4	10	2.67
Change underwear daily	250	66.67	100	26.67	15	4	10	2.67
Wash toilet/bathroom daily	50	13.33	75	20	125	33.33	125	33.33
Always dispose household waste properly	50	13.33	75	20	125	33.33	125	33.33
Cover water and other edibles properly	200	53.33	125	33.33	25	6.67	25	6.67
Sweep your room daily	250	66.67	100	26.67	15	4	10	2.67
Wash your clothes weekly	75	20	200	53.33	75	20	25	6.67
Use the bush for open defecation daily	50	13.33	75	20	125	33.33	125	33.33
Use only toilet for defecation	75	20	200	53.33	75	20	25	6.67

Source: Survey Data 2024

Table 3: Distribution of the respondents based on Extent of Use of Hygiene and Sanitation Practices in 2024

Extent of Hygiene and Sanitation Practices: do you/cleanses...	SA	SA (%)	A	A (%)	SD	SD (%)	D	D (%)
Daily brush teeth in the morning only	50	13.33	75	20	125	33.33	125	33.33
Not always wash hands before meals	50	13.33	75	20	125	33.33	125	33.33
Always wash hands with soap after defecation	50	13.33	75	20	125	33.33	125	33.33
Always disposes hostel waste properly	50	13.33	75	20	125	33.33	125	33.33
Not wash hands after sweeping and touching garbage	50	13.33	75	20	125	33.33	125	33.33
Keep water and edibles covered/protected from flies	250	66.67	100	26.67	15	4	10	2.67
Cut nails at least once a week	75	20	200	53.33	75	20	25	6.67
Strictly use toilets available for defecation	50	13.33	75	20	125	33.33	125	33.33
Use the available water for drinking, toileting and hand washing	250	66.67	100	26.67	15	4	10	2.67

Source: Survey data 2024