

ANALYSIS OF DISEASE TREND AMONG STUDENTS OF TERTIARY INSTITUTION A CASE STUDY OF KWARA STATE POLYTECHNIC ILORIN

BY

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CERTIFICATION

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DEDICATION

This research work is dedicated to almighty Allah and my parent, Mr, and Mrs Hassan, also all my brothers, sister for their contribution and supporting towards the successful of the course.

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My profound gratitude goes to Almighty Allah for his faithfulness and his tender mercies that endure forever, also all glory and honour for always being there for me throughout this period of my studies.

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Abstract

This study examines the trends and prevalence of diseases among students of Kwara State Polytechnic with the goal of identifying common illnesses and understanding patterns associated with health issues in an academic environment. Data were collected through structured questionnaires, and analyzed using descriptive statistical, graphical representations, and inferential statistics including Chi-square tests.

Finding revealed that malaria (40%) and typhoid (27%) are the most prevalent illnesses among students, while cold/catarrh (20%) and stress-related illnesses(13%) are comparatively underreported, potentially due to lack of awareness. Analysis of illness frequency during examination periods showed that nearly half of the students frequently experience health challenges, highlighting a critical connection between academic stress and health. Gender-based analysis showed a higher number of illness reports among female students; however, the difference was not statistically significant ($X^2 = 1.960$, $p = 0.162$). In contrast, the difference in frequency of illness types was statistically significant ($X^2 = 15.920$, $p = 0.001$), confirming malaria and typhoid as dominant illnesses.

The study concludes that health issues among students are influenced by environmental and academic factors, and recommends targeted health interventions, awareness campaign, and improved medical services on campus to enhance students well-being and academic performance.

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**CERTIFICATION
DEDICATION**

ACKNOWLEDGEMENT

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CHAPTER ONE

1.1 Background Of Study

Health is a fundamental human right and a crucial component of sustainable development. Among students in tertiary institutions, health plays a vital role in academic performance, social integration, and overall well-being. However, tertiary institutions, especially in developing countries like Nigeria, are often challenged by a variety of health related issues. These issues range from infectious diseases to lifestyle related illnesses, mental health problems, and environmental health risks.

Kwara State Polytechnic, Ilorin, like many higher institutions in Nigeria, accommodates thousands of students from diverse socio-economic backgrounds. These students often live in close proximity in hostels and shared accommodations, making them particularly vulnerable to the spread of infectious diseases. Factors such as poor sanitation, inadequate healthcare services, stress, poor nutrition, and lack of awareness about healthy practices further exacerbate the risk of disease spread.

Over the years, there have been observable trends in disease patterns among students, often influenced by changes in lifestyle, climate, infrastructural development, and public health interventions. Diseases such as malaria, typhoid fever, cold and catarrh, stress-related illness and mental health issues such as depression and anxiety have shown varying trends in prevalence among students' populations.

Analyzing these disease trends is critical for identifying high-risk periods, evaluating the effectiveness of existing health interventions, and planning for better health services. This study is therefore focused on analyzing the trend of diseases among students of Kwara State Polytechnic, Ilorin, in order to inform policies and practices that can enhance student health and academic productivity.

1.2 Statement of the Problem

The health status of students in tertiary institutions is increasingly becoming a major concern, particularly in developing nations like Nigeria. Despite various efforts by health authorities and school management to curb the prevalence of diseases, there continues to be a high incidence

of preventable diseases among students. This is evident in frequent visits to health centers, increasing rates of absenteeism, and even cases of hospitalization.

At Kwara State polytechnic, students are often exposed to a combination of factors such as overcrowding, insufficient access to clean water, poor waste disposal systems, and limited access to quality healthcare. These conditions create a fertile ground for the spread of infectious and non-communicable diseases alike.

However, there appears to be a lack of empirical data and trend analysis on the pattern and types of diseases affecting students over time. This lack of data impedes evidence-based health interventions and planning. Without a clear understanding of the disease trends, it is difficult for policy makers, school administrators, and healthcare providers to design and implement effective public health strategies.

1.3 Aims and Objective of study

1. To Identify the most common disease
2. To determine how often student experience illness during exam
3. To determine the association between gender and diseases types

1.4 Research Questions

What types of illness do you frequently experience?

How often do you visit the clinic or hospital?

Have you ever missed lectures or examination due to illness?

1.5 Significant Of The Study

This study is significant for several reasons:

For Policy Makers: It provides empirical data that can guide policy formulation regarding students' health in tertiary institutions.

For School Management: It offers insights into the health needs of students and how best to allocate resources for maximum impacts.

For Health Practitioners: It aids in understanding common health issues among students and adjusting medical services accordingly.

For students: It helps raise awareness about health risks and promotes preventive health behaviors.

For Researchers: It provides a basis for further research in related fields such as epidemiology, public health, and school health administration.

1.6 Scope of the Study

The study focuses on disease trends among students of Kwara State Polytechnic, Ilorin. It considers disease data from evaluates both communicable and non-communicable diseases. The study focuses on students from the Kwara State Polytechnic, both ND and HND levels.

1.7 Limitation of the Study

Some limitation thta may be encountered Includes:

Incomplete or inaccessible health records.

Response bias in survey data. Limitation funding and time for data collection. Variability in disease reporting methods

1.8 Definition of Terms

Disease Trends: The pattern or movement of disease occurrence over a period.

Tertiary Institution: An institution that offers higher education beyond secondary school level.

Epidemiology: The study of the distribution and determinants of health-related states in specific populations.

Prevalence: The total numbers of cases of a disease in a population at a given time.

Incidence: The number of new cases of a disease that occur in a specific time period.

Malaria: Caused by mosquito bites, prevalent in tropical regions.

Typhoid Fever: Linked to poor sanitation and unsafe water.

Cold/Catarrh: To force out suddenly.

Stressed related illness: The illness that can be derive from stress like (head, body pain etc).

Health: Is a broad topic that encompasses physical, mental, and emotional well-being.

Anopheles: genus of mosquitoes that are the primary vectors of malaria.

Plasmodium: A genus of protozoan parasites that cause malaria in humans and other animals.

Protozoa: A group of single-celled microorganism that are eukaryotic, meaning their cells have a nucleus.

CHAPTER TWO : LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant literature on disease trends in tertiary institutions, focusing on the types of diseases, contributing factors, seasonal variations, and preventive strategies. It draws from national and international studies and highlights gaps this research seeks to fill. Health in the context of a learning environment is not just the absence of illness but the complete well-being of students physically, mentally, and socially. In tertiary institutions, students often face a range of health challenges due to stress, poor lifestyle choices, environmental factors, and exposure to communicable diseases. As noted by the World Health Organisation (WHO), institutions must integrate health into their educational systems to ensure the development of students who are not just academically sound but physically and mentally fit. The study is guided by the **Health Belief Model (HBM)**, which emphasizes the role of personal beliefs in health behavior. The model suggests that students are likely to take health-related actions if they believe they are susceptible to diseases, the diseases have serious consequences, and actions can reduce the susceptibility or severity. Research on students' knowledge and attitude towards specific diseases in Nigerian tertiary institutions highlights the need for awareness and education. A study on Kwara State College of Health Technology emphasizes the importance of descriptive statistical methods in analyzing student health data. Research on malaria and typhoid highlights the need for improved diagnostic methods and enhanced healthcare provider education. Studies on medicinal plants for treating malaria and typhoid diseases show promising results, establishing their traditional applications and capability to control or eliminate these diseases. Development of medical diagnosis expert systems for malaria and related diseases can aid. A significant public health concern in Nigeria, with high prevalence rates. Malaria is a potential life-threatening disease caused by infection with plasmodium protozoa transmitted by an infective female Anopheles mosquito. Another prevalent disease in Nigeria, often co-occurring with malaria. Studies have documented the presence of malaria and typhoid fever in sub-Saharan Africa, highlighting the need for effective surveillance and intervention strategies. Malaria and typhoid fever co-infection is a concern, although some research suggests that the perceived widespread co-infection may be misleading due to limitations in diagnostic methods.

2.2 Review of related literature

2.2.1 Common Diseases among Students

Studies by Adeola (2018) and Yusuf (2019) found that malaria, typhoid fever, are the most reported ailments in Nigerian tertiary institutions. Inadequate sanitation and exposure to unclean water sources have been identified as major contributors to these illnesses. Previous studies have consistently identified several diseases commonly found among students in higher institutions. These include:

Malaria: Caused by mosquito bites, prevalent in tropical regions.

Typhoid Fever: Linked to poor sanitation and unsafe water.

Cold/Catarrh: To force out suddenly

Stressed related illness: The illness that can be derived from stress like (head etc)

2.2.2 Seasonal Variations in Disease Occurrence

Research has shown that diseases like malaria and respiratory infections tend to peak during the rainy and harmattan seasons respectively. For instance, Akinwale (2020) noted that malaria cases are more prevalent from June to September in the southwestern part of Nigeria. Unhealthy lifestyles such as poor dieting, smoking, drug abuse, and unprotected sex contribute significantly to disease trends. Overcrowded hostels, poor waste management, and limited water supply exacerbate the situation. The level of health awareness among students plays a major role in disease prevention. However, studies reveal that many students lack basic knowledge about disease transmission and do not engage in regular medical checkups. The accessibility and quality of health services on campus are crucial in disease management. Studies often complain about long wait times, lack of drugs, and poor attitudes of medical staff. Multiple studies have shown a strong correlation between living conditions and health outcomes in tertiary institutions. For example, in a study conducted at the University of Ibadan, 63% of students reported having fallen sick twice in a semester, with malaria and typhoid being the most common. Several studies have explored health trends in tertiary institutions across Nigeria:

Akinyemu (2018) studied disease prevalence in the University of Lagos and found malaria and typhoid to be the most common. Noting a significant increase in depression and anxiety linked to academic stress. Balogun (2020) researched disease trends in polytechnic and discovered a rise in malaria and typhoid due to poor environmental conditions.

However, there is limited research focusing specifically on Kwara state Polytechnic, which this study seeks to address.

2.3 Gaps in the Literature

Lack of recent studies focusing on polytechnic rather than universities. Insufficient use of trend analysis over time.

Limited focus on institutional-specific health services and their effectiveness.

2.4 Summary of literature review

The reviewed literature underscores the need for a comprehensive, data-driven approach to understand and combat disease trends in tertiary institutions. However, limited research has been done specifically on Kwara state Polytechnic, which this study aims to address

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design, population, sampling techniques, data collection methods and data analysis of disease trends among students of Kwara State Polytechnic. The study employs a **descriptive survey design**. This design is suitable for collecting information from a large population and identifying patterns and trends in disease occurrence among students.

3.2 Research Design

- **Cross sectional study:** A survey will be conducted to collect data on disease prevalence and trends among students
- **Quantitative approach:** Statistical analysis will be used to identify patterns and correlations.

3.3 Population Of The Study

The target population consists of all students of Kwara State Polytechnic, Ilorin, during the 2024/2025 academic session. As of the last academic report, the institution has an estimated population of over 15,000 students

3.4 Sample and Sampling Techniques

A sample size of 100 students was selected using stratified random sampling to ensure representation across faculties, departments, gender, and academic level and others.

Research instrument

The primary instrument used for data collection is a structured questionnaire titled 'Analysis of disease trend among students of tertiary institution'. It consists of both open and closed-ended questions, divided into four sections:

Section A: Demographic Information

Section B: Health History

Section C: Disease trends and pattern

Section D: Health awareness and preventive measures

3.5 Methods Of data collection

The questionnaires were distributed physically and digitally over a one-week period. Students were briefed on the objective of the study and assured of confidentiality.

3.6 Method of data analysis

Data collected were coded and analyzed using Statistical Package For the Social (SPSS). Descriptive statistics such as Pie chart, Bar chart were used. Inferential statistics, including Chi-square tests, were employed to test relationships between variables.

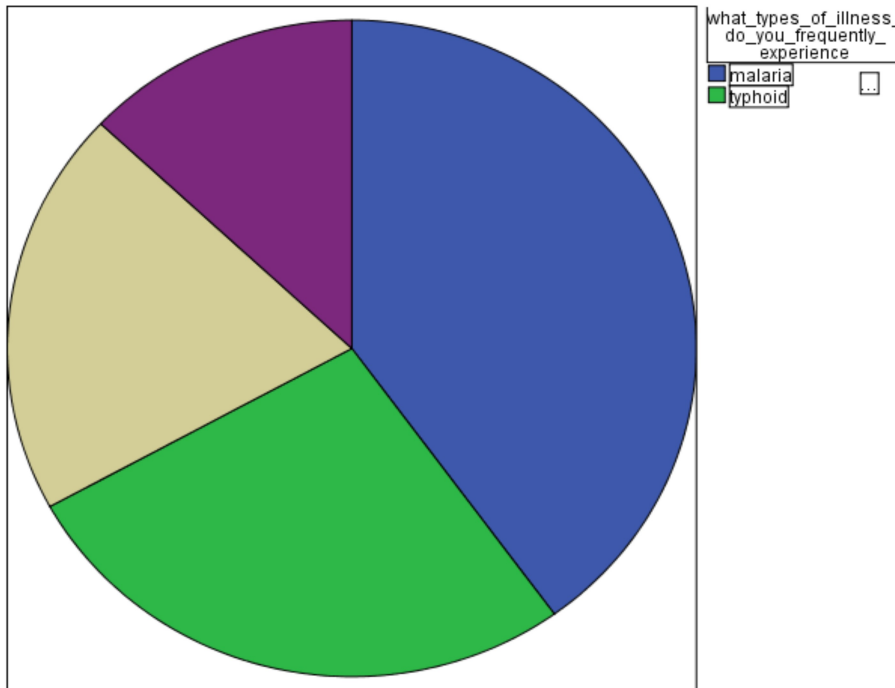
3.7 Ethical Considerations

- Informed consent was obtained from all participants.
- Confidentiality of responses was guaranteed.
- Participation was voluntary, and students could withdraw at any point.

CHAPTER FOUR

4.1 Introduction

This chapter presents the analysis and interpretation of data collected on the types and trends of illnesses experienced by students at Kwara State Polytechnic. The analysis focuses on disease prevalence, frequency of illness during examinations, and the relationship between gender and illness experience using statistical tools including frequency tables, pie charts, bar charts, and Chi-square tests.



4.2 Prevalence of Disease

The pie chart illustrates the types of illnesses most frequently experienced by students :

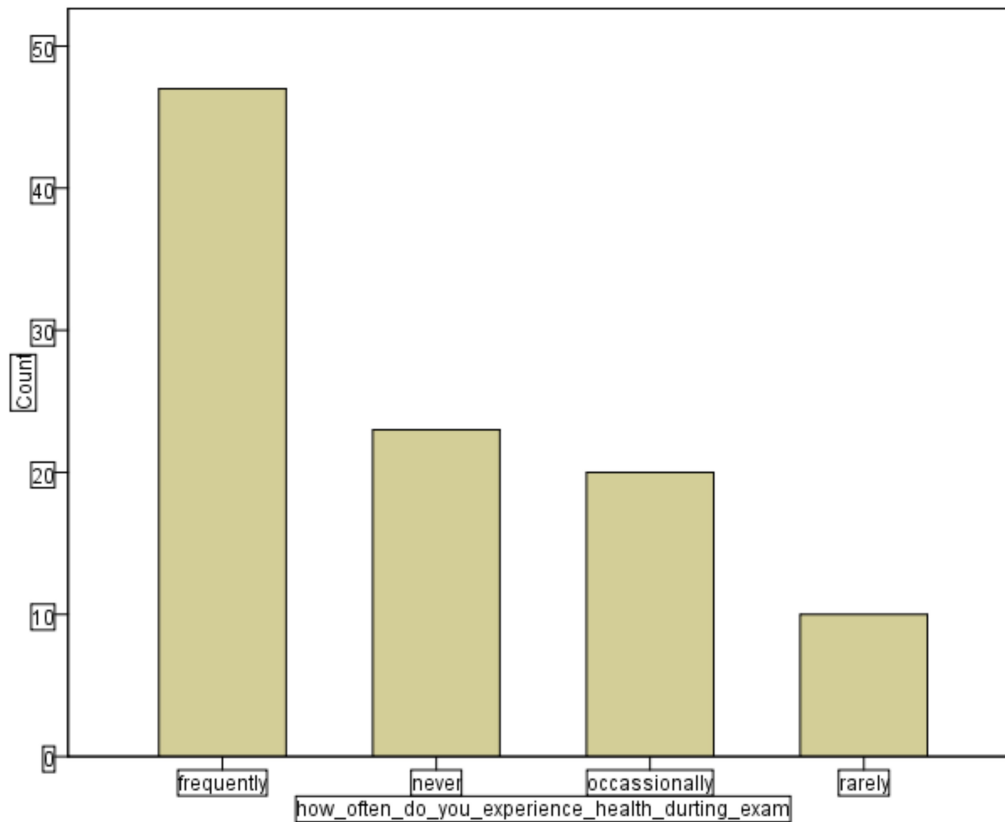
Malaria: 40% of students reported frequent malaria cases

Typhoid: 27% indicated suffering from typhoid.

Cold/Catarrh: 20% reported experiencing cold-related illnesses.

Stressed related illnesses: 13% experienced illnesses related to stress.

This suggests that malaria is the most prevalent disease, followed by typhoid. stress-related illnesses are the least reported, which may be underrepresented due to underreporting or lack of awareness.



4.3 Frequency of illness during Examination

The bar chart. Shows the frequency with which students experience health issues during examination:

Frequently: about 48 students

Never: Around 22 students

Occasionally: About 20 students

Rarely: 10 students

This reveals that a significant portion of students (nearly half) experience health issues frequently during exams, which could impact their academic performance. Only a small number never experience such issues.

gender

	Observed N	Expected N	Residual
male	43	50.0	-7.0
female	57	50.0	7.0
Total	100		

what_types_of_illness_do_you_frequently_experience

	Observed N	Expected N	Residual
malaria	40	25.0	15.0
typhoid	27	25.0	2.0
cold catarrh	20	25.0	-5.0
stressed related illness	13	25.0	-12.0
Total	100		

Test Statistics

	gender	what_types_of_illness_do_you_frequently_experience
Chi-Square	1.960 ^a	15.920 ^b
df	1	3
Asymp. Sig.	.162	.001

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 50.0.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

4.4 Gender distribution of illness Reports

From the Chi-square table for gender:

Observed (male):43

Expected: 50

Residual: -7

Observed (Female):57

Expected: 50

Residual:+7

This shows that more females (57%) reported illnesses than males (43%). However, the Chi-square test result ($\chi^2 = 1.960$, $p = 0.162$) indicates that this difference is not statistically significant, meaning that gender is not a strong factor in illness frequency among students.

4.5 Chi-square analysis of illness types

For the types of illnesses experienced:

The Chi-square statistic=15.920

Degree of freedom(df)=3

Significance (Asymp. Sig.)= 0.001

Since $p < 0.05$, the results is statistically significant, implying that the difference in reported illness types is not due to chance. Thus, malaria and typhoid occur significantly more frequently than other types.

4.6 Summary of findings

Malaria is the most common illness, followed by typhoid.

Stressed related illnesses are underreported but still present.

A large proportion of students suffer health issues during exams, which is a concern for students welfare.

No significant gender difference in illness frequency.

The types of illnesses reported differ significantly, with malaria dominating

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study investigated the trends, prevalence, and contributing factors of disease among students of Kwara State Polytechnic, Ilorin. Using descriptive survey methods, questionnaire samples of students, and relevant data were analyzed to gain insight into disease patterns and health challenges within the students community.

The key findings of the study include:

- **Prevalent Disease:**

Malaria, typhoid fever were identified as the commonly reported diseases among students,

- **Seasonal Trends:**

Disease incidence was found to increase during specific seasons, especially during the rainy season (malaria) and harmattan (typhoid), indicating a strong link between environmental conditions and disease occurrence.

- **Contributing Factors:**

Factors contributing to the spread of diseases among students include poor hygiene practices, overcrowded hostels, limited access to clean water, and unhealthy lifestyles such as smoking, excessive alcohol consumption, and unprotected sexual activity.

- **Health Awareness:**

While a moderate level of health awareness was observed among students, a significant number still lacked adequate knowledge on disease prevention methods and rarely participated in preventive healthcare activities such as regular checkups or health seminars.

- **Healthcare Services:**

The majority of students expressed dissatisfactions with the health facilities available on campus. Complaints ranged from inadequate medical personnel and poor attitudes of staff to long wait times and lack of essential medications.

5.2 Conclusion

The study concludes that disease prevalence among students of Kwara State Polytechnic remains a significant public health concern, driven largely by environmental, behavioral, and institutional factors. Malaria, typhoid, and respiratory infections are especially dominants, influenced by seasonal changes and poor living conditions.

Despite effort to promote health awareness, many students remain vulnerable due to insufficient knowledge, lack of preventive habits, and limited access to quality healthcare services. The current healthcare infrastructure on campus is inadequate to meet the needs of the growing students population.

To ensure a healthy student population, strategic interventions focusing on prevention, education, infrastructure, and policy reforms must be implemented.

5.3 Recommendation

Based on the finding, the following recommendations are made:

1. **Health Education Campaigns:** The institution should organize regular and intensive health awareness campaign on disease prevention, personal hygiene, and healthy lifestyles through seminars, posters, and online platforms.
2. **Improvement Of health care facilities:** The school clinic should be upgraded with more medical personnel, essential drugs, and modern diagnostic tools. Extended working hours should also be considered to cater to emergencies and reduce waiting time.
3. **Periodic Health Screening:** Compulsory annual health screenings should be introduced for all students to facilitate early detection and treatment of diseases.
4. **Environmental Sanitation Programs:** The institution must improve sanitation in hostel and lecture halls by providing clean water, proper waste disposal systems, and routine fumigation, especially during peak disease seasons.
5. **Policy Implementation and Monitoring :** The school's health unit should implement and monitor health-related policies, including mandatory health talks during orientation programs and ongoing health assessments throughout the academic session.
6. **Students Engagement:** Students should be encouraged to form peer-led health clubs to promote positive health behaviors and disseminate accurate health information.

5.4 Contribution to Knowledge

This research contributes to public health knowledge by providing a focused analysis of disease patterns among students in a Nigeria tertiary institution. It offers a data-driven basis for institutional reforms, policymaking, and further studies on disease control in educational settings

5.5 Suggestions for Further Studies

Future research could explore:

1. A comparative study between disease trends in public and private tertiary institutions.
2. The impact of mental health on physical disease prevalence among students.
3. Longitudinal studies to monitor the effectiveness of health interventions over time.

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questionnaire on Analysis disease trends amongs students of tertiary institutions

(A case study of kwara polytechnic ilorin)

All responses will be treated with strict coonfidentially and used solely for academic purpose.

Section A : Demographic Information

1. Age: ☐16-20 ☐21-25 ☐26-30 ☐31 and above
2. Gender: ☐Male ☐Female ☐ Prefer not to say
3. Level of Study: ☐ ND 1 ☐ ND II ☐HND 1 ☐HND II
4. Type of Residence ☐On-campus ☐Off-campus

SECTION B: Health History

5. Have you been diagnosed with any health condition in the past 12 months ? ☐Yes ☐No
6. How often do you visit the clinic or hospital? ☐ Weekly ☐ Monthly ☐Occassionally ☐ Rarely ☐Never
7. What types of illness do you frequently experience? ☐ Malaria ☐Typhoid ☐Cold/Catarrh
8. Do you have any chronic illness? ☐Yes ☐No

SECTION C:Disease Trends and Pattern

9. Do you notice an disease in the frequently of illness during a specific semster or time of year? ☐Yes ☐No
10. How often do you experience health issues during exam periods? ☐ Frequently ☐ Occasionally ☐Rarely ☐Never
11. Do you believe academic stress contributes to your health issues? ☐Strongly agree ☐ Agree ☐Neutral ☐Disagree ☐Strongly disagree
12. Have you ever missed lectures or examination due to illness? ☐ Yes ☐No
13. What do you think are the most common causes of illness among syudents? ☐Poor hygiene ☐Poor diet ☐Overcrowded accomodation ☐Poor sanitation ☐Academic stress ☐ Others

SECTION D: Health Awareness and Preventive Measures

14. are you aware of the medical facilities available on campus? ☐Yes ☐No

15. Have you ever utilized the school's medical center? ☐Yes ☐No

16. Do you engage in regular medical check-ups? ☐Yes ☐No

17. Do you